# Linear/Logistic Regression

```
#STEP1 : Read the data into R
# data.frame':  5960 obs. of  28 variables

library( rpart )
library( rpart.plot )
library( ROCR )
library( MASS )
library( randomForest )

## randomForest 4.7-1.1

## Type rfNews() to see new features/changes/bug fixes.

library(gbm)

## Loaded gbm 2.1.9

## This version of gbm is no longer under development. Consider transitioning
to gbm3, https://github.com/gbm-developers/gbm3

PATH ="/Users/stellam/Desktop/TRINE/Bigdata&dataScience/HMEQ_Scrubbed"
FILE_NAME ="HMEQ_Scrubbed.csv"
INFILE = paste (PATH,FILE_NAME, sep="/")
setwd(PATH)
df = read.csv(FILE_NAME)

SEED = 1
set.seed( SEED )
#
TARGET = "TARGET_BAD_FLAG"

df$TARGET_LOSS_AMT = NULL
#List the structure of the data (str)
str( df )

## 'data.frame':    5960 obs. of  28 variables:
##  $ TARGET_BAD_FLAG    : int  1 1 1 1 0 1 1 1 1 1 ...
##  $ LOAN               : int  1100 1300 1500 1500 1700 1700 1800 1800 2000
2000 ...
##  $ IMP_MORTDUE        : num  25860 70053 13500 65000 97800 ...
##  $ M_MORTDUE          : int  0 0 0 1 0 0 0 0 0 1 ...
##  $ IMP_VALUE          : num  39025 68400 16700 89000 112000 ...
##  $ M_VALUE            : int  0 0 0 1 0 0 0 0 0 0 ...
##  $ IMP_YOJ            : num  10.5 7 4 7 3 9 5 11 3 16 ...
##  $ M_YOJ              : int  0 0 0 1 0 0 0 0 0 0 ...
##  $ IMP_DEROG          : int  0 0 0 1 0 0 3 0 0 0 ...
##  $ M_DEROG            : int  0 0 0 1 0 0 0 0 0 0 ...
```

```
##  $ IMP_DELINQ         : int  0 2 0 1 0 0 2 0 2 0 ...
##  $ M_DELINQ           : int  0 0 0 1 0 0 0 0 0 0 ...
##  $ IMP_CLAGE          : num  94.4 121.8 149.5 174 93.3 ...
##  $ M_CLAGE            : int  0 0 0 1 0 0 0 0 0 0 ...
##  $ IMP_NINQ           : int  1 0 1 1 0 1 1 0 1 0 ...
##  $ M_NINQ             : int  0 0 0 1 0 0 0 0 0 0 ...
##  $ IMP_CLNO           : int  9 14 10 20 14 8 17 8 12 13 ...
##  $ M_CLNO             : int  0 0 0 1 0 0 0 0 0 0 ...
##  $ IMP_DEBTINC        : num  35 35 35 35 35 ...
##  $ M_DEBTINC          : int  1 1 1 1 1 0 1 0 1 1 ...
##  $ FLAG.Job.Mgr       : int  0 0 0 0 0 0 0 0 0 0 ...
##  $ FLAG.Job.Office    : int  0 0 0 0 1 0 0 0 0 0 ...
##  $ FLAG.Job.Other     : int  1 1 1 0 0 1 1 1 1 0 ...
##  $ FLAG.Job.ProfExe   : int  0 0 0 0 0 0 0 0 0 0 ...
##  $ FLAG.Job.Sales     : int  0 0 0 0 0 0 0 0 0 1 ...
##  $ FLAG.Job.Self      : int  0 0 0 0 0 0 0 0 0 0 ...
##  $ FLAG.Reason.DebtCon: int  0 0 0 0 0 0 0 0 0 0 ...
##  $ FLAG.Reason.HomeImp: int  1 1 1 0 1 1 1 1 1 1 ...
```

```r
#Execute a summary of the data
summary( df )
```

```
##  TARGET_BAD_FLAG       LOAN        IMP_MORTDUE       M_MORTDUE
##  Min.   :0.0000   Min.   : 1100   Min.   :  2063   Min.   :0.00000
##  1st Qu.:0.0000   1st Qu.:11100   1st Qu.: 48139   1st Qu.:0.00000
##  Median :0.0000   Median :16300   Median : 65000   Median :0.00000
##  Mean   :0.1995   Mean   :18608   Mean   : 72999   Mean   :0.08691
##  3rd Qu.:0.0000   3rd Qu.:23300   3rd Qu.: 88200   3rd Qu.:0.00000
##  Max.   :1.0000   Max.   :89900   Max.   :399550   Max.   :1.00000
##    IMP_VALUE         M_VALUE           IMP_YOJ           M_YOJ
##  Min.   :  8000   Min.   :0.00000   Min.   : 0.000   Min.   :0.00000
##  1st Qu.: 66490   1st Qu.:0.00000   1st Qu.: 3.000   1st Qu.:0.00000
##  Median : 89000   Median :0.00000   Median : 7.000   Median :0.00000
##  Mean   :101536   Mean   :0.01879   Mean   : 8.756   Mean   :0.08641
##  3rd Qu.:119005   3rd Qu.:0.00000   3rd Qu.:12.000   3rd Qu.:0.00000
##  Max.   :855909   Max.   :1.00000   Max.   :41.000   Max.   :1.00000
##    IMP_DEROG          M_DEROG         IMP_DELINQ        M_DELINQ
##  Min.   : 0.0000   Min.   :0.0000   Min.   : 0.000   Min.   :0.00000
##  1st Qu.: 0.0000   1st Qu.:0.0000   1st Qu.: 0.000   1st Qu.:0.00000
##  Median : 0.0000   Median :0.0000   Median : 0.000   Median :0.00000
##  Mean   : 0.3431   Mean   :0.1188   Mean   : 0.503   Mean   :0.09732
##  3rd Qu.: 0.0000   3rd Qu.:0.0000   3rd Qu.: 1.000   3rd Qu.:0.00000
##  Max.   :10.0000   Max.   :1.0000   Max.   :15.000   Max.   :1.00000
##    IMP_CLAGE         M_CLAGE           IMP_NINQ         M_NINQ
##  Min.   :   0.0   Min.   :0.00000   Min.   : 0.00   Min.   :0.00000
##  1st Qu.: 117.4   1st Qu.:0.00000   1st Qu.: 0.00   1st Qu.:0.00000
##  Median : 174.0   Median :0.00000   Median : 1.00   Median :0.00000
##  Mean   : 179.5   Mean   :0.05168   Mean   : 1.17   Mean   :0.08557
##  3rd Qu.: 227.1   3rd Qu.:0.00000   3rd Qu.: 2.00   3rd Qu.:0.00000
##  Max.   :1168.2   Max.   :1.00000   Max.   :17.00   Max.   :1.00000
```

```
##     IMP_CLNO         M_CLNO         IMP_DEBTINC         M_DEBTINC
##  Min.   : 0.00   Min.   :0.00000   Min.   :  0.5245   Min.   :0.0000
##  1st Qu.:15.00   1st Qu.:0.00000   1st Qu.: 30.7632   1st Qu.:0.0000
##  Median :20.00   Median :0.00000   Median : 35.0000   Median :0.0000
##  Mean   :21.25   Mean   :0.03725   Mean   : 34.0393   Mean   :0.2126
##  3rd Qu.:26.00   3rd Qu.:0.00000   3rd Qu.: 37.9499   3rd Qu.:0.0000
##  Max.   :71.00   Max.   :1.00000   Max.   :203.3122   Max.   :1.0000
##   FLAG.Job.Mgr    FLAG.Job.Office  FLAG.Job.Other   FLAG.Job.ProfExe
##  Min.   :0.0000   Min.   :0.0000   Min.   :0.0000   Min.   :0.0000
##  1st Qu.:0.0000   1st Qu.:0.0000   1st Qu.:0.0000   1st Qu.:0.0000
##  Median :0.0000   Median :0.0000   Median :0.0000   Median :0.0000
##  Mean   :0.1287   Mean   :0.1591   Mean   :0.4007   Mean   :0.2141
##  3rd Qu.:0.0000   3rd Qu.:0.0000   3rd Qu.:1.0000   3rd Qu.:0.0000
##  Max.   :1.0000   Max.   :1.0000   Max.   :1.0000   Max.   :1.0000
##  FLAG.Job.Sales    FLAG.Job.Self     FLAG.Reason.DebtCon
FLAG.Reason.HomeImp
##  Min.   :0.00000   Min.   :0.00000   Min.   :0.0000      Min.   :0.0000
##  1st Qu.:0.00000   1st Qu.:0.00000   1st Qu.:0.0000      1st Qu.:0.0000
##  Median :0.00000   Median :0.00000   Median :1.0000      Median :0.0000
##  Mean   :0.01829   Mean   :0.03238   Mean   :0.6591      Mean   :0.2987
##  3rd Qu.:0.00000   3rd Qu.:0.00000   3rd Qu.:1.0000      3rd Qu.:1.0000
##  Max.   :1.00000   Max.   :1.00000   Max.   :1.0000      Max.   :1.0000
```

```r
#Print the first six records
dim( df )
```

```
## [1] 5960   28
```

```r
df_flag = df
```

#SPLIT the datasets into training dataset and test dataset.

```r
dim( df_flag )
```

```
## [1] 5960   28
```

```r
dim( df_train )
```

```
## [1] 4142   28
```

```r
dim( df_test )
```

```
## [1] 1818   28
```

#1. DECISION TREE

```r
tr_set = rpart.control( maxdepth = 10 )
tr_model = rpart( data=df_train, TARGET_BAD_FLAG ~ ., control=tr_set,
method="class", parms=list(split='information') )
rpart.plot( tr_model )
```

#RANDOM FOREST

```
rf_model = randomForest( data=df_train, TARGET_BAD_FLAG ~ ., ntree=500,
importance=TRUE )

## Warning in randomForest.default(m, y, ...): The response has five or fewer
## unique values.  Are you sure you want to do regression?

rf_model

##
## Call:
##  randomForest(formula = TARGET_BAD_FLAG ~ ., data = df_train,      ntree =
500, importance = TRUE)
##                Type of random forest: regression
##                      Number of trees: 500
## No. of variables tried at each split: 9
##
##           Mean of squared residuals: 0.0662375
##                     % Var explained: 58.74
```

#GRADIENT BOOSTING

```r
gb_model = gbm( data=df_train, TARGET_BAD_FLAG ~ ., n.trees=500,
distribution="bernoulli" )
summary.gbm( gb_model, cBars=10 )
```

```
##                                    var     rel.inf
## M_DEBTINC                     M_DEBTINC 42.15276212
## IMP_DEBTINC                 IMP_DEBTINC 13.00578764
## IMP_DELINQ                   IMP_DELINQ 10.91954001
## IMP_CLAGE                     IMP_CLAGE  4.94970498
## IMP_VALUE                     IMP_VALUE  4.81763715
## M_VALUE                         M_VALUE  4.51409149
## IMP_DEROG                     IMP_DEROG  4.26284516
## LOAN                               LOAN  3.55916423
## IMP_CLNO                       IMP_CLNO  3.46797820
## IMP_NINQ                       IMP_NINQ  1.75727930
## IMP_YOJ                         IMP_YOJ  1.65837025
## IMP_MORTDUE                 IMP_MORTDUE  1.64426153
## M_DEROG                         M_DEROG  1.27305534
## FLAG.Job.Sales           FLAG.Job.Sales  0.73536853
## M_CLNO                           M_CLNO  0.54901563
## M_YOJ                             M_YOJ  0.16877535
## FLAG.Job.Other           FLAG.Job.Other  0.13372343
## FLAG.Job.Office         FLAG.Job.Office  0.12346471
```

```
## FLAG.Job.Mgr                FLAG.Job.Mgr  0.06870764
## FLAG.Reason.DebtCon FLAG.Reason.DebtCon  0.06701971
## M_DELINQ                       M_DELINQ  0.06598496
## M_MORTDUE                     M_MORTDUE  0.05293782
## FLAG.Job.Self              FLAG.Job.Self  0.05252482
## M_CLAGE                         M_CLAGE  0.00000000
## M_NINQ                           M_NINQ  0.00000000
## FLAG.Job.ProfExe        FLAG.Job.ProfExe  0.00000000
## FLAG.Reason.HomeImp FLAG.Reason.HomeImp  0.00000000
```

STEP02 : CLASSIFICATION MODELS

1. Create a LOGISTIC REGRESSION model using ALL the variables to predict the variable TARGET_BAD_FLAG

- ALL the variables

```
theUpper_LR = glm( TARGET_BAD_FLAG ~ ., family = "binomial", data=df_train )
theLower_LR = glm( TARGET_BAD_FLAG ~ 1, family = "binomial", data=df_train )
summary( theUpper_LR )
```

```
##
## Call:
## glm(formula = TARGET_BAD_FLAG ~ ., family = "binomial", data = df_train)
##
## Coefficients:
##                        Estimate Std. Error z value Pr(>|z|)
## (Intercept)          -6.817e+00  6.558e-01 -10.395  < 2e-16 ***
## LOAN                 -8.996e-06  5.694e-06  -1.580 0.114122
## IMP_MORTDUE          -3.482e-06  2.092e-06  -1.664 0.096053 .
## M_MORTDUE             3.647e-01  2.491e-01   1.464 0.143231
## IMP_VALUE             4.356e-06  1.495e-06   2.914 0.003572 **
## M_VALUE               4.945e+00  6.167e-01   8.017 1.08e-15 ***
## IMP_YOJ              -2.010e-02  8.271e-03  -2.430 0.015103 *
## M_YOJ                -7.720e-01  2.427e-01  -3.181 0.001466 **
## IMP_DEROG             5.869e-01  7.617e-02   7.706 1.30e-14 ***
## M_DEROG              -2.655e+00  3.603e-01  -7.367 1.74e-13 ***
## IMP_DELINQ            8.182e-01  6.264e-02  13.062  < 2e-16 ***
## M_DELINQ             -1.101e+00  4.859e-01  -2.266 0.023465 *
## IMP_CLAGE            -5.466e-03  8.103e-04  -6.746 1.52e-11 ***
## M_CLAGE               9.834e-01  4.403e-01   2.233 0.025529 *
## IMP_NINQ              1.528e-01  3.175e-02   4.813 1.48e-06 ***
## M_NINQ               -2.494e-01  4.538e-01  -0.550 0.582542
## IMP_CLNO             -1.600e-02  6.331e-03  -2.527 0.011513 *
## M_CLNO                2.693e+00  7.552e-01   3.565 0.000363 ***
## IMP_DEBTINC           9.231e-02  1.017e-02   9.075  < 2e-16 ***
## M_DEBTINC             2.679e+00  1.144e-01  23.425  < 2e-16 ***
## FLAG.Job.Mgr          2.091e+00  4.989e-01   4.191 2.77e-05 ***
## FLAG.Job.Office       1.414e+00  5.005e-01   2.824 0.004736 **
## FLAG.Job.Other        2.081e+00  4.825e-01   4.314 1.60e-05 ***
## FLAG.Job.ProfExe      1.972e+00  4.965e-01   3.971 7.16e-05 ***
```

```
## FLAG.Job.Sales       3.240e+00  5.794e-01   5.592 2.24e-08 ***
## FLAG.Job.Self        2.518e+00  5.650e-01   4.456 8.34e-06 ***
## FLAG.Reason.DebtCon -1.318e-01  3.661e-01  -0.360 0.718960
## FLAG.Reason.HomeImp -5.659e-02  3.728e-01  -0.152 0.879329
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## (Dispersion parameter for binomial family taken to be 1)
##
##     Null deviance: 4155.3  on 4141  degrees of freedom
## Residual deviance: 2248.2  on 4114  degrees of freedom
## AIC: 2304.2
##
## Number of Fisher Scoring iterations: 6
```

#LOGISTIC REGRESSION w/ FORWARD SELECTION

```
lr_model = stepAIC(theUpper_LR, direction="forward",
scope=list(lower=theLower_LR, upper=theUpper_LR))
```

```
## Start:  AIC=2304.21
## TARGET_BAD_FLAG ~ LOAN + IMP_MORTDUE + M_MORTDUE + IMP_VALUE +
##     M_VALUE + IMP_YOJ + M_YOJ + IMP_DEROG + M_DEROG + IMP_DELINQ +
##     M_DELINQ + IMP_CLAGE + M_CLAGE + IMP_NINQ + M_NINQ + IMP_CLNO +
##     M_CLNO + IMP_DEBTINC + M_DEBTINC + FLAG.Job.Mgr + FLAG.Job.Office +
##     FLAG.Job.Other + FLAG.Job.ProfExe + FLAG.Job.Sales + FLAG.Job.Self +
##     FLAG.Reason.DebtCon + FLAG.Reason.HomeImp
```

```
summary( lr_model )
```

```
##
## Call:
## glm(formula = TARGET_BAD_FLAG ~ LOAN + IMP_MORTDUE + M_MORTDUE +
##     IMP_VALUE + M_VALUE + IMP_YOJ + M_YOJ + IMP_DEROG + M_DEROG +
##     IMP_DELINQ + M_DELINQ + IMP_CLAGE + M_CLAGE + IMP_NINQ +
##     M_NINQ + IMP_CLNO + M_CLNO + IMP_DEBTINC + M_DEBTINC + FLAG.Job.Mgr +
##     FLAG.Job.Office + FLAG.Job.Other + FLAG.Job.ProfExe + FLAG.Job.Sales +
##     FLAG.Job.Self + FLAG.Reason.DebtCon + FLAG.Reason.HomeImp,
##     family = "binomial", data = df_train)
##
## Coefficients:
##                       Estimate Std. Error z value Pr(>|z|)
## (Intercept)         -6.817e+00  6.558e-01 -10.395  < 2e-16 ***
## LOAN                -8.996e-06  5.694e-06  -1.580 0.114122
## IMP_MORTDUE         -3.482e-06  2.092e-06  -1.664 0.096053 .
## M_MORTDUE            3.647e-01  2.491e-01   1.464 0.143231
## IMP_VALUE            4.356e-06  1.495e-06   2.914 0.003572 **
## M_VALUE              4.945e+00  6.167e-01   8.017 1.08e-15 ***
## IMP_YOJ             -2.010e-02  8.271e-03  -2.430 0.015103 *
## M_YOJ               -7.720e-01  2.427e-01  -3.181 0.001466 **
## IMP_DEROG            5.869e-01  7.617e-02   7.706 1.30e-14 ***
```

```
## M_DEROG             -2.655e+00  3.603e-01  -7.367 1.74e-13 ***
## IMP_DELINQ           8.182e-01  6.264e-02  13.062  < 2e-16 ***
## M_DELINQ            -1.101e+00  4.859e-01  -2.266 0.023465 *
## IMP_CLAGE           -5.466e-03  8.103e-04  -6.746 1.52e-11 ***
## M_CLAGE              9.834e-01  4.403e-01   2.233 0.025529 *
## IMP_NINQ             1.528e-01  3.175e-02   4.813 1.48e-06 ***
## M_NINQ              -2.494e-01  4.538e-01  -0.550 0.582542
## IMP_CLNO            -1.600e-02  6.331e-03  -2.527 0.011513 *
## M_CLNO               2.693e+00  7.552e-01   3.565 0.000363 ***
## IMP_DEBTINC          9.231e-02  1.017e-02   9.075  < 2e-16 ***
## M_DEBTINC            2.679e+00  1.144e-01  23.425  < 2e-16 ***
## FLAG.Job.Mgr         2.091e+00  4.989e-01   4.191 2.77e-05 ***
## FLAG.Job.Office      1.414e+00  5.005e-01   2.824 0.004736 **
## FLAG.Job.Other       2.081e+00  4.825e-01   4.314 1.60e-05 ***
## FLAG.Job.ProfExe     1.972e+00  4.965e-01   3.971 7.16e-05 ***
## FLAG.Job.Sales       3.240e+00  5.794e-01   5.592 2.24e-08 ***
## FLAG.Job.Self        2.518e+00  5.650e-01   4.456 8.34e-06 ***
## FLAG.Reason.DebtCon -1.318e-01  3.661e-01  -0.360 0.718960
## FLAG.Reason.HomeImp -5.659e-02  3.728e-01  -0.152 0.879329
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## (Dispersion parameter for binomial family taken to be 1)
##
##     Null deviance: 4155.3  on 4141  degrees of freedom
## Residual deviance: 2248.2  on 4114  degrees of freedom
## AIC: 2304.2
##
## Number of Fisher Scoring iterations: 6
```

#LOGISTIC REGRESSION Model w/ BACKWARD SELECTION 2. Create a LOGISTIC REGRESSION model and using BACKWARD VARIABLE SELECTION

```
lr_model_2 = stepAIC(theLower_LR, direction="backward",
scope=list(lower=theLower_LR, upper=theUpper_LR))

## Start:  AIC=4157.3
## TARGET_BAD_FLAG ~ 1

summary( lr_model_2 )

##
## Call:
## glm(formula = TARGET_BAD_FLAG ~ 1, family = "binomial", data = df_train)
##
## Coefficients:
##             Estimate Std. Error z value Pr(>|z|)
## (Intercept) -1.38087    0.03878  -35.61   <2e-16 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
```

```
## (Dispersion parameter for binomial family taken to be 1)
##
##     Null deviance: 4155.3  on 4141  degrees of freedom
## Residual deviance: 4155.3  on 4141  degrees of freedom
## AIC: 4157.3
##
## Number of Fisher Scoring iterations: 4
```

#LOGISTIC REGRESSION w/ DECISION TREE and FORWARD STEPWISE SELECTION

3. Create a LOGISTIC REGRESSION model and using a DECISION TREE and FORWARD STEPWISE SELECTION.

```
#DECISION TREE
treeVars = tr_model$variable.importance
treeVars = names(treeVars)
treeVarsPlus = paste( treeVars, collapse="+")
F = as.formula( paste( "TARGET_BAD_FLAG ~", treeVarsPlus ))

tree_LR = glm( F, family = "binomial", data=df_train )
theLower_LR = glm( TARGET_BAD_FLAG ~ 1, family = "binomial", data=df_train )

#Logistic Regression Model with forward stepwise selection
lrt_model_3 = stepAIC(theLower_LR, direction="forward",
scope=list(lower=theLower_LR, upper=tree_LR))

## Start:  AIC=4157.3
## TARGET_BAD_FLAG ~ 1
##
##               Df Deviance    AIC
## + M_DEBTINC    1   3088.5 3092.5
## + IMP_DELINQ   1   3776.4 3780.4
## + M_VALUE      1   3942.8 3946.8
## + IMP_CLAGE    1   4020.9 4024.9
## + IMP_DEBTINC  1   4051.1 4055.1
## + LOAN         1   4133.3 4137.3
## + IMP_YOJ      1   4144.0 4148.0
## + IMP_MORTDUE  1   4150.4 4154.4
## + IMP_VALUE    1   4153.1 4157.1
## <none>             4155.3 4157.3
## + IMP_CLNO     1   4155.3 4159.3
##
## Step:  AIC=3092.5
## TARGET_BAD_FLAG ~ M_DEBTINC
##
##               Df Deviance    AIC
## + IMP_DELINQ   1   2861.2 2867.2
## + M_VALUE      1   2972.0 2978.0
## + IMP_DEBTINC  1   2977.4 2983.4
## + IMP_CLAGE    1   3006.3 3012.3
## + IMP_YOJ      1   3075.2 3081.2
```

```
## <none>              3088.5 3092.5
## + LOAN         1   3086.7 3092.7
## + IMP_CLNO     1   3088.2 3094.2
## + IMP_VALUE    1   3088.3 3094.3
## + IMP_MORTDUE  1   3088.5 3094.5
##
## Step:  AIC=2867.17
## TARGET_BAD_FLAG ~ M_DEBTINC + IMP_DELINQ
##
##               Df Deviance    AIC
## + IMP_CLAGE    1   2751.2 2759.2
## + IMP_DEBTINC  1   2753.8 2761.8
## + M_VALUE      1   2778.9 2786.9
## + IMP_YOJ      1   2836.1 2844.1
## + IMP_CLNO     1   2850.8 2858.8
## <none>              2861.2 2867.2
## + LOAN         1   2859.8 2867.8
## + IMP_VALUE    1   2860.8 2868.8
## + IMP_MORTDUE  1   2861.1 2869.1
##
## Step:  AIC=2759.17
## TARGET_BAD_FLAG ~ M_DEBTINC + IMP_DELINQ + IMP_CLAGE
##
##               Df Deviance    AIC
## + IMP_DEBTINC  1   2650.4 2660.4
## + M_VALUE      1   2672.4 2682.4
## + IMP_YOJ      1   2741.4 2751.4
## + IMP_VALUE    1   2743.9 2753.9
## <none>              2751.2 2759.2
## + IMP_MORTDUE  1   2749.2 2759.2
## + IMP_CLNO     1   2751.2 2761.2
## + LOAN         1   2751.2 2761.2
##
## Step:  AIC=2660.38
## TARGET_BAD_FLAG ~ M_DEBTINC + IMP_DELINQ + IMP_CLAGE + IMP_DEBTINC
##
##               Df Deviance    AIC
## + M_VALUE      1   2554.2 2566.2
## + IMP_YOJ      1   2644.2 2656.2
## + IMP_VALUE    1   2646.5 2658.5
## + IMP_CLNO     1   2648.2 2660.2
## <none>              2650.4 2660.4
## + LOAN         1   2650.0 2662.0
## + IMP_MORTDUE  1   2650.1 2662.1
##
## Step:  AIC=2566.19
## TARGET_BAD_FLAG ~ M_DEBTINC + IMP_DELINQ + IMP_CLAGE + IMP_DEBTINC +
##     M_VALUE
##
##               Df Deviance    AIC
```

```
## + IMP_YOJ      1   2547.7 2561.7
## + IMP_VALUE    1   2549.6 2563.6
## <none>             2554.2 2566.2
## + IMP_CLNO     1   2552.5 2566.5
## + LOAN         1   2553.3 2567.3
## + IMP_MORTDUE  1   2554.2 2568.2
##
## Step:  AIC=2561.67
## TARGET_BAD_FLAG ~ M_DEBTINC + IMP_DELINQ + IMP_CLAGE + IMP_DEBTINC +
##     M_VALUE + IMP_YOJ
##
##               Df Deviance    AIC
## + IMP_VALUE    1   2542.8 2558.8
## <none>             2547.7 2561.7
## + IMP_CLNO     1   2545.9 2561.9
## + LOAN         1   2547.2 2563.2
## + IMP_MORTDUE  1   2547.7 2563.7
##
## Step:  AIC=2558.79
## TARGET_BAD_FLAG ~ M_DEBTINC + IMP_DELINQ + IMP_CLAGE + IMP_DEBTINC +
##     M_VALUE + IMP_YOJ + IMP_VALUE
##
##               Df Deviance    AIC
## + IMP_MORTDUE  1   2538.0 2556.0
## + IMP_CLNO     1   2539.4 2557.4
## + LOAN         1   2540.5 2558.5
## <none>             2542.8 2558.8
##
## Step:  AIC=2556.04
## TARGET_BAD_FLAG ~ M_DEBTINC + IMP_DELINQ + IMP_CLAGE + IMP_DEBTINC +
##     M_VALUE + IMP_YOJ + IMP_VALUE + IMP_MORTDUE
##
##            Df Deviance    AIC
## + LOAN      1   2535.7 2555.7
## + IMP_CLNO  1   2536.0 2556.0
## <none>          2538.0 2556.0
##
## Step:  AIC=2555.73
## TARGET_BAD_FLAG ~ M_DEBTINC + IMP_DELINQ + IMP_CLAGE + IMP_DEBTINC +
##     M_VALUE + IMP_YOJ + IMP_VALUE + IMP_MORTDUE + LOAN
##
##            Df Deviance    AIC
## <none>          2535.7 2555.7
## + IMP_CLNO  1   2533.8 2555.8
```

```r
summary( lrt_model_3 )
```

```
##
## Call:
## glm(formula = TARGET_BAD_FLAG ~ M_DEBTINC + IMP_DELINQ + IMP_CLAGE +
```

```
##     IMP_DEBTINC + M_VALUE + IMP_YOJ + IMP_VALUE + IMP_MORTDUE +
##     LOAN, family = "binomial", data = df_train)
##
## Coefficients:
##               Estimate Std. Error z value Pr(>|z|)
## (Intercept) -4.723e+00  3.904e-01 -12.097  < 2e-16 ***
## M_DEBTINC    2.777e+00  1.064e-01  26.096  < 2e-16 ***
## IMP_DELINQ   6.697e-01  5.095e-02  13.145  < 2e-16 ***
## IMP_CLAGE   -6.506e-03  7.373e-04  -8.823  < 2e-16 ***
## IMP_DEBTINC  8.820e-02  9.577e-03   9.210  < 2e-16 ***
## M_VALUE      3.897e+00  4.959e-01   7.858 3.91e-15 ***
## IMP_YOJ     -2.093e-02  7.882e-03  -2.655  0.00793 **
## IMP_VALUE    4.432e-06  1.370e-06   3.236  0.00121 **
## IMP_MORTDUE -4.005e-06  1.890e-06  -2.119  0.03408 *
## LOAN        -7.589e-06  5.054e-06  -1.502  0.13323
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## (Dispersion parameter for binomial family taken to be 1)
##
##     Null deviance: 4155.3  on 4141  degrees of freedom
## Residual deviance: 2535.7  on 4132  degrees of freedom
## AIC: 2555.7
##
## Number of Fisher Scoring iterations: 6
```

#List the important variables from the Logistic Regression Variable Selections.

```r
#LOGISTIC REGRESSION w/ FORWARD SELECTION
glm(lr_model)
```

```
##
## Call:  glm(formula = lr_model)
##
## Coefficients:
##         (Intercept)                 LOAN          IMP_MORTDUE
##          -1.532e-01           -9.306e-07           -4.810e-07
##           M_MORTDUE            IMP_VALUE              M_VALUE
##           4.318e-02            4.894e-07            4.073e-01
##             IMP_YOJ                M_YOJ            IMP_DEROG
##          -1.921e-03           -6.684e-02            6.430e-02
##             M_DEROG           IMP_DELINQ             M_DELINQ
##          -1.876e-01            8.064e-02           -7.368e-02
##           IMP_CLAGE              M_CLAGE             IMP_NINQ
##          -4.190e-04            1.122e-01            1.569e-02
##              M_NINQ             IMP_CLNO               M_CLNO
##          -6.158e-04           -1.351e-03            1.096e-01
##         IMP_DEBTINC            M_DEBTINC         FLAG.Job.Mgr
##           6.085e-03            4.010e-01            1.247e-01
##     FLAG.Job.Office       FLAG.Job.Other     FLAG.Job.ProfExe
```

```
##           8.408e-02            1.327e-01            1.156e-01
##      FLAG.Job.Sales        FLAG.Job.Self  FLAG.Reason.DebtCon
##           2.610e-01            1.560e-01           -7.002e-03
## FLAG.Reason.HomeImp
##           1.204e-02
##
## Degrees of Freedom: 4141 Total (i.e. Null);  4114 Residual
## Null Deviance:       664.9
## Residual Deviance: 368.2     AIC: 1788
```

```
#LOGISTIC REGRESSION Model w/ BACKWARD SELECTION
glm(lr_model_2)
```

```
##
## Call:  glm(formula = lr_model_2)
##
## Coefficients:
## (Intercept)
##      0.2009
##
## Degrees of Freedom: 4141 Total (i.e. Null);  4141 Residual
## Null Deviance:       664.9
## Residual Deviance: 664.9     AIC: 4181
```

```
#LOGISTIC REGRESSION w/ DECISION TREE and FORWARD STEPWISE SELECTION
glm(lrt_model_3)
```

```
##
## Call:  glm(formula = lrt_model_3)
##
## Coefficients:
## (Intercept)    M_DEBTINC   IMP_DELINQ    IMP_CLAGE  IMP_DEBTINC
M_VALUE
##  -3.029e-02    4.465e-01    7.520e-02   -5.290e-04    6.059e-03    4.172e-
01
##     IMP_YOJ    IMP_VALUE  IMP_MORTDUE         LOAN
##  -2.013e-03    5.434e-07   -6.116e-07   -8.555e-07
##
## Degrees of Freedom: 4141 Total (i.e. Null);  4132 Residual
## Null Deviance:       664.9
## Residual Deviance: 399.6     AIC: 2090
```

#Compare the variables from the logistic Regression with those of the Random Forest and the Gradient Boosting.

Logistic Regression Model with forward selection :

```
LOAN + IMP_MORTDUE + M_MORTDUE +
IMP_VALUE + M_VALUE + IMP_YOJ + M_YOJ + IMP_DEROG + M_DEROG +
IMP_DELINQ + M_DELINQ + IMP_CLAGE + M_CLAGE + IMP_NINQ +
M_NINQ + IMP_CLNO + M_CLNO + IMP_DEBTINC + M_DEBTINC + FLAG.Job.Mgr +
```

```
FLAG.Job.Office + FLAG.Job.Other + FLAG.Job.ProfExe + FLAG.Job.Sales +
FLAG.Job.Self + FLAG.Reason.DebtCon + FLAG.Reason.HomeImp
```

RANDOM FOREST : LOAN + IMP_MORTDUE + M_MORTDUE + IMP_VALUE + M_VALUE + IMP_YOJ + M_YOJ + IMP_DEROG + M_DEROG + IMP_DELINQ + M_DELINQ + IMP_CLAGE + M_CLAGE + IMP_NINQ + M_NINQ + IMP_CLNO + M_CLNO + IMP_DEBTINC + M_DEBTINC + FLAG.Job.Mgr + FLAG.Job.Office + FLAG.Job.Other + FLAG.Job.ProfExe + FLAG.Job.Sales + FLAG.Job.Self + FLAG.Reason.DebtCon + FLAG.Reason.HomeImp

GRAIDENT BOOSTING : M_DEBTINC IMP_DEBTINC IMP_DELINQ IMP_CLAGE IMP_VALUE M_VALUE IMP_DEROG LOAN IMP_CLNO IMP_NINQ

```
#RANDOM FOREST
rf_model$importance

##                          %IncMSE IncNodePurity
## LOAN                0.0159419003     38.993106
## IMP_MORTDUE         0.0234068563     35.266432
## M_MORTDUE           0.0016891083      2.349943
## IMP_VALUE           0.0231282638     43.056864
## M_VALUE             0.0137469911     18.739138
## IMP_YOJ             0.0142021137     31.086101
## M_YOJ               0.0012577501      2.944031
## IMP_DEROG           0.0147603845     21.754538
## M_DEROG             0.0030132125      4.951353
## IMP_DELINQ          0.0371963423     48.238429
## M_DELINQ            0.0016259138      2.107158
## IMP_CLAGE           0.0348745713     55.559885
## M_CLAGE             0.0017993423      1.840701
## IMP_NINQ            0.0118052637     17.852157
## M_NINQ              0.0019974586      2.082765
## IMP_CLNO            0.0230424836     37.694496
## M_CLNO              0.0008400593      1.103966
## IMP_DEBTINC         0.0497632454    104.953372
## M_DEBTINC           0.0346049524    130.591066
## FLAG.Job.Mgr        0.0021009462      3.765830
## FLAG.Job.Office     0.0021596184      5.148490
## FLAG.Job.Other      0.0044601769      5.102794
## FLAG.Job.ProfExe    0.0019630762      3.935220
## FLAG.Job.Sales      0.0025384804      3.364372
## FLAG.Job.Self       0.0007569286      1.883075
## FLAG.Reason.DebtCon 0.0024958739      3.814255
## FLAG.Reason.HomeImp 0.0022467261      3.908644

#GRAIDENT BOOSTING
summary(gb_model)
```

```
##                                     var     rel.inf
## M_DEBTINC                     M_DEBTINC 42.15276212
## IMP_DEBTINC                 IMP_DEBTINC 13.00578764
## IMP_DELINQ                   IMP_DELINQ 10.91954001
## IMP_CLAGE                     IMP_CLAGE  4.94970498
## IMP_VALUE                     IMP_VALUE  4.81763715
## M_VALUE                         M_VALUE  4.51409149
## IMP_DEROG                     IMP_DEROG  4.26284516
## LOAN                               LOAN  3.55916423
## IMP_CLNO                       IMP_CLNO  3.46797820
## IMP_NINQ                       IMP_NINQ  1.75727930
## IMP_YOJ                         IMP_YOJ  1.65837025
## IMP_MORTDUE                 IMP_MORTDUE  1.64426153
## M_DEROG                         M_DEROG  1.27305534
## FLAG.Job.Sales           FLAG.Job.Sales  0.73536853
## M_CLNO                           M_CLNO  0.54901563
## M_YOJ                             M_YOJ  0.16877535
## FLAG.Job.Other           FLAG.Job.Other  0.13372343
## FLAG.Job.Office         FLAG.Job.Office  0.12346471
## FLAG.Job.Mgr               FLAG.Job.Mgr  0.06870764
## FLAG.Reason.DebtCon FLAG.Reason.DebtCon  0.06701971
## M_DELINQ                       M_DELINQ  0.06598496
## M_MORTDUE                     M_MORTDUE  0.05293782
```

```
## FLAG.Job.Self             FLAG.Job.Self  0.05252482
## M_CLAGE                         M_CLAGE  0.00000000
## M_NINQ                           M_NINQ  0.00000000
## FLAG.Job.ProfExe       FLAG.Job.ProfExe  0.00000000
## FLAG.Reason.HomeImp FLAG.Reason.HomeImp  0.00000000
```

## Using the testing data set, create a ROC curves for all models. They must all be on the same plot.

```
# TREE
pt = predict( tr_model, df_test, type="prob" )
head( pt )

##            0          1
## 4  0.3354839 0.66451613
## 6  0.9315112 0.06848885
## 7  0.1206897 0.87931034
## 15 0.3354839 0.66451613
## 17 0.1206897 0.87931034
## 18 0.9315112 0.06848885

pt2 = prediction( pt[,2], df_test$TARGET_BAD_FLAG )
pt3 = performance( pt2, "tpr", "fpr" )
#RF
pr = predict( rf_model, df_test )
head( pr )

##         4         6         7        15        17        18
## 0.7966524 0.8313333 0.9241667 0.7746333 0.9212667 0.3462000

pr2 = prediction( pr, df_test$TARGET_BAD_FLAG )
pr3 = performance( pr2, "tpr", "fpr" )
# GRADIENT BOOSTING
pg = predict( gb_model, df_test, type="response" )

## Using 500 trees...

head( pg )

## [1] 0.9666599 0.4323602 0.9940194 0.8066121 0.9980174 0.9721196

pg2 = prediction( pg, df_test$TARGET_BAD_FLAG )
pg3 = performance( pg2, "tpr", "fpr" )
# LOGISTIC FORWARD
plr = predict( lr_model, df_test, type="response" )
plr2 = prediction( plr, df_test$TARGET_BAD_FLAG )
plr3 = performance( plr2, "tpr", "fpr" )
# LOGISTIC BACKWARD
plrb = predict( lr_model_2, df_test, type="response" )
plrb2 = prediction( plr, df_test$TARGET_BAD_FLAG )
plrb3 = performance( plr2, "tpr", "fpr" )
```

```r
# LR DECISION STEP TREE
plrt = predict( lrt_model_3, df_test, type="response" )
plrt2 = prediction( plrt, df_test$TARGET_BAD_FLAG )
plrt3 = performance( plrt2, "tpr", "fpr" )

plot( pt3, col="green" )
plot( pr3, col="red", add=TRUE )
plot( pg3, col="blue", add=TRUE )
plot( plr3, col="gold", add=TRUE )
plot(plrb3, col ="orange", add=TRUE)
plot( plrt3, col="gray", add=TRUE )

abline(0,1,lty=2)
legend("bottomright",c("TREE","RANDOM FOREST", "GRADIENT BOOSTING", "LOGIT
REG FWD", "LOGIT REG BWD", "LOGIT REG
TREE"),col=c("green","red","blue","gold","orange","gray"), bty="y", lty=1 )
```

```r
aucT = performance( pt2, "auc" )@y.values
aucR = performance( pr2, "auc" )@y.values
aucG = performance( pg2, "auc" )@y.values
aucLR = performance( plr2, "auc")@y.values
aucLRB = performance( plrb2, "auc")@y.values
aucLRT = performance( plrt2, "auc")@y.values
```

```
print( paste("TREE AUC=", aucT) )

## [1] "TREE AUC= 0.826618121581281"

print( paste("RF AUC=", aucR) )

## [1] "RF AUC= 0.953436405362943"

print( paste("GB AUC=", aucG) )

## [1] "GB AUC= 0.920521802150007"

print( paste("LR AUC=", aucLRB) )

## [1] "LR AUC= 0.910306627784587"

print( paste("LRT AUC=", aucLRT) )

## [1] "LRT AUC= 0.879705201724766"
```

#Write a summary about which moddel performed the best and why :

AUC Values are as below : * Random Forest (RF): 0.9534 * Gradient Boosting (GB): 0.9205 * Logistic Regression (LR): 0.9103 * Logistic Regression Tree (LRT): 0.8797 * Decision Tree (TREE): 0.8266 The Random Forest model has the highest AUC value of 0.9534 among others. It indicates that it has the best predictive accuracy. Second best predictive model is Gradient Boosting, then Logistic Regression, Logistic Regression Tree, and lastly, the single Decision Tree. As a superior performance model, it should be fit model as the Random Forest model outperforms the other models. Based on the variables in the RF model, "LOAN + IMP_MORTDUE + M_MORTDUE + IMP_VALUE + M_VALUE + IMP_YOJ + M_YOJ + IMP_DEROG + M_DEROG + IMP_DELINQ + M_DELINQ + IMP_CLAGE + M_CLAGE + IMP_NINQ + M_NINQ + IMP_CLNO + M_CLNO + IMP_DEBTINC + M_DEBTINC + FLAG.Job.Mgr + FLAG.Job.Office + FLAG.Job.Other + FLAG.Job.ProfExe + FLAG.Job.Sales + FLAG.Job.Self + FLAG.Reason.DebtCon + FLAG.Reason.HomeImp" will be the varibles considered to be important in an order.

Step 3: Linear Regression to meausre the damage

```
PATH ="/Users/stellam/Desktop/TRINE/Bigdata&dataScience/HMEQ_Scrubbed"
FILE_NAME ="HMEQ_Scrubbed.csv"
INFILE = paste (PATH,FILE_NAME, sep="/")
setwd(PATH)
df = read.csv(FILE_NAME)

SEED = 1
set.seed( SEED )

TARGET = "TARGET_LOSS_AMT"
df$TARGET_BAD_FALG = NULL
```

```r
df_amt = df
FLAG = sample( c( TRUE, FALSE ), nrow(df_amt), replace=TRUE, prob=c(0.7,0.3))
df_train = df_amt[FLAG, ]
df_test = df_amt[! FLAG, ]

mean( df_amt$TARGET_LOSS_AMT )

## [1] 2676.163

mean( df_train$TARGET_LOSS_AMT )

## [1] 2726.379

mean( df_test$TARGET_LOSS_AMT )

## [1] 2561.755
```

#DECISION TREE

```r
# TREE

tr_set = rpart.control( maxdepth = 10 )

tr_model = rpart( data=df_train, TARGET_LOSS_AMT ~ ., control=tr_set,
method="poisson" )
rpart.plot( tr_model )
```

```
rpart.plot( tr_model, digits=-3, extra=100 )
```

```
tr_model$variable.importance

##     TARGET_BAD_FLAG           M_DEBTINC                LOAN
IMP_DELINQ
##         36251736.50          9367936.72          4119721.09
3398600.30
##             M_VALUE         IMP_DEBTINC           IMP_DEROG
IMP_VALUE
##          3093597.71          2507137.05          2135018.14
1044619.71
##         IMP_MORTDUE           IMP_CLAGE FLAG.Reason.HomeImp
FLAG.Job.Self
##           788428.37           182144.06           137784.31
136608.05
## FLAG.Reason.DebtCon            IMP_CLNO             IMP_YOJ
IMP_NINQ
##           113469.44            56734.72            23535.84
17651.88

pt = predict( tr_model, df_test )
head( pt )

##        4        6        7       15       17       18
## 4612.683 4612.683 4612.683 4612.683 4612.683 4612.683
```

```r
RMSEt = sqrt( mean( ( df_test$TARGET_LOSS_AMT - pt )^2 ) )
```

#RANDOM FOREST

```r
rf_model = randomForest( data=df_train, TARGET_LOSS_AMT ~ ., ntree=500,
importance=TRUE )
importance( rf_model )
```

```
##                        %IncMSE IncNodePurity
## TARGET_BAD_FLAG     114.189392   90816671182
## LOAN                 75.056081   48273239979
## IMP_MORTDUE           9.345253    5420762996
## M_MORTDUE             4.308162     256607606
## IMP_VALUE            12.997514    9226894152
## M_VALUE               7.506812    1353170893
## IMP_YOJ               5.922053    2559274253
## M_YOJ                 2.921449     165042523
## IMP_DEROG             8.189313    2001553129
## M_DEROG               3.512038     198306664
## IMP_DELINQ           13.530822    9133792194
## M_DELINQ              2.771952      95545234
## IMP_CLAGE             8.408003    4220036914
## M_CLAGE               5.735034     200217793
## IMP_NINQ              3.331829    2438408614
## M_NINQ                3.445997      78512611
## IMP_CLNO             25.438137    8733141717
## M_CLNO                1.505593      22260760
## IMP_DEBTINC          16.794164    8115505422
## M_DEBTINC            20.627929   19813664556
## FLAG.Job.Mgr          1.576908     242210982
## FLAG.Job.Office       3.422240     255025096
## FLAG.Job.Other        1.735363     318462520
## FLAG.Job.ProfExe      1.861185     286201560
## FLAG.Job.Sales        1.753181      91196945
## FLAG.Job.Self         3.252411    1317932382
## FLAG.Reason.DebtCon  10.313082    1684462365
## FLAG.Reason.HomeImp  12.301864    2440730616
```

```r
varImpPlot( rf_model )
```

```
pr = predict( rf_model, df_test )
head( pr )

##        4        6        7       15       17       18
## 5048.191 1008.149 3784.140 3165.406 7537.541 3818.803

RMSEr = sqrt( mean( ( df_test$TARGET_LOSS_AMT - pr )^2 ) )
```

## GRADIENT BOOSTING

```
gb_model = gbm( data=df_train, TARGET_LOSS_AMT ~ ., n.trees=500,
distribution="poisson" )
summary.gbm( gb_model, cBars=10 )
```

```
##                                      var     rel.inf
## TARGET_BAD_FLAG         TARGET_BAD_FLAG 76.40712502
## LOAN                               LOAN 14.70862087
## IMP_DELINQ                   IMP_DELINQ  2.16771421
## IMP_CLNO                       IMP_CLNO  1.89809647
## IMP_DEBTINC                  IMP_DEBTINC  1.29616184
## M_DEBTINC                    M_DEBTINC  0.95589402
## IMP_VALUE                    IMP_VALUE  0.94668664
## IMP_CLAGE                    IMP_CLAGE  0.67110739
## IMP_DEROG                    IMP_DEROG  0.28055448
## IMP_YOJ                        IMP_YOJ  0.17128213
## FLAG.Job.Self             FLAG.Job.Self  0.13445379
## IMP_MORTDUE                  IMP_MORTDUE  0.10245563
## FLAG.Reason.DebtCon FLAG.Reason.DebtCon  0.08622134
## FLAG.Job.Sales           FLAG.Job.Sales  0.05734676
## M_VALUE                        M_VALUE  0.05664074
## IMP_NINQ                       IMP_NINQ  0.03805345
## FLAG.Reason.HomeImp FLAG.Reason.HomeImp  0.02158522
## M_MORTDUE                    M_MORTDUE  0.00000000
## M_YOJ                            M_YOJ  0.00000000
## M_DEROG                        M_DEROG  0.00000000
## M_DELINQ                       M_DELINQ  0.00000000
## M_CLAGE                        M_CLAGE  0.00000000
```

```
## M_NINQ                          M_NINQ  0.00000000
## M_CLNO                          M_CLNO  0.00000000
## FLAG.Job.Mgr               FLAG.Job.Mgr  0.00000000
## FLAG.Job.Office         FLAG.Job.Office  0.00000000
## FLAG.Job.Other           FLAG.Job.Other  0.00000000
## FLAG.Job.ProfExe       FLAG.Job.ProfExe  0.00000000
```

```
pg = predict( gb_model, df_test, type="response" )
```

```
## Using 500 trees...
```

```
head( pg )
```

```
## [1] 2624.8750 1449.3798 3165.8499 2610.4421 3653.5035  689.7229
```

```
RMSEg = sqrt( mean( ( df_test$TARGET_LOSS_AMT - pg )^2 ) )
```

#Linear regression model with all the variables

```
theUpper_LR = lm( TARGET_LOSS_AMT ~ ., data=df_train )
theLower_LR = lm( TARGET_LOSS_AMT ~ 1, data=df_train )


lrf_model = stepAIC(theLower_LR, direction="forward",
scope=list(lower=theLower_LR, upper=theUpper_LR))
```

```
## Start:  AIC=73734.01
## TARGET_LOSS_AMT ~ 1
##
##                        Df  Sum of Sq        RSS   AIC
## + TARGET_BAD_FLAG       1 1.2249e+11 1.0042e+11 70433
## + M_DEBTINC             1 4.7153e+10 1.7575e+11 72752
## + IMP_DELINQ            1 2.9356e+10 1.9355e+11 73151
## + M_VALUE               1 1.0850e+10 2.1205e+11 73529
## + LOAN                  1 9.4873e+09 2.1341e+11 73556
## + IMP_DEROG             1 9.3922e+09 2.1351e+11 73558
## + IMP_DEBTINC           1 7.7321e+09 2.1517e+11 73590
## + IMP_NINQ              1 6.5037e+09 2.1640e+11 73613
## + IMP_CLNO              1 3.7741e+09 2.1913e+11 73665
## + IMP_CLAGE             1 3.3814e+09 2.1952e+11 73673
## + IMP_VALUE             1 3.0724e+09 2.1983e+11 73679
## + FLAG.Job.Self         1 2.9256e+09 2.1998e+11 73681
## + IMP_MORTDUE           1 1.5436e+09 2.2136e+11 73707
## + FLAG.Reason.HomeImp   1 1.1946e+09 2.2171e+11 73714
## + FLAG.Reason.DebtCon   1 9.6462e+08 2.2194e+11 73718
## + M_DELINQ              1 9.1543e+08 2.2199e+11 73719
## + M_YOJ                 1 8.5650e+08 2.2205e+11 73720
## + M_DEROG               1 8.3039e+08 2.2207e+11 73721
## + FLAG.Job.Office       1 7.8093e+08 2.2212e+11 73721
## + M_NINQ                1 6.7307e+08 2.2223e+11 73723
## + FLAG.Job.Sales        1 5.7363e+08 2.2233e+11 73725
```

```
## + IMP_YOJ              1 2.7913e+08 2.2262e+11 73731
## + M_CLAGE              1 1.5448e+08 2.2275e+11 73733
## + FLAG.Job.Mgr         1 1.5356e+08 2.2275e+11 73733
## + M_MORTDUE            1 1.3042e+08 2.2277e+11 73734
## <none>                              2.2290e+11 73734
## + M_CLNO               1 8.2695e+07 2.2282e+11 73734
## + FLAG.Job.ProfExe     1 6.1698e+07 2.2284e+11 73735
## + FLAG.Job.Other       1 5.6571e+06 2.2290e+11 73736
##
## Step:  AIC=70433.13
## TARGET_LOSS_AMT ~ TARGET_BAD_FLAG
##
##                       Df  Sum of Sq        RSS   AIC
## + LOAN                 1 1.4929e+10 8.5487e+10 69768
## + IMP_VALUE            1 4.0092e+09 9.6407e+10 70266
## + IMP_CLNO             1 3.9067e+09 9.6509e+10 70271
## + IMP_DELINQ           1 3.6093e+09 9.6807e+10 70284
## + IMP_MORTDUE          1 2.6211e+09 9.7795e+10 70326
## + FLAG.Reason.HomeImp  1 2.0569e+09 9.8359e+10 70349
## + FLAG.Reason.DebtCon  1 1.7158e+09 9.8700e+10 70364
## + FLAG.Job.Self        1 1.4839e+09 9.8932e+10 70373
## + IMP_DEBTINC          1 1.1197e+09 9.9296e+10 70389
## + M_DEBTINC            1 9.1692e+08 9.9499e+10 70397
## + IMP_NINQ             1 5.0230e+08 9.9914e+10 70414
## + M_CLAGE              1 2.8998e+08 1.0013e+11 70423
## + IMP_DEROG            1 2.6898e+08 1.0015e+11 70424
## + FLAG.Job.Other       1 2.5115e+08 1.0016e+11 70425
## + M_VALUE              1 1.9168e+08 1.0022e+11 70427
## + M_MORTDUE            1 1.3220e+08 1.0028e+11 70430
## + M_CLNO               1 1.0673e+08 1.0031e+11 70431
## + M_NINQ               1 6.9180e+07 1.0035e+11 70432
## <none>                              1.0042e+11 70433
## + M_DELINQ             1 3.9859e+07 1.0038e+11 70433
## + FLAG.Job.Office      1 2.4143e+07 1.0039e+11 70434
## + FLAG.Job.ProfExe     1 1.8507e+07 1.0040e+11 70434
## + FLAG.Job.Sales       1 7.9849e+06 1.0041e+11 70435
## + M_YOJ                1 6.5294e+06 1.0041e+11 70435
## + FLAG.Job.Mgr         1 4.5355e+06 1.0041e+11 70435
## + M_DEROG              1 3.4493e+06 1.0041e+11 70435
## + IMP_YOJ              1 1.7237e+06 1.0041e+11 70435
## + IMP_CLAGE            1 5.5254e+05 1.0042e+11 70435
##
## Step:  AIC=69768.45
## TARGET_LOSS_AMT ~ TARGET_BAD_FLAG + LOAN
##
##                       Df  Sum of Sq        RSS   AIC
## + IMP_DELINQ           1 3685676079 8.1801e+10 69588
## + IMP_CLNO             1 2871002462 8.2616e+10 69629
## + M_DEBTINC            1 1510399285 8.3977e+10 69697
## + FLAG.Reason.HomeImp  1  698460708 8.4789e+10 69736
```

```
## + IMP_MORTDUE          1  657001885 8.4830e+10 69738
## + IMP_DEBTINC          1  612429542 8.4875e+10 69741
## + IMP_VALUE            1  598322989 8.4889e+10 69741
## + FLAG.Reason.DebtCon  1  443625629 8.5043e+10 69749
## + IMP_DEROG            1  336898272 8.5150e+10 69754
## + FLAG.Job.Self        1  313308904 8.5174e+10 69755
## + IMP_NINQ             1  221391135 8.5266e+10 69760
## + M_VALUE              1  143541341 8.5344e+10 69763
## + M_MORTDUE            1  118484915 8.5369e+10 69765
## + FLAG.Job.Other       1  116877560 8.5370e+10 69765
## + IMP_YOJ              1  100191935 8.5387e+10 69766
## + IMP_CLAGE            1   84296020 8.5403e+10 69766
## + FLAG.Job.Sales       1   79545503 8.5408e+10 69767
## + M_YOJ                1   53731807 8.5433e+10 69768
## + M_CLAGE              1   52230952 8.5435e+10 69768
## + M_DEROG              1   49998871 8.5437e+10 69768
## <none>                              8.5487e+10 69768
## + FLAG.Job.Office      1    5819424 8.5481e+10 69770
## + FLAG.Job.ProfExe     1    2267388 8.5485e+10 69770
## + M_DELINQ             1    1954765 8.5485e+10 69770
## + M_CLNO               1    1857931 8.5485e+10 69770
## + FLAG.Job.Mgr         1     960353 8.5486e+10 69770
## + M_NINQ               1      72342 8.5487e+10 69770
##
## Step:  AIC=69587.91
## TARGET_LOSS_AMT ~ TARGET_BAD_FLAG + LOAN + IMP_DELINQ
##
##                       Df  Sum of Sq        RSS   AIC
## + IMP_CLNO             1 1971452923 7.9830e+10 69489
## + M_DEBTINC            1 1346021323 8.0455e+10 69521
## + IMP_VALUE            1  665440899 8.1136e+10 69556
## + IMP_DEBTINC          1  663363080 8.1138e+10 69556
## + FLAG.Reason.HomeImp  1  631819974 8.1170e+10 69558
## + IMP_MORTDUE          1  629413603 8.1172e+10 69558
## + FLAG.Reason.DebtCon  1  489343809 8.1312e+10 69565
## + FLAG.Job.Self        1  287549511 8.1514e+10 69575
## + IMP_NINQ             1  214856278 8.1587e+10 69579
## + IMP_YOJ              1  208974801 8.1592e+10 69579
## + IMP_CLAGE            1  206986005 8.1594e+10 69579
## + FLAG.Job.Sales       1  159250118 8.1642e+10 69582
## + M_DELINQ             1  147900575 8.1653e+10 69582
## + M_MORTDUE            1  138582889 8.1663e+10 69583
## + M_CLAGE              1   98327497 8.1703e+10 69585
## + M_DEROG              1   91870759 8.1710e+10 69585
## + M_NINQ               1   89623393 8.1712e+10 69585
## + FLAG.Job.Other       1   79797248 8.1722e+10 69586
## + M_YOJ                1   73298105 8.1728e+10 69586
## + IMP_DEROG            1   63834127 8.1738e+10 69587
## + M_VALUE              1   44602816 8.1757e+10 69588
## <none>                              8.1801e+10 69588
```

```
## + M_CLNO               1   15571984 8.1786e+10 69589
## + FLAG.Job.Office      1   11419263 8.1790e+10 69589
## + FLAG.Job.ProfExe     1    9028123 8.1792e+10 69589
## + FLAG.Job.Mgr         1    6022401 8.1795e+10 69590
##
## Step:  AIC=69488.86
## TARGET_LOSS_AMT ~ TARGET_BAD_FLAG + LOAN + IMP_DELINQ + IMP_CLNO
##
##                       Df  Sum of Sq        RSS   AIC
## + M_DEBTINC            1 1314269343 7.8516e+10 69422
## + IMP_CLAGE            1  631551977 7.9198e+10 69458
## + FLAG.Reason.HomeImp  1  444674925 7.9385e+10 69468
## + IMP_DEBTINC          1  370688063 7.9459e+10 69472
## + FLAG.Reason.DebtCon  1  300159688 7.9530e+10 69475
## + FLAG.Job.Self        1  272915893 7.9557e+10 69477
## + IMP_YOJ              1  243961126 7.9586e+10 69478
## + IMP_VALUE            1  207012750 7.9623e+10 69480
## + IMP_MORTDUE          1  129159594 7.9701e+10 69484
## + M_DEROG              1  117402092 7.9713e+10 69485
## + FLAG.Job.Sales       1  111613787 7.9718e+10 69485
## + IMP_NINQ             1  110642705 7.9719e+10 69485
## + M_DELINQ             1  100672926 7.9729e+10 69486
## + M_VALUE              1   62048404 7.9768e+10 69488
## + M_NINQ               1   51313552 7.9779e+10 69488
## <none>                              7.9830e+10 69489
## + IMP_DEROG            1   29725067 7.9800e+10 69489
## + FLAG.Job.ProfExe     1   24932871 7.9805e+10 69490
## + FLAG.Job.Mgr         1   19707803 7.9810e+10 69490
## + M_CLAGE              1   15711294 7.9814e+10 69490
## + M_YOJ                1   10875253 7.9819e+10 69490
## + FLAG.Job.Other       1    7985583 7.9822e+10 69490
## + FLAG.Job.Office      1    6072136 7.9824e+10 69491
## + M_CLNO               1    5861930 7.9824e+10 69491
## + M_MORTDUE            1    2076342 7.9828e+10 69491
##
## Step:  AIC=69422.1
## TARGET_LOSS_AMT ~ TARGET_BAD_FLAG + LOAN + IMP_DELINQ + IMP_CLNO +
##     M_DEBTINC
##
##                       Df Sum of Sq        RSS   AIC
## + IMP_CLAGE            1 608553121 7.7907e+10 69392
## + FLAG.Reason.HomeImp  1 437233426 7.8078e+10 69401
## + IMP_DEBTINC          1 413913446 7.8102e+10 69402
## + FLAG.Reason.DebtCon  1 292262695 7.8223e+10 69409
## + IMP_YOJ              1 276435044 7.8239e+10 69409
## + FLAG.Job.Self        1 268894631 7.8247e+10 69410
## + IMP_VALUE            1 237644721 7.8278e+10 69412
## + IMP_MORTDUE          1 164577782 7.8351e+10 69415
## + FLAG.Job.Sales       1 113467133 7.8402e+10 69418
## + M_DEROG              1 109832285 7.8406e+10 69418
```

```
## + M_DELINQ             1  92861625 7.8423e+10 69419
## + IMP_NINQ             1  62206148 7.8453e+10 69421
## + M_NINQ               1  43965265 7.8472e+10 69422
## + M_VALUE              1  40637628 7.8475e+10 69422
## <none>                             7.8516e+10 69422
## + FLAG.Job.ProfExe     1  29583553 7.8486e+10 69423
## + IMP_DEROG            1  21416138 7.8494e+10 69423
## + FLAG.Job.Mgr         1  17669861 7.8498e+10 69423
## + M_CLAGE              1  16260622 7.8499e+10 69423
## + M_YOJ                1  10149828 7.8506e+10 69424
## + FLAG.Job.Other       1   7484453 7.8508e+10 69424
## + M_CLNO               1   5880590 7.8510e+10 69424
## + FLAG.Job.Office      1   4666111 7.8511e+10 69424
## + M_MORTDUE            1   3280565 7.8512e+10 69424
##
## Step:  AIC=69391.87
## TARGET_LOSS_AMT ~ TARGET_BAD_FLAG + LOAN + IMP_DELINQ + IMP_CLNO +
##     M_DEBTINC + IMP_CLAGE
##
##                       Df Sum of Sq        RSS   AIC
## + IMP_DEBTINC          1 358866553 7.7548e+10 69375
## + FLAG.Reason.HomeImp  1 344143531 7.7563e+10 69376
## + IMP_VALUE            1 316399374 7.7591e+10 69377
## + FLAG.Job.Self        1 242241993 7.7665e+10 69381
## + FLAG.Reason.DebtCon  1 203047378 7.7704e+10 69383
## + IMP_MORTDUE          1 187499667 7.7720e+10 69384
## + IMP_YOJ              1 161830757 7.7745e+10 69385
## + FLAG.Job.Sales       1 126997223 7.7780e+10 69387
## + M_DELINQ             1 108757439 7.7798e+10 69388
## + M_DEROG              1 106685890 7.7800e+10 69388
## + M_NINQ               1  51703361 7.7855e+10 69391
## + M_VALUE              1  44961885 7.7862e+10 69391
## <none>                             7.7907e+10 69392
## + IMP_NINQ             1  26298378 7.7881e+10 69392
## + FLAG.Job.Mgr         1  24423623 7.7883e+10 69393
## + FLAG.Job.ProfExe     1  14918150 7.7892e+10 69393
## + M_CLAGE              1  12331215 7.7895e+10 69393
## + IMP_DEROG            1  11715673 7.7895e+10 69393
## + FLAG.Job.Other       1   7888613 7.7899e+10 69393
## + M_CLNO               1   6420202 7.7901e+10 69394
## + FLAG.Job.Office      1   5646884 7.7901e+10 69394
## + M_YOJ                1    817215 7.7906e+10 69394
## + M_MORTDUE            1       553 7.7907e+10 69394
##
## Step:  AIC=69374.75
## TARGET_LOSS_AMT ~ TARGET_BAD_FLAG + LOAN + IMP_DELINQ + IMP_CLNO +
##     M_DEBTINC + IMP_CLAGE + IMP_DEBTINC
##
##                       Df Sum of Sq        RSS   AIC
## + FLAG.Reason.HomeImp  1 340643054 7.7208e+10 69359
```

```
## + IMP_VALUE            1 282421414 7.7266e+10 69362
## + FLAG.Job.Self        1 238956049 7.7309e+10 69364
## + FLAG.Reason.DebtCon  1 183925711 7.7364e+10 69367
## + IMP_MORTDUE          1 151905857 7.7396e+10 69369
## + IMP_YOJ              1 142246100 7.7406e+10 69369
## + M_DEROG              1 121081639 7.7427e+10 69370
## + M_DELINQ             1 105652636 7.7443e+10 69371
## + FLAG.Job.Sales       1 104719198 7.7444e+10 69371
## + M_VALUE              1  60965971 7.7487e+10 69373
## <none>                             7.7548e+10 69375
## + M_NINQ               1  32308919 7.7516e+10 69375
## + FLAG.Job.Mgr         1  31934943 7.7516e+10 69375
## + FLAG.Job.Other       1  15870411 7.7532e+10 69376
## + IMP_NINQ             1  15505304 7.7533e+10 69376
## + IMP_DEROG            1  14839189 7.7533e+10 69376
## + FLAG.Job.Office      1   8533059 7.7540e+10 69376
## + M_MORTDUE            1   5890638 7.7542e+10 69376
## + FLAG.Job.ProfExe     1   4443292 7.7544e+10 69377
## + M_CLAGE              1   3194632 7.7545e+10 69377
## + M_CLNO               1   2212929 7.7546e+10 69377
## + M_YOJ                1   1615787 7.7547e+10 69377
##
## Step:  AIC=69358.52
## TARGET_LOSS_AMT ~ TARGET_BAD_FLAG + LOAN + IMP_DELINQ + IMP_CLNO +
##     M_DEBTINC + IMP_CLAGE + IMP_DEBTINC + FLAG.Reason.HomeImp
##
##                       Df Sum of Sq        RSS   AIC
## + FLAG.Job.Self        1 342206598 7.6865e+10 69342
## + IMP_VALUE            1 321410846 7.6886e+10 69343
## + IMP_MORTDUE          1 161506107 7.7046e+10 69352
## + M_DEROG              1 143994968 7.7064e+10 69353
## + IMP_YOJ              1 115512903 7.7092e+10 69354
## + M_DELINQ             1 114882244 7.7093e+10 69354
## + FLAG.Job.Sales       1  80012648 7.7128e+10 69356
## + M_VALUE              1  61756213 7.7146e+10 69357
## + FLAG.Reason.DebtCon  1  54581761 7.7153e+10 69358
## + FLAG.Job.Mgr         1  44306559 7.7163e+10 69358
## <none>                             7.7208e+10 69359
## + M_NINQ               1  32213477 7.7175e+10 69359
## + M_MORTDUE            1  20705477 7.7187e+10 69359
## + FLAG.Job.Other       1  20344205 7.7187e+10 69359
## + IMP_DEROG            1  12860514 7.7195e+10 69360
## + M_CLAGE              1   6654063 7.7201e+10 69360
## + FLAG.Job.Office      1   5466670 7.7202e+10 69360
## + IMP_NINQ             1   4503415 7.7203e+10 69360
## + M_YOJ                1   3445553 7.7204e+10 69360
## + M_CLNO               1   3411925 7.7204e+10 69360
## + FLAG.Job.ProfExe     1   1994323 7.7206e+10 69360
##
## Step:  AIC=69342.12
```

```
## TARGET_LOSS_AMT ~ TARGET_BAD_FLAG + LOAN + IMP_DELINQ + IMP_CLNO +
##     M_DEBTINC + IMP_CLAGE + IMP_DEBTINC + FLAG.Reason.HomeImp +
##     FLAG.Job.Self
##
##                        Df Sum of Sq        RSS   AIC
## + IMP_VALUE             1 244906089 7.6620e+10 69331
## + M_DEROG               1 132051022 7.6733e+10 69337
## + IMP_MORTDUE           1 120451279 7.6745e+10 69338
## + M_DELINQ              1 115637390 7.6750e+10 69338
## + IMP_YOJ               1  95428510 7.6770e+10 69339
## + FLAG.Job.Sales        1  82887828 7.6783e+10 69340
## + M_VALUE               1  65702932 7.6800e+10 69341
## + FLAG.Reason.DebtCon   1  49058281 7.6816e+10 69341
## + M_NINQ                1  47136566 7.6818e+10 69342
## <none>                             7.6865e+10 69342
## + FLAG.Job.Mgr          1  28666746 7.6837e+10 69343
## + M_MORTDUE             1  24959484 7.6840e+10 69343
## + IMP_DEROG             1  16768071 7.6849e+10 69343
## + M_CLAGE               1   5958992 7.6859e+10 69344
## + IMP_NINQ              1   4494415 7.6861e+10 69344
## + M_CLNO                1   3279832 7.6862e+10 69344
## + FLAG.Job.Other        1   3167984 7.6862e+10 69344
## + M_YOJ                 1   2000766 7.6863e+10 69344
## + FLAG.Job.Office       1    695210 7.6865e+10 69344
## + FLAG.Job.ProfExe      1    364373 7.6865e+10 69344
##
## Step:  AIC=69330.9
## TARGET_LOSS_AMT ~ TARGET_BAD_FLAG + LOAN + IMP_DELINQ + IMP_CLNO +
##     M_DEBTINC + IMP_CLAGE + IMP_DEBTINC + FLAG.Reason.HomeImp +
##     FLAG.Job.Self + IMP_VALUE
##
##                        Df Sum of Sq        RSS   AIC
## + M_DEROG               1 130185263 7.6490e+10 69326
## + M_DELINQ              1 100579780 7.6520e+10 69327
## + IMP_YOJ               1  83263636 7.6537e+10 69328
## + FLAG.Job.Sales        1  73793029 7.6547e+10 69329
## + M_VALUE               1  71527216 7.6549e+10 69329
## + M_MORTDUE             1  52159898 7.6568e+10 69330
## + FLAG.Reason.DebtCon   1  44986611 7.6576e+10 69330
## + M_NINQ                1  42242747 7.6578e+10 69331
## + FLAG.Job.Mgr          1  38004592 7.6582e+10 69331
## <none>                             7.6620e+10 69331
## + IMP_DEROG             1  22182341 7.6598e+10 69332
## + FLAG.Job.ProfExe      1  12244387 7.6608e+10 69332
## + M_CLAGE               1   7322974 7.6613e+10 69333
## + IMP_NINQ              1   6805224 7.6614e+10 69333
## + M_CLNO                1   3236198 7.6617e+10 69333
## + FLAG.Job.Other        1   2347833 7.6618e+10 69333
## + IMP_MORTDUE           1    612806 7.6620e+10 69333
## + M_YOJ                 1      8744 7.6620e+10 69333
```

```
## + FLAG.Job.Office      1       354 7.6620e+10 69333
##
## Step:  AIC=69325.86
## TARGET_LOSS_AMT ~ TARGET_BAD_FLAG + LOAN + IMP_DELINQ + IMP_CLNO +
##     M_DEBTINC + IMP_CLAGE + IMP_DEBTINC + FLAG.Reason.HomeImp +
##     FLAG.Job.Self + IMP_VALUE + M_DEROG
##
##                        Df Sum of Sq        RSS   AIC
## + IMP_YOJ               1  94345702 7.6396e+10 69323
## + M_MORTDUE             1  88124861 7.6402e+10 69323
## + M_VALUE               1  87088939 7.6403e+10 69323
## + FLAG.Job.Sales        1  71456009 7.6419e+10 69324
## + FLAG.Reason.DebtCon   1  71179229 7.6419e+10 69324
## + IMP_DEROG             1  68954694 7.6421e+10 69324
## <none>                             7.6490e+10 69326
## + FLAG.Job.Mgr          1  34456418 7.6456e+10 69326
## + M_CLNO                1  24589483 7.6466e+10 69327
## + FLAG.Job.ProfExe      1  20548853 7.6470e+10 69327
## + IMP_NINQ              1  12601823 7.6478e+10 69327
## + M_CLAGE               1   7275544 7.6483e+10 69327
## + M_DELINQ              1   5131396 7.6485e+10 69328
## + M_YOJ                 1   5026669 7.6485e+10 69328
## + FLAG.Job.Other        1   1005351 7.6489e+10 69328
## + M_NINQ                1    372820 7.6490e+10 69328
## + IMP_MORTDUE           1    197034 7.6490e+10 69328
## + FLAG.Job.Office       1     10139 7.6490e+10 69328
##
## Step:  AIC=69322.74
## TARGET_LOSS_AMT ~ TARGET_BAD_FLAG + LOAN + IMP_DELINQ + IMP_CLNO +
##     M_DEBTINC + IMP_CLAGE + IMP_DEBTINC + FLAG.Reason.HomeImp +
##     FLAG.Job.Self + IMP_VALUE + M_DEROG + IMP_YOJ
##
##                        Df Sum of Sq        RSS   AIC
## + M_VALUE               1  89043594 7.6307e+10 69320
## + M_MORTDUE             1  77882691 7.6318e+10 69321
## + FLAG.Reason.DebtCon   1  73384520 7.6323e+10 69321
## + FLAG.Job.Sales        1  66819149 7.6329e+10 69321
## + IMP_DEROG             1  61052061 7.6335e+10 69321
## <none>                             7.6396e+10 69323
## + FLAG.Job.Mgr          1  30016076 7.6366e+10 69323
## + FLAG.Job.ProfExe      1  23583796 7.6372e+10 69323
## + M_CLNO                1  22637734 7.6373e+10 69324
## + M_DELINQ              1  11008182 7.6385e+10 69324
## + IMP_NINQ              1   9979883 7.6386e+10 69324
## + M_CLAGE               1   4818930 7.6391e+10 69324
## + IMP_MORTDUE           1   3223898 7.6393e+10 69325
## + FLAG.Job.Other        1   1975270 7.6394e+10 69325
## + M_YOJ                 1   1904640 7.6394e+10 69325
## + FLAG.Job.Office       1    186696 7.6396e+10 69325
## + M_NINQ                1      1287 7.6396e+10 69325
```

```
##
## Step:  AIC=69319.91
## TARGET_LOSS_AMT ~ TARGET_BAD_FLAG + LOAN + IMP_DELINQ + IMP_CLNO +
##     M_DEBTINC + IMP_CLAGE + IMP_DEBTINC + FLAG.Reason.HomeImp +
##     FLAG.Job.Self + IMP_VALUE + M_DEROG + IMP_YOJ + M_VALUE
##
##                        Df Sum of Sq        RSS   AIC
## + FLAG.Job.Sales        1  68600482 7.6238e+10 69318
## + M_MORTDUE             1  65625566 7.6241e+10 69318
## + FLAG.Reason.DebtCon   1  61000540 7.6246e+10 69319
## + IMP_DEROG             1  60033994 7.6247e+10 69319
## <none>                             7.6307e+10 69320
## + FLAG.Job.Mgr          1  29565066 7.6277e+10 69320
## + FLAG.Job.ProfExe      1  24428213 7.6282e+10 69321
## + M_CLNO                1  17713092 7.6289e+10 69321
## + IMP_NINQ              1  13081836 7.6294e+10 69321
## + M_DELINQ              1  11504437 7.6295e+10 69321
## + IMP_MORTDUE           1   5909771 7.6301e+10 69322
## + M_CLAGE               1   3191176 7.6304e+10 69322
## + FLAG.Job.Other        1   2808221 7.6304e+10 69322
## + M_YOJ                 1   1775539 7.6305e+10 69322
## + FLAG.Job.Office       1    203614 7.6307e+10 69322
## + M_NINQ                1      1762 7.6307e+10 69322
##
## Step:  AIC=69318.19
## TARGET_LOSS_AMT ~ TARGET_BAD_FLAG + LOAN + IMP_DELINQ + IMP_CLNO +
##     M_DEBTINC + IMP_CLAGE + IMP_DEBTINC + FLAG.Reason.HomeImp +
##     FLAG.Job.Self + IMP_VALUE + M_DEROG + IMP_YOJ + M_VALUE +
##     FLAG.Job.Sales
##
##                        Df Sum of Sq        RSS   AIC
## + FLAG.Reason.DebtCon   1  65083049 7.6173e+10 69317
## + M_MORTDUE             1  62659602 7.6176e+10 69317
## + IMP_DEROG             1  58604852 7.6180e+10 69317
## <none>                             7.6238e+10 69318
## + FLAG.Job.Mgr          1  24471816 7.6214e+10 69319
## + M_CLNO                1  19107841 7.6219e+10 69319
## + FLAG.Job.ProfExe      1  17790963 7.6221e+10 69319
## + IMP_NINQ              1  17229273 7.6221e+10 69319
## + M_DELINQ              1  11759086 7.6227e+10 69320
## + FLAG.Job.Other        1   7261487 7.6231e+10 69320
## + IMP_MORTDUE           1   5726918 7.6233e+10 69320
## + M_CLAGE               1   3964646 7.6234e+10 69320
## + M_YOJ                 1   1360098 7.6237e+10 69320
## + M_NINQ                1     54229 7.6238e+10 69320
## + FLAG.Job.Office       1         9 7.6238e+10 69320
##
## Step:  AIC=69316.65
## TARGET_LOSS_AMT ~ TARGET_BAD_FLAG + LOAN + IMP_DELINQ + IMP_CLNO +
##     M_DEBTINC + IMP_CLAGE + IMP_DEBTINC + FLAG.Reason.HomeImp +
```

```
##     FLAG.Job.Self + IMP_VALUE + M_DEROG + IMP_YOJ + M_VALUE +
##     FLAG.Job.Sales + FLAG.Reason.DebtCon
##
##                    Df Sum of Sq        RSS   AIC
## + IMP_DEROG         1  57381088 7.6116e+10 69316
## + M_MORTDUE         1  46417747 7.6127e+10 69316
## <none>                         7.6173e+10 69317
## + FLAG.Job.Mgr      1  22170097 7.6151e+10 69317
## + M_DELINQ          1  19340454 7.6154e+10 69318
## + IMP_NINQ          1  19289707 7.6154e+10 69318
## + FLAG.Job.ProfExe  1  13769284 7.6159e+10 69318
## + FLAG.Job.Other    1   9414541 7.6164e+10 69318
## + IMP_MORTDUE       1   4972817 7.6168e+10 69318
## + M_CLNO            1   4698938 7.6169e+10 69318
## + M_NINQ            1   1134278 7.6172e+10 69319
## + M_YOJ             1    282333 7.6173e+10 69319
## + M_CLAGE           1     97021 7.6173e+10 69319
## + FLAG.Job.Office   1     32618 7.6173e+10 69319
##
## Step:  AIC=69315.53
## TARGET_LOSS_AMT ~ TARGET_BAD_FLAG + LOAN + IMP_DELINQ + IMP_CLNO +
##     M_DEBTINC + IMP_CLAGE + IMP_DEBTINC + FLAG.Reason.HomeImp +
##     FLAG.Job.Self + IMP_VALUE + M_DEROG + IMP_YOJ + M_VALUE +
##     FLAG.Job.Sales + FLAG.Reason.DebtCon + IMP_DEROG
##
##                    Df Sum of Sq        RSS   AIC
## + M_MORTDUE         1  44086715 7.6072e+10 69315
## <none>                         7.6116e+10 69316
## + M_DELINQ          1  26331932 7.6090e+10 69316
## + FLAG.Job.Mgr      1  23965044 7.6092e+10 69316
## + IMP_NINQ          1  13296030 7.6103e+10 69317
## + FLAG.Job.ProfExe  1  11084915 7.6105e+10 69317
## + FLAG.Job.Other    1   7753647 7.6108e+10 69317
## + M_CLNO            1   5122837 7.6111e+10 69317
## + IMP_MORTDUE       1   3894315 7.6112e+10 69317
## + M_NINQ            1   2737789 7.6113e+10 69317
## + M_YOJ             1    986884 7.6115e+10 69317
## + FLAG.Job.Office   1    164072 7.6116e+10 69318
## + M_CLAGE           1    132234 7.6116e+10 69318
##
## Step:  AIC=69315.13
## TARGET_LOSS_AMT ~ TARGET_BAD_FLAG + LOAN + IMP_DELINQ + IMP_CLNO +
##     M_DEBTINC + IMP_CLAGE + IMP_DEBTINC + FLAG.Reason.HomeImp +
##     FLAG.Job.Self + IMP_VALUE + M_DEROG + IMP_YOJ + M_VALUE +
##     FLAG.Job.Sales + FLAG.Reason.DebtCon + IMP_DEROG + M_MORTDUE
##
##                    Df Sum of Sq        RSS   AIC
## <none>                         7.6072e+10 69315
## + M_DELINQ          1  35717002 7.6036e+10 69315
## + FLAG.Job.Mgr      1  21655226 7.6050e+10 69316
```

```
## + IMP_NINQ          1  13664643 7.6058e+10 69316
## + IMP_MORTDUE       1  10521753 7.6061e+10 69317
## + FLAG.Job.ProfExe  1   8509234 7.6063e+10 69317
## + M_NINQ            1   6234946 7.6066e+10 69317
## + M_YOJ             1   5704210 7.6066e+10 69317
## + FLAG.Job.Other    1   5361326 7.6066e+10 69317
## + M_CLNO            1   4326310 7.6067e+10 69317
## + M_CLAGE           1    482535 7.6071e+10 69317
## + FLAG.Job.Office   1    416534 7.6071e+10 69317
```

```r
summary( lr_model )
```

```
##
## Call:
## glm(formula = TARGET_BAD_FLAG ~ LOAN + IMP_MORTDUE + M_MORTDUE +
##     IMP_VALUE + M_VALUE + IMP_YOJ + M_YOJ + IMP_DEROG + M_DEROG +
##     IMP_DELINQ + M_DELINQ + IMP_CLAGE + M_CLAGE + IMP_NINQ +
##     M_NINQ + IMP_CLNO + M_CLNO + IMP_DEBTINC + M_DEBTINC + FLAG.Job.Mgr +
##     FLAG.Job.Office + FLAG.Job.Other + FLAG.Job.ProfExe + FLAG.Job.Sales +
##     FLAG.Job.Self + FLAG.Reason.DebtCon + FLAG.Reason.HomeImp,
##     family = "binomial", data = df_train)
##
## Coefficients:
##                       Estimate Std. Error z value Pr(>|z|)
## (Intercept)         -6.817e+00  6.558e-01 -10.395  < 2e-16 ***
## LOAN                -8.996e-06  5.694e-06  -1.580 0.114122
## IMP_MORTDUE         -3.482e-06  2.092e-06  -1.664 0.096053 .
## M_MORTDUE            3.647e-01  2.491e-01   1.464 0.143231
## IMP_VALUE            4.356e-06  1.495e-06   2.914 0.003572 **
## M_VALUE              4.945e+00  6.167e-01   8.017 1.08e-15 ***
## IMP_YOJ             -2.010e-02  8.271e-03  -2.430 0.015103 *
## M_YOJ               -7.720e-01  2.427e-01  -3.181 0.001466 **
## IMP_DEROG            5.869e-01  7.617e-02   7.706 1.30e-14 ***
## M_DEROG             -2.655e+00  3.603e-01  -7.367 1.74e-13 ***
## IMP_DELINQ           8.182e-01  6.264e-02  13.062  < 2e-16 ***
## M_DELINQ            -1.101e+00  4.859e-01  -2.266 0.023465 *
## IMP_CLAGE           -5.466e-03  8.103e-04  -6.746 1.52e-11 ***
## M_CLAGE              9.834e-01  4.403e-01   2.233 0.025529 *
## IMP_NINQ             1.528e-01  3.175e-02   4.813 1.48e-06 ***
## M_NINQ              -2.494e-01  4.538e-01  -0.550 0.582542
## IMP_CLNO            -1.600e-02  6.331e-03  -2.527 0.011513 *
## M_CLNO               2.693e+00  7.552e-01   3.565 0.000363 ***
## IMP_DEBTINC          9.231e-02  1.017e-02   9.075  < 2e-16 ***
## M_DEBTINC            2.679e+00  1.144e-01  23.425  < 2e-16 ***
## FLAG.Job.Mgr         2.091e+00  4.989e-01   4.191 2.77e-05 ***
## FLAG.Job.Office      1.414e+00  5.005e-01   2.824 0.004736 **
## FLAG.Job.Other       2.081e+00  4.825e-01   4.314 1.60e-05 ***
## FLAG.Job.ProfExe     1.972e+00  4.965e-01   3.971 7.16e-05 ***
## FLAG.Job.Sales       3.240e+00  5.794e-01   5.592 2.24e-08 ***
## FLAG.Job.Self        2.518e+00  5.650e-01   4.456 8.34e-06 ***
```

```
## FLAG.Reason.DebtCon -1.318e-01  3.661e-01  -0.360 0.718960
## FLAG.Reason.HomeImp -5.659e-02  3.728e-01  -0.152 0.879329
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## (Dispersion parameter for binomial family taken to be 1)
##
##     Null deviance: 4155.3  on 4141  degrees of freedom
## Residual deviance: 2248.2  on 4114  degrees of freedom
## AIC: 2304.2
##
## Number of Fisher Scoring iterations: 6
```

```
plrf = predict( lrf_model, df_test )
head( plr )
```

```
##         4         6         7        15        17        18
## 0.9732766 0.1167694 0.9808605 0.7202890 0.9981836 0.1588877
```

```
RMSElrf = sqrt( mean( ( df_test$TARGET_LOSS_AMT - plrf )^2 ) )
```

#Linear regression model with backward variable selection

```
theUpper_LR = lm( TARGET_LOSS_AMT ~ ., data=df_train )
theLower_LR = lm( TARGET_LOSS_AMT ~ 1, data=df_train )

summary( theUpper_LR )
```

```
##
## Call:
## lm(formula = TARGET_LOSS_AMT ~ ., data = df_train)
##
## Residuals:
##    Min     1Q Median     3Q    Max
## -22532  -1612    122   1526  53770
##
## Coefficients:
##                      Estimate Std. Error t value Pr(>|t|)
## (Intercept)         -4.383e+03  5.806e+02  -7.549 5.38e-14 ***
## TARGET_BAD_FLAG      1.165e+04  2.238e+02  52.031  < 2e-16 ***
## LOAN                 1.516e-01  6.637e-03  22.837  < 2e-16 ***
## IMP_MORTDUE         -1.450e-03  2.681e-03  -0.541  0.58876
## M_MORTDUE            4.727e+02  2.789e+02   1.695  0.09013 .
## IMP_VALUE            6.187e-03  2.047e-03   3.022  0.00253 **
## M_VALUE              9.512e+02  5.038e+02   1.888  0.05909 .
## IMP_YOJ             -2.223e+01  9.733e+00  -2.284  0.02240 *
## M_YOJ               -1.665e+02  2.696e+02  -0.618  0.53685
## IMP_DEROG            1.593e+02  9.011e+01   1.768  0.07721 .
## M_DEROG             -6.060e+02  3.405e+02  -1.780  0.07517 .
## IMP_DELINQ           8.544e+02  6.792e+01  12.579  < 2e-16 ***
## M_DELINQ            -5.680e+02  4.313e+02  -1.317  0.18801
```

```
## IMP_CLAGE           -3.957e+00  8.612e-01  -4.595 4.46e-06 ***
## M_CLAGE             -7.427e+02  6.306e+02  -1.178  0.23894
## IMP_NINQ             3.711e+01  4.343e+01   0.854  0.39290
## M_NINQ              -4.934e+01  4.089e+02  -0.121  0.90396
## IMP_CLNO             6.420e+01  7.814e+00   8.216 2.80e-16 ***
## M_CLNO               9.703e+02  8.090e+02   1.199  0.23045
## IMP_DEBTINC          3.953e+01  8.991e+00   4.397 1.12e-05 ***
## M_DEBTINC            1.634e+03  1.962e+02   8.330  < 2e-16 ***
## FLAG.Job.Mgr        -8.142e+02  4.260e+02  -1.911  0.05603 .
## FLAG.Job.Office     -6.088e+02  4.200e+02  -1.449  0.14734
## FLAG.Job.Other      -5.605e+02  3.964e+02  -1.414  0.15746
## FLAG.Job.ProfExe    -7.224e+02  4.157e+02  -1.738  0.08232 .
## FLAG.Job.Sales       3.507e+02  6.345e+02   0.553  0.58045
## FLAG.Job.Self        7.772e+02  5.446e+02   1.427  0.15361
## FLAG.Reason.DebtCon -4.410e+02  3.756e+02  -1.174  0.24043
## FLAG.Reason.HomeImp -1.169e+03  3.817e+02  -3.062  0.00221 **
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 4296 on 4113 degrees of freedom
## Multiple R-squared:  0.6595, Adjusted R-squared:  0.6572
## F-statistic: 284.5 on 28 and 4113 DF,  p-value: < 2.2e-16
```

```r
summary( theLower_LR )
```

```
##
## Call:
## lm(formula = TARGET_LOSS_AMT ~ 1, data = df_train)
##
## Residuals:
##    Min     1Q Median     3Q    Max
##  -2726  -2726  -2726  -2726  76261
##
## Coefficients:
##             Estimate Std. Error t value Pr(>|t|)
## (Intercept)     2726        114   23.92   <2e-16 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 7337 on 4141 degrees of freedom
```

```r
lr_model = stepAIC(theUpper_LR, direction="backward",
scope=list(lower=theLower_LR, upper=theUpper_LR))
```

```
## Start:  AIC=69327.35
## TARGET_LOSS_AMT ~ TARGET_BAD_FLAG + LOAN + IMP_MORTDUE + M_MORTDUE +
##     IMP_VALUE + M_VALUE + IMP_YOJ + M_YOJ + IMP_DEROG + M_DEROG +
##     IMP_DELINQ + M_DELINQ + IMP_CLAGE + M_CLAGE + IMP_NINQ +
##     M_NINQ + IMP_CLNO + M_CLNO + IMP_DEBTINC + M_DEBTINC + FLAG.Job.Mgr +
##     FLAG.Job.Office + FLAG.Job.Other + FLAG.Job.ProfExe + FLAG.Job.Sales +
##     FLAG.Job.Self + FLAG.Reason.DebtCon + FLAG.Reason.HomeImp
```

```
##
##                        Df  Sum of Sq        RSS   AIC
## - M_NINQ                1 2.6867e+05 7.5893e+10 69325
## - IMP_MORTDUE           1 5.3940e+06 7.5898e+10 69326
## - FLAG.Job.Sales        1 5.6380e+06 7.5898e+10 69326
## - M_YOJ                 1 7.0388e+06 7.5899e+10 69326
## - IMP_NINQ              1 1.3472e+07 7.5906e+10 69326
## - FLAG.Reason.DebtCon   1 2.5436e+07 7.5918e+10 69327
## - M_CLAGE               1 2.5597e+07 7.5918e+10 69327
## - M_CLNO                1 2.6543e+07 7.5919e+10 69327
## - M_DELINQ              1 3.1991e+07 7.5924e+10 69327
## <none>                               7.5892e+10 69327
## - FLAG.Job.Other        1 3.6889e+07 7.5929e+10 69327
## - FLAG.Job.Self         1 3.7583e+07 7.5930e+10 69327
## - FLAG.Job.Office       1 3.8755e+07 7.5931e+10 69327
## - M_MORTDUE             1 5.3018e+07 7.5945e+10 69328
## - FLAG.Job.ProfExe      1 5.5725e+07 7.5948e+10 69328
## - IMP_DEROG             1 5.7648e+07 7.5950e+10 69328
## - M_DEROG               1 5.8453e+07 7.5951e+10 69329
## - M_VALUE               1 6.5775e+07 7.5958e+10 69329
## - FLAG.Job.Mgr          1 6.7410e+07 7.5960e+10 69329
## - IMP_YOJ               1 9.6291e+07 7.5989e+10 69331
## - IMP_VALUE             1 1.6850e+08 7.6061e+10 69335
## - FLAG.Reason.HomeImp   1 1.7299e+08 7.6065e+10 69335
## - IMP_DEBTINC           1 3.5676e+08 7.6249e+10 69345
## - IMP_CLAGE             1 3.8957e+08 7.6282e+10 69347
## - IMP_CLNO              1 1.2454e+09 7.7138e+10 69393
## - M_DEBTINC             1 1.2805e+09 7.7173e+10 69395
## - IMP_DELINQ            1 2.9198e+09 7.8812e+10 69482
## - LOAN                  1 9.6232e+09 8.5515e+10 69820
## - TARGET_BAD_FLAG       1 4.9953e+10 1.2585e+11 71420
##
## Step:  AIC=69325.36
## TARGET_LOSS_AMT ~ TARGET_BAD_FLAG + LOAN + IMP_MORTDUE + M_MORTDUE +
##     IMP_VALUE + M_VALUE + IMP_YOJ + M_YOJ + IMP_DEROG + M_DEROG +
##     IMP_DELINQ + M_DELINQ + IMP_CLAGE + M_CLAGE + IMP_NINQ +
##     IMP_CLNO + M_CLNO + IMP_DEBTINC + M_DEBTINC + FLAG.Job.Mgr +
##     FLAG.Job.Office + FLAG.Job.Other + FLAG.Job.ProfExe + FLAG.Job.Sales +
##     FLAG.Job.Self + FLAG.Reason.DebtCon + FLAG.Reason.HomeImp
##
##                        Df  Sum of Sq        RSS   AIC
## - IMP_MORTDUE           1 5.3873e+06 7.5898e+10 69324
## - FLAG.Job.Sales        1 5.7490e+06 7.5898e+10 69324
## - M_YOJ                 1 7.3096e+06 7.5900e+10 69324
## - IMP_NINQ              1 1.3797e+07 7.5906e+10 69324
## - FLAG.Reason.DebtCon   1 2.5431e+07 7.5918e+10 69325
## - M_CLAGE               1 2.5470e+07 7.5918e+10 69325
## - M_CLNO                1 2.6657e+07 7.5919e+10 69325
## <none>                               7.5893e+10 69325
## - FLAG.Job.Other        1 3.6768e+07 7.5929e+10 69325
```

```
## - FLAG.Job.Self        1 3.7339e+07 7.5930e+10 69325
## - FLAG.Job.Office      1 3.8625e+07 7.5931e+10 69325
## - M_DELINQ             1 4.3696e+07 7.5936e+10 69326
## - M_MORTDUE            1 5.2756e+07 7.5945e+10 69326
## - FLAG.Job.ProfExe     1 5.5578e+07 7.5948e+10 69326
## - IMP_DEROG            1 5.7397e+07 7.5950e+10 69326
## - M_DEROG              1 5.9267e+07 7.5952e+10 69327
## - M_VALUE              1 6.6186e+07 7.5959e+10 69327
## - FLAG.Job.Mgr         1 6.7246e+07 7.5960e+10 69327
## - IMP_YOJ              1 9.6285e+07 7.5989e+10 69329
## - IMP_VALUE            1 1.6833e+08 7.6061e+10 69333
## - FLAG.Reason.HomeImp  1 1.7300e+08 7.6066e+10 69333
## - IMP_DEBTINC          1 3.6149e+08 7.6254e+10 69343
## - IMP_CLAGE            1 3.8930e+08 7.6282e+10 69345
## - IMP_CLNO             1 1.2452e+09 7.7138e+10 69391
## - M_DEBTINC            1 1.2811e+09 7.7174e+10 69393
## - IMP_DELINQ           1 2.9211e+09 7.8814e+10 69480
## - LOAN                 1 9.6465e+09 8.5539e+10 69819
## - TARGET_BAD_FLAG      1 4.9953e+10 1.2585e+11 71418
##
## Step:  AIC=69323.65
## TARGET_LOSS_AMT ~ TARGET_BAD_FLAG + LOAN + M_MORTDUE + IMP_VALUE +
##     M_VALUE + IMP_YOJ + M_YOJ + IMP_DEROG + M_DEROG + IMP_DELINQ +
##     M_DELINQ + IMP_CLAGE + M_CLAGE + IMP_NINQ + IMP_CLNO + M_CLNO +
##     IMP_DEBTINC + M_DEBTINC + FLAG.Job.Mgr + FLAG.Job.Office +
##     FLAG.Job.Other + FLAG.Job.ProfExe + FLAG.Job.Sales + FLAG.Job.Self +
##     FLAG.Reason.DebtCon + FLAG.Reason.HomeImp
##
##                       Df  Sum of Sq        RSS   AIC
## - FLAG.Job.Sales       1 5.8425e+06 7.5904e+10 69322
## - M_YOJ                1 6.7645e+06 7.5905e+10 69322
## - IMP_NINQ             1 1.3324e+07 7.5911e+10 69322
## - FLAG.Reason.DebtCon  1 2.6226e+07 7.5924e+10 69323
## - M_CLAGE              1 2.7314e+07 7.5925e+10 69323
## - M_CLNO               1 2.8803e+07 7.5927e+10 69323
## - FLAG.Job.Other       1 3.5965e+07 7.5934e+10 69324
## <none>                              7.5898e+10 69324
## - FLAG.Job.Self        1 3.7426e+07 7.5935e+10 69324
## - FLAG.Job.Office      1 3.7984e+07 7.5936e+10 69324
## - M_DELINQ             1 4.4378e+07 7.5942e+10 69324
## - M_MORTDUE            1 4.8231e+07 7.5946e+10 69324
## - FLAG.Job.ProfExe     1 5.6568e+07 7.5955e+10 69325
## - IMP_DEROG            1 5.8934e+07 7.5957e+10 69325
## - M_DEROG              1 5.9478e+07 7.5957e+10 69325
## - M_VALUE              1 6.4251e+07 7.5962e+10 69325
## - FLAG.Job.Mgr         1 6.8355e+07 7.5966e+10 69325
## - IMP_YOJ              1 9.2080e+07 7.5990e+10 69327
## - FLAG.Reason.HomeImp  1 1.7375e+08 7.6072e+10 69331
## - IMP_VALUE            1 2.6965e+08 7.6168e+10 69336
## - IMP_DEBTINC          1 3.5653e+08 7.6254e+10 69341
```

```
## - IMP_CLAGE            1 3.8677e+08 7.6285e+10 69343
## - IMP_CLNO             1 1.2659e+09 7.7164e+10 69390
## - M_DEBTINC            1 1.2877e+09 7.7186e+10 69391
## - IMP_DELINQ           1 2.9181e+09 7.8816e+10 69478
## - LOAN                 1 9.7298e+09 8.5628e+10 69821
## - TARGET_BAD_FLAG      1 5.0076e+10 1.2597e+11 71420
##
## Step:  AIC=69321.97
## TARGET_LOSS_AMT ~ TARGET_BAD_FLAG + LOAN + M_MORTDUE + IMP_VALUE +
##     M_VALUE + IMP_YOJ + M_YOJ + IMP_DEROG + M_DEROG + IMP_DELINQ +
##     M_DELINQ + IMP_CLAGE + M_CLAGE + IMP_NINQ + IMP_CLNO + M_CLNO +
##     IMP_DEBTINC + M_DEBTINC + FLAG.Job.Mgr + FLAG.Job.Office +
##     FLAG.Job.Other + FLAG.Job.ProfExe + FLAG.Job.Self +
FLAG.Reason.DebtCon +
##     FLAG.Reason.HomeImp
##
##                        Df  Sum of Sq        RSS   AIC
## - M_YOJ                 1 6.5945e+06 7.5910e+10 69320
## - IMP_NINQ              1 1.2469e+07 7.5916e+10 69321
## - FLAG.Reason.DebtCon   1 2.3152e+07 7.5927e+10 69321
## - M_CLNO                1 2.6686e+07 7.5930e+10 69321
## - M_CLAGE               1 2.9842e+07 7.5934e+10 69322
## - FLAG.Job.Self         1 3.1661e+07 7.5935e+10 69322
## <none>                               7.5904e+10 69322
## - M_DELINQ              1 4.2929e+07 7.5947e+10 69322
## - M_MORTDUE             1 4.7147e+07 7.5951e+10 69323
## - IMP_DEROG             1 5.8624e+07 7.5962e+10 69323
## - M_DEROG               1 6.0504e+07 7.5964e+10 69323
## - M_VALUE               1 6.3457e+07 7.5967e+10 69323
## - FLAG.Job.Office       1 8.3510e+07 7.5987e+10 69325
## - FLAG.Job.Other        1 8.6030e+07 7.5990e+10 69325
## - IMP_YOJ               1 9.2854e+07 7.5997e+10 69325
## - FLAG.Job.ProfExe      1 1.1996e+08 7.6024e+10 69327
## - FLAG.Job.Mgr          1 1.3448e+08 7.6038e+10 69327
## - FLAG.Reason.HomeImp   1 1.6845e+08 7.6072e+10 69329
## - IMP_VALUE             1 2.7356e+08 7.6177e+10 69335
## - IMP_DEBTINC           1 3.6622e+08 7.6270e+10 69340
## - IMP_CLAGE             1 3.8214e+08 7.6286e+10 69341
## - IMP_CLNO              1 1.2720e+09 7.7176e+10 69389
## - M_DEBTINC             1 1.2885e+09 7.7192e+10 69390
## - IMP_DELINQ            1 2.9125e+09 7.8816e+10 69476
## - LOAN                  1 9.7472e+09 8.5651e+10 69820
## - TARGET_BAD_FLAG       1 5.0610e+10 1.2651e+11 71436
##
## Step:  AIC=69320.33
## TARGET_LOSS_AMT ~ TARGET_BAD_FLAG + LOAN + M_MORTDUE + IMP_VALUE +
##     M_VALUE + IMP_YOJ + IMP_DEROG + M_DEROG + IMP_DELINQ + M_DELINQ +
##     IMP_CLAGE + M_CLAGE + IMP_NINQ + IMP_CLNO + M_CLNO + IMP_DEBTINC +
##     M_DEBTINC + FLAG.Job.Mgr + FLAG.Job.Office + FLAG.Job.Other +
##     FLAG.Job.ProfExe + FLAG.Job.Self + FLAG.Reason.DebtCon +
```

```
##     FLAG.Reason.HomeImp
##
##                        Df  Sum of Sq        RSS   AIC
## - IMP_NINQ              1 1.3633e+07 7.5924e+10 69319
## - FLAG.Reason.DebtCon   1 2.0460e+07 7.5931e+10 69319
## - M_CLNO                1 2.4500e+07 7.5935e+10 69320
## - M_CLAGE               1 2.9623e+07 7.5940e+10 69320
## - FLAG.Job.Self         1 3.2512e+07 7.5943e+10 69320
## <none>                               7.5910e+10 69320
## - M_MORTDUE             1 4.2380e+07 7.5953e+10 69321
## - M_DELINQ              1 4.5618e+07 7.5956e+10 69321
## - IMP_DEROG             1 5.6734e+07 7.5967e+10 69321
## - M_DEROG               1 5.9646e+07 7.5970e+10 69322
## - M_VALUE               1 6.4821e+07 7.5975e+10 69322
## - FLAG.Job.Office       1 8.1653e+07 7.5992e+10 69323
## - FLAG.Job.Other        1 8.7183e+07 7.5998e+10 69323
## - IMP_YOJ               1 8.9511e+07 7.6000e+10 69323
## - FLAG.Job.ProfExe      1 1.1768e+08 7.6028e+10 69325
## - FLAG.Job.Mgr          1 1.3299e+08 7.6043e+10 69326
## - FLAG.Reason.HomeImp   1 1.6262e+08 7.6073e+10 69327
## - IMP_VALUE             1 2.7673e+08 7.6187e+10 69333
## - IMP_DEBTINC           1 3.6160e+08 7.6272e+10 69338
## - IMP_CLAGE             1 3.9684e+08 7.6307e+10 69340
## - IMP_CLNO              1 1.2870e+09 7.7197e+10 69388
## - M_DEBTINC             1 1.2875e+09 7.7198e+10 69388
## - IMP_DELINQ            1 2.9175e+09 7.8828e+10 69475
## - LOAN                  1 9.7744e+09 8.5685e+10 69820
## - TARGET_BAD_FLAG       1 5.0813e+10 1.2672e+11 71441
##
## Step:  AIC=69319.08
## TARGET_LOSS_AMT ~ TARGET_BAD_FLAG + LOAN + M_MORTDUE + IMP_VALUE +
##     M_VALUE + IMP_YOJ + IMP_DEROG + M_DEROG + IMP_DELINQ + M_DELINQ +
##     IMP_CLAGE + M_CLAGE + IMP_CLNO + M_CLNO + IMP_DEBTINC + M_DEBTINC +
##     FLAG.Job.Mgr + FLAG.Job.Office + FLAG.Job.Other + FLAG.Job.ProfExe +
##     FLAG.Job.Self + FLAG.Reason.DebtCon + FLAG.Reason.HomeImp
##
##                        Df  Sum of Sq        RSS   AIC
## - FLAG.Reason.DebtCon   1 2.0202e+07 7.5944e+10 69318
## - M_CLNO                1 2.2833e+07 7.5947e+10 69318
## - M_CLAGE               1 2.8285e+07 7.5952e+10 69319
## - FLAG.Job.Self         1 3.3751e+07 7.5958e+10 69319
## <none>                               7.5924e+10 69319
## - M_MORTDUE             1 4.1878e+07 7.5966e+10 69319
## - M_DELINQ              1 4.6240e+07 7.5970e+10 69320
## - M_DEROG               1 5.6156e+07 7.5980e+10 69320
## - M_VALUE               1 6.2495e+07 7.5987e+10 69320
## - IMP_DEROG             1 6.2759e+07 7.5987e+10 69320
## - FLAG.Job.Office       1 8.0967e+07 7.6005e+10 69321
## - FLAG.Job.Other        1 8.3580e+07 7.6008e+10 69322
## - IMP_YOJ               1 9.2672e+07 7.6017e+10 69322
```

```
## - FLAG.Job.ProfExe     1 1.1631e+08 7.6040e+10 69323
## - FLAG.Job.Mgr         1 1.2925e+08 7.6053e+10 69324
## - FLAG.Reason.HomeImp  1 1.6536e+08 7.6089e+10 69326
## - IMP_VALUE            1 2.7465e+08 7.6199e+10 69332
## - IMP_DEBTINC          1 3.6922e+08 7.6293e+10 69337
## - IMP_CLAGE            1 4.1284e+08 7.6337e+10 69340
## - M_DEBTINC            1 1.3155e+09 7.7240e+10 69388
## - IMP_CLNO             1 1.3246e+09 7.7249e+10 69389
## - IMP_DELINQ           1 2.9066e+09 7.8831e+10 69473
## - LOAN                 1 9.8493e+09 8.5773e+10 69822
## - TARGET_BAD_FLAG      1 5.1266e+10 1.2719e+11 71454
##
## Step:  AIC=69318.18
## TARGET_LOSS_AMT ~ TARGET_BAD_FLAG + LOAN + M_MORTDUE + IMP_VALUE +
##     M_VALUE + IMP_YOJ + IMP_DEROG + M_DEROG + IMP_DELINQ + M_DELINQ +
##     IMP_CLAGE + M_CLAGE + IMP_CLNO + M_CLNO + IMP_DEBTINC + M_DEBTINC +
##     FLAG.Job.Mgr + FLAG.Job.Office + FLAG.Job.Other + FLAG.Job.ProfExe +
##     FLAG.Job.Self + FLAG.Reason.HomeImp
##
##                       Df  Sum of Sq        RSS   AIC
## - M_CLAGE              1 2.5049e+07 7.5969e+10 69318
## - M_CLNO               1 2.6277e+07 7.5971e+10 69318
## - FLAG.Job.Self        1 3.0159e+07 7.5974e+10 69318
## <none>                              7.5944e+10 69318
## - M_DELINQ             1 4.5291e+07 7.5990e+10 69319
## - M_MORTDUE            1 4.9048e+07 7.5993e+10 69319
## - M_DEROG              1 5.9359e+07 7.6004e+10 69319
## - IMP_DEROG            1 6.2803e+07 7.6007e+10 69320
## - M_VALUE              1 6.7008e+07 7.6011e+10 69320
## - IMP_YOJ              1 8.9696e+07 7.6034e+10 69321
## - FLAG.Job.Office      1 9.2470e+07 7.6037e+10 69321
## - FLAG.Job.Other       1 9.7723e+07 7.6042e+10 69322
## - FLAG.Job.ProfExe     1 1.3419e+08 7.6078e+10 69323
## - FLAG.Job.Mgr         1 1.4500e+08 7.6089e+10 69324
## - IMP_VALUE            1 2.8163e+08 7.6226e+10 69332
## - IMP_DEBTINC          1 3.6413e+08 7.6308e+10 69336
## - IMP_CLAGE            1 4.0359e+08 7.6348e+10 69338
## - FLAG.Reason.HomeImp  1 4.5820e+08 7.6402e+10 69341
## - M_DEBTINC            1 1.3126e+09 7.7257e+10 69387
## - IMP_CLNO             1 1.3198e+09 7.7264e+10 69388
## - IMP_DELINQ           1 2.9576e+09 7.8902e+10 69474
## - LOAN                 1 9.8306e+09 8.5775e+10 69820
## - TARGET_BAD_FLAG      1 5.1247e+10 1.2719e+11 71452
##
## Step:  AIC=69317.55
## TARGET_LOSS_AMT ~ TARGET_BAD_FLAG + LOAN + M_MORTDUE + IMP_VALUE +
##     M_VALUE + IMP_YOJ + IMP_DEROG + M_DEROG + IMP_DELINQ + M_DELINQ +
##     IMP_CLAGE + IMP_CLNO + M_CLNO + IMP_DEBTINC + M_DEBTINC +
##     FLAG.Job.Mgr + FLAG.Job.Office + FLAG.Job.Other + FLAG.Job.ProfExe +
##     FLAG.Job.Self + FLAG.Reason.HomeImp
```

```
##
##                        Df  Sum of Sq        RSS   AIC
## - M_CLNO                1 3.9267e+06 7.5973e+10 69316
## - FLAG.Job.Self         1 3.4856e+07 7.6004e+10 69317
## <none>                               7.5969e+10 69318
## - M_DELINQ              1 4.2901e+07 7.6012e+10 69318
## - M_MORTDUE             1 4.5825e+07 7.6015e+10 69318
## - M_DEROG               1 6.0108e+07 7.6029e+10 69319
## - IMP_DEROG             1 6.0759e+07 7.6030e+10 69319
## - M_VALUE               1 6.8218e+07 7.6037e+10 69319
## - FLAG.Job.Office       1 8.3363e+07 7.6053e+10 69320
## - IMP_YOJ               1 8.4515e+07 7.6054e+10 69320
## - FLAG.Job.Other        1 8.9100e+07 7.6058e+10 69320
## - FLAG.Job.ProfExe      1 1.2398e+08 7.6093e+10 69322
## - FLAG.Job.Mgr          1 1.3540e+08 7.6105e+10 69323
## - IMP_VALUE             1 2.7584e+08 7.6245e+10 69331
## - IMP_DEBTINC           1 3.8167e+08 7.6351e+10 69336
## - IMP_CLAGE             1 4.1499e+08 7.6384e+10 69338
## - FLAG.Reason.HomeImp   1 4.5036e+08 7.6420e+10 69340
## - M_DEBTINC             1 1.3116e+09 7.7281e+10 69386
## - IMP_CLNO              1 1.4356e+09 7.7405e+10 69393
## - IMP_DELINQ            1 2.9690e+09 7.8938e+10 69474
## - LOAN                  1 9.8224e+09 8.5792e+10 69819
## - TARGET_BAD_FLAG       1 5.1226e+10 1.2720e+11 71450
##
## Step:  AIC=69315.76
## TARGET_LOSS_AMT ~ TARGET_BAD_FLAG + LOAN + M_MORTDUE + IMP_VALUE +
##     M_VALUE + IMP_YOJ + IMP_DEROG + M_DEROG + IMP_DELINQ + M_DELINQ +
##     IMP_CLAGE + IMP_CLNO + IMP_DEBTINC + M_DEBTINC + FLAG.Job.Mgr +
##     FLAG.Job.Office + FLAG.Job.Other + FLAG.Job.ProfExe + FLAG.Job.Self +
##     FLAG.Reason.HomeImp
##
##                        Df  Sum of Sq        RSS   AIC
## - FLAG.Job.Self         1 3.1564e+07 7.6005e+10 69315
## <none>                               7.5973e+10 69316
## - M_DELINQ              1 3.9032e+07 7.6012e+10 69316
## - M_MORTDUE             1 4.5484e+07 7.6019e+10 69316
## - M_DEROG               1 5.6856e+07 7.6030e+10 69317
## - IMP_DEROG             1 5.9309e+07 7.6033e+10 69317
## - M_VALUE               1 6.9972e+07 7.6043e+10 69318
## - IMP_YOJ               1 8.3677e+07 7.6057e+10 69318
## - FLAG.Job.Office       1 1.0554e+08 7.6079e+10 69320
## - FLAG.Job.Other        1 1.1528e+08 7.6088e+10 69320
## - FLAG.Job.ProfExe      1 1.4978e+08 7.6123e+10 69322
## - FLAG.Job.Mgr          1 1.6381e+08 7.6137e+10 69323
## - IMP_VALUE             1 2.7630e+08 7.6250e+10 69329
## - IMP_DEBTINC           1 3.7893e+08 7.6352e+10 69334
## - IMP_CLAGE             1 4.1476e+08 7.6388e+10 69336
## - FLAG.Reason.HomeImp   1 4.4838e+08 7.6422e+10 69338
## - M_DEBTINC             1 1.3122e+09 7.7285e+10 69385
```

```
## - IMP_CLNO             1 1.4348e+09 7.7408e+10 69391
## - IMP_DELINQ           1 2.9651e+09 7.8938e+10 69472
## - LOAN                 1 9.8346e+09 8.5808e+10 69818
## - TARGET_BAD_FLAG      1 5.1495e+10 1.2747e+11 71457
##
## Step:  AIC=69315.48
## TARGET_LOSS_AMT ~ TARGET_BAD_FLAG + LOAN + M_MORTDUE + IMP_VALUE +
##     M_VALUE + IMP_YOJ + IMP_DEROG + M_DEROG + IMP_DELINQ + M_DELINQ +
##     IMP_CLAGE + IMP_CLNO + IMP_DEBTINC + M_DEBTINC + FLAG.Job.Mgr +
##     FLAG.Job.Office + FLAG.Job.Other + FLAG.Job.ProfExe +
FLAG.Reason.HomeImp
##
##                       Df  Sum of Sq        RSS   AIC
## <none>                               7.6005e+10 69315
## - M_DELINQ             1 3.9581e+07 7.6044e+10 69316
## - M_MORTDUE            1 4.0286e+07 7.6045e+10 69316
## - IMP_DEROG            1 5.6733e+07 7.6062e+10 69317
## - M_DEROG              1 6.3997e+07 7.6069e+10 69317
## - M_VALUE              1 6.7688e+07 7.6072e+10 69317
## - IMP_YOJ              1 8.6778e+07 7.6092e+10 69318
## - FLAG.Job.Office      1 2.3195e+08 7.6237e+10 69326
## - FLAG.Job.Other       1 2.7293e+08 7.6278e+10 69328
## - IMP_VALUE            1 2.9796e+08 7.6303e+10 69330
## - FLAG.Job.Mgr         1 3.2195e+08 7.6327e+10 69331
## - FLAG.Job.ProfExe     1 3.3105e+08 7.6336e+10 69331
## - IMP_DEBTINC          1 3.8450e+08 7.6389e+10 69334
## - FLAG.Reason.HomeImp  1 4.2070e+08 7.6425e+10 69336
## - IMP_CLAGE            1 4.2148e+08 7.6426e+10 69336
## - M_DEBTINC            1 1.3153e+09 7.7320e+10 69385
## - IMP_CLNO             1 1.4483e+09 7.7453e+10 69392
## - IMP_DELINQ           1 3.0128e+09 7.9018e+10 69474
## - LOAN                 1 1.0238e+10 8.6243e+10 69837
## - TARGET_BAD_FLAG      1 5.1553e+10 1.2756e+11 71458
```

```r
summary( lr_model )
```

```
##
## Call:
## lm(formula = TARGET_LOSS_AMT ~ TARGET_BAD_FLAG + LOAN + M_MORTDUE +
##     IMP_VALUE + M_VALUE + IMP_YOJ + IMP_DEROG + M_DEROG + IMP_DELINQ +
##     M_DELINQ + IMP_CLAGE + IMP_CLNO + IMP_DEBTINC + M_DEBTINC +
##     FLAG.Job.Mgr + FLAG.Job.Office + FLAG.Job.Other + FLAG.Job.ProfExe +
##     FLAG.Reason.HomeImp, data = df_train)
##
## Residuals:
##    Min     1Q Median     3Q    Max
## -22274  -1598    138   1557  54185
##
## Coefficients:
##                       Estimate Std. Error t value Pr(>|t|)
```

```
## (Intercept)         -4.528e+03  4.240e+02 -10.681  < 2e-16 ***
## TARGET_BAD_FLAG      1.169e+04  2.210e+02  52.876  < 2e-16 ***
## LOAN                 1.522e-01  6.460e-03  23.564  < 2e-16 ***
## M_MORTDUE            3.927e+02  2.657e+02   1.478 0.139449
## IMP_VALUE            5.609e-03  1.395e-03   4.020 5.93e-05 ***
## M_VALUE              9.579e+02  5.000e+02   1.916 0.055438 .
## IMP_YOJ             -2.079e+01  9.581e+00  -2.169 0.030110 *
## IMP_DEROG            1.564e+02  8.915e+01   1.754 0.079489 .
## M_DEROG             -6.211e+02  3.334e+02  -1.863 0.062533 .
## IMP_DELINQ           8.615e+02  6.739e+01  12.783  < 2e-16 ***
## M_DELINQ            -5.275e+02  3.600e+02  -1.465 0.142961
## IMP_CLAGE           -4.052e+00  8.474e-01  -4.781 1.80e-06 ***
## IMP_CLNO             6.609e+01  7.457e+00   8.863  < 2e-16 ***
## IMP_DEBTINC          4.026e+01  8.817e+00   4.566 5.10e-06 ***
## M_DEBTINC            1.651e+03  1.954e+02   8.446  < 2e-16 ***
## FLAG.Job.Mgr        -1.206e+03  2.887e+02  -4.179 2.99e-05 ***
## FLAG.Job.Office     -9.894e+02  2.790e+02  -3.547 0.000394 ***
## FLAG.Job.Other      -9.459e+02  2.459e+02  -3.847 0.000121 ***
## FLAG.Job.ProfExe    -1.132e+03  2.672e+02  -4.237 2.31e-05 ***
## FLAG.Reason.HomeImp -7.208e+02  1.509e+02  -4.777 1.84e-06 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 4294 on 4122 degrees of freedom
## Multiple R-squared:  0.659,  Adjusted R-squared:  0.6574
## F-statistic: 419.3 on 19 and 4122 DF,  p-value: < 2.2e-16
```

```
plr = predict( lr_model, df_test )
head( plr )
```

```
##         4         6         7        15        17        18
## 12635.478  7400.119 12043.309 10594.338 15491.993  9189.565
```

```
RMSElr = sqrt( mean( ( df_test$TARGET_LOSS_AMT - plr )^2 ) )
```

#Linear regression modl with decision tree w/ forward stepwise selection

```
treeVars = tr_model$variable.importance
treeVars = names(treeVars)
treeVarsPlus = paste( treeVars, collapse="+")
treeVarsPlus
```

```
## [1]
"TARGET_BAD_FLAG+M_DEBTINC+LOAN+IMP_DELINQ+M_VALUE+IMP_DEBTINC+IMP_DEROG+IMP_
VALUE+IMP_MORTDUE+IMP_CLAGE+FLAG.Reason.HomeImp+FLAG.Job.Self+FLAG.Reason.Deb
tCon+IMP_CLNO+IMP_YOJ+IMP_NINQ"
```

```
F = as.formula( paste( "TARGET_LOSS_AMT ~", treeVarsPlus ))

tree_LR = lm( F, data=df_train )
theLower_LR = lm( TARGET_LOSS_AMT ~ 1, data=df_train )
```

```
plr_tree = predict( tree_LR, df_test )
head( plr_tree )

##         4         6         7        15        17        18
## 12764.786  7528.691 11712.782 10559.303 15155.742  9875.683

RMSElr_tree = sqrt( mean( ( df_test$TARGET_LOSS_AMT - plr_tree )^2 ) )

plr_tree_step = predict( lrf_model, df_test )
head( plr_tree_step )

##         4         6         7        15        17        18
## 12472.506  7355.451 11943.990 10502.346 15571.632  9044.153

RMSElr_tree_step = sqrt( mean( ( df_test$TARGET_LOSS_AMT - plr_tree_step )^2
) )
```

Compare the variables from the Linear Regression with those of the Random Forest and the Gradient Boosting.

Linear Regression -

```
TARGET_LOSS_AMT ~ LOAN + M_MORTDUE +
IMP_VALUE + M_VALUE + IMP_YOJ + IMP_DEROG + M_DEROG + IMP_DELINQ +
M_DELINQ + IMP_CLAGE + IMP_CLNO + IMP_DEBTINC + M_DEBTINC +
FLAG.Job.Mgr + FLAG.Job.Office + FLAG.Job.Other + FLAG.Job.ProfExe +
FLAG.Reason.HomeImp
```

GB_Model -LOAN IMP_DELINQ IMP_CLNO IMP_DEBTINC M_DEBTINC IMP_VALUE IMP_CLAGE IMP_DEROG IMP_YOJ

```
importance(rf_model)

##                        %IncMSE IncNodePurity
## TARGET_BAD_FLAG     114.189392   90816671182
## LOAN                 75.056081   48273239979
## IMP_MORTDUE           9.345253    5420762996
## M_MORTDUE             4.308162     256607606
## IMP_VALUE            12.997514    9226894152
## M_VALUE               7.506812    1353170893
## IMP_YOJ               5.922053    2559274253
## M_YOJ                 2.921449     165042523
## IMP_DEROG             8.189313    2001553129
## M_DEROG               3.512038     198306664
## IMP_DELINQ           13.530822    9133792194
## M_DELINQ              2.771952      95545234
## IMP_CLAGE             8.408003    4220036914
## M_CLAGE               5.735034     200217793
## IMP_NINQ              3.331829    2438408614
## M_NINQ                3.445997      78512611
## IMP_CLNO             25.438137    8733141717
```

```
## M_CLNO                1.505593      22260760
## IMP_DEBTINC          16.794164    8115505422
## M_DEBTINC            20.627929   19813664556
## FLAG.Job.Mgr          1.576908     242210982
## FLAG.Job.Office       3.422240     255025096
## FLAG.Job.Other        1.735363     318462520
## FLAG.Job.ProfExe      1.861185     286201560
## FLAG.Job.Sales        1.753181      91196945
## FLAG.Job.Self         3.252411    1317932382
## FLAG.Reason.DebtCon  10.313082    1684462365
## FLAG.Reason.HomeImp  12.301864    2440730616
```

Using the testing data set, calculate the Root Mean Square Error (RMSE) for all models.

```
#TREE
RMSEt

## [1] 2786.254

# RF
RMSEr

## [1] 1466.45

#GB
RMSEg

## [1] 1153.8

#Linear regression with all the var
RMSElrf

## [1] 4084.523

#Linear regression model with backward variable selection
RMSElr

## [1] 4077.817

#Linear regression with decision tree w/forward stepwise selection
RMSElr_tree_step

## [1] 4084.523

print( paste("TREE RMSE=", RMSEt ))

## [1] "TREE RMSE= 2786.25391549687"

print( paste("RF RMSE=", RMSEr ))

## [1] "RF RMSE= 1466.44992533321"

print( paste("GB RMSE=", RMSEg ))
```

```
## [1] "GB RMSE= 1153.80023827177"

print( paste("LR BACK RMSE=",  RMSElrf ))

## [1] "LR BACK RMSE= 4084.52267404283"

print( paste("LR TREE RMSE=",  RMSElr_tree ))

## [1] "LR TREE RMSE= 4097.49901597081"

print( paste("LR TREE STEP RMSE=", RMSElr_tree_step ))

## [1] "LR TREE STEP RMSE= 4084.52267404283"
```

- Determine which model performed best and why you believe this.
- Write a brief summary of which model you would recommend using. Note that this is your opinion. There is no right answer. You might, for example, select a less accurate model because it is faster or easier to interpret.

GB model has the lowest RMSE showing that the loan amount that could be lost are the most accurate when compared to the actual losses.The GB model performed the best. When it comes to the accuracy, GB model is the most accurate and saving the prospective losses. However, given that decision tree's interpretability, it is much easier to understand and to explain to stakeholders. Models like Random Forest is known for being overfitting and stable against the variance in the data. Given these considerations, Gradient Boosting is the model with the maximized accuracy due to its superior performance. However, if the easy interpretability and good predictive performance considered, Random Forest would be a strong candidate, and it is much simpler than Gradient Boosting.

STEP4 : Probability / Severity Model

```
library(rpart)
library(rpart.plot)
PATH ="/Users/stellam/Desktop/TRINE/Bigdata&dataScience/HMEQ_Scrubbed"
FILE_NAME ="HMEQ_Scrubbed.csv"
INFILE = paste (PATH,FILE_NAME, sep="/")
setwd(PATH)
df = read.csv(FILE_NAME)

SEED = 1
set.seed( SEED )
#
TARGET = "TARGET_BAD_FLAG"

#List the structure of the data (str)
str( df )

## 'data.frame':    5960 obs. of  29 variables:
##  $ TARGET_BAD_FLAG    : int  1 1 1 1 0 1 1 1 1 1 ...
##  $ TARGET_LOSS_AMT    : int  641 1109 767 1425 0 335 1841 373 1217 1523
...
```

```
##  $ LOAN                : int  1100 1300 1500 1500 1700 1700 1800 1800 2000
2000 ...
##  $ IMP_MORTDUE         : num  25860 70053 13500 65000 97800 ...
##  $ M_MORTDUE           : int  0 0 0 1 0 0 0 0 0 1 ...
##  $ IMP_VALUE           : num  39025 68400 16700 89000 112000 ...
##  $ M_VALUE             : int  0 0 0 1 0 0 0 0 0 0 ...
##  $ IMP_YOJ             : num  10.5 7 4 7 3 9 5 11 3 16 ...
##  $ M_YOJ               : int  0 0 0 1 0 0 0 0 0 0 ...
##  $ IMP_DEROG           : int  0 0 0 1 0 0 3 0 0 0 ...
##  $ M_DEROG             : int  0 0 0 1 0 0 0 0 0 0 ...
##  $ IMP_DELINQ          : int  0 2 0 1 0 0 2 0 2 0 ...
##  $ M_DELINQ            : int  0 0 0 1 0 0 0 0 0 0 ...
##  $ IMP_CLAGE           : num  94.4 121.8 149.5 174 93.3 ...
##  $ M_CLAGE             : int  0 0 0 1 0 0 0 0 0 0 ...
##  $ IMP_NINQ            : int  1 0 1 1 0 1 1 0 1 0 ...
##  $ M_NINQ              : int  0 0 0 1 0 0 0 0 0 0 ...
##  $ IMP_CLNO            : int  9 14 10 20 14 8 17 8 12 13 ...
##  $ M_CLNO              : int  0 0 0 1 0 0 0 0 0 0 ...
##  $ IMP_DEBTINC         : num  35 35 35 35 35 ...
##  $ M_DEBTINC           : int  1 1 1 1 1 0 1 0 1 1 ...
##  $ FLAG.Job.Mgr        : int  0 0 0 0 0 0 0 0 0 0 ...
##  $ FLAG.Job.Office     : int  0 0 0 0 1 0 0 0 0 0 ...
##  $ FLAG.Job.Other      : int  1 1 1 0 0 1 1 1 1 0 ...
##  $ FLAG.Job.ProfExe    : int  0 0 0 0 0 0 0 0 0 0 ...
##  $ FLAG.Job.Sales      : int  0 0 0 0 0 0 0 0 0 1 ...
##  $ FLAG.Job.Self       : int  0 0 0 0 0 0 0 0 0 0 ...
##  $ FLAG.Reason.DebtCon: int  0 0 0 0 0 0 0 0 0 0 ...
##  $ FLAG.Reason.HomeImp: int  1 1 1 0 1 1 1 1 1 1 ...
```

```r
#Execute a summary of the data
summary( df )
```

```
##  TARGET_BAD_FLAG  TARGET_LOSS_AMT      LOAN        IMP_MORTDUE
##  Min.   :0.0000   Min.   :    0   Min.   : 1100   Min.   :  2063
##  1st Qu.:0.0000   1st Qu.:    0   1st Qu.:11100   1st Qu.: 48139
##  Median :0.0000   Median :    0   Median :16300   Median : 65000
##  Mean   :0.1995   Mean   : 2676   Mean   :18608   Mean   : 72999
##  3rd Qu.:0.0000   3rd Qu.:    0   3rd Qu.:23300   3rd Qu.: 88200
##  Max.   :1.0000   Max.   :78987   Max.   :89900   Max.   :399550
##    M_MORTDUE         IMP_VALUE         M_VALUE           IMP_YOJ
##  Min.   :0.00000   Min.   :  8000   Min.   :0.00000   Min.   : 0.000
##  1st Qu.:0.00000   1st Qu.: 66490   1st Qu.:0.00000   1st Qu.: 3.000
##  Median :0.00000   Median : 89000   Median :0.00000   Median : 7.000
##  Mean   :0.08691   Mean   :101536   Mean   :0.01879   Mean   : 8.756
##  3rd Qu.:0.00000   3rd Qu.:119005   3rd Qu.:0.00000   3rd Qu.:12.000
##  Max.   :1.00000   Max.   :855909   Max.   :1.00000   Max.   :41.000
##      M_YOJ           IMP_DEROG          M_DEROG         IMP_DELINQ
##  Min.   :0.00000   Min.   : 0.0000   Min.   :0.0000   Min.   : 0.000
##  1st Qu.:0.00000   1st Qu.: 0.0000   1st Qu.:0.0000   1st Qu.: 0.000
##  Median :0.00000   Median : 0.0000   Median :0.0000   Median : 0.000
```

```
##  Mean   :0.08641   Mean   : 0.3431   Mean   :0.1188   Mean   : 0.503
##  3rd Qu.:0.00000   3rd Qu.: 0.0000   3rd Qu.:0.0000   3rd Qu.: 1.000
##  Max.   :1.00000   Max.   :10.0000   Max.   :1.0000   Max.   :15.000
##     M_DELINQ         IMP_CLAGE         M_CLAGE           IMP_NINQ
##  Min.   :0.00000   Min.   :   0.0   Min.   :0.00000   Min.   : 0.00
##  1st Qu.:0.00000   1st Qu.: 117.4   1st Qu.:0.00000   1st Qu.: 0.00
##  Median :0.00000   Median : 174.0   Median :0.00000   Median : 1.00
##  Mean   :0.09732   Mean   : 179.5   Mean   :0.05168   Mean   : 1.17
##  3rd Qu.:0.00000   3rd Qu.: 227.1   3rd Qu.:0.00000   3rd Qu.: 2.00
##  Max.   :1.00000   Max.   :1168.2   Max.   :1.00000   Max.   :17.00
##      M_NINQ           IMP_CLNO         M_CLNO         IMP_DEBTINC
##  Min.   :0.00000   Min.   : 0.00   Min.   :0.00000   Min.   :  0.5245
##  1st Qu.:0.00000   1st Qu.:15.00   1st Qu.:0.00000   1st Qu.: 30.7632
##  Median :0.00000   Median :20.00   Median :0.00000   Median : 35.0000
##  Mean   :0.08557   Mean   :21.25   Mean   :0.03725   Mean   : 34.0393
##  3rd Qu.:0.00000   3rd Qu.:26.00   3rd Qu.:0.00000   3rd Qu.: 37.9499
##  Max.   :1.00000   Max.   :71.00   Max.   :1.00000   Max.   :203.3122
##    M_DEBTINC       FLAG.Job.Mgr    FLAG.Job.Office  FLAG.Job.Other
##  Min.   :0.0000   Min.   :0.0000   Min.   :0.0000   Min.   :0.0000
##  1st Qu.:0.0000   1st Qu.:0.0000   1st Qu.:0.0000   1st Qu.:0.0000
##  Median :0.0000   Median :0.0000   Median :0.0000   Median :0.0000
##  Mean   :0.2126   Mean   :0.1287   Mean   :0.1591   Mean   :0.4007
##  3rd Qu.:0.0000   3rd Qu.:0.0000   3rd Qu.:0.0000   3rd Qu.:1.0000
##  Max.   :1.0000   Max.   :1.0000   Max.   :1.0000   Max.   :1.0000
##  FLAG.Job.ProfExe FLAG.Job.Sales    FLAG.Job.Self     FLAG.Reason.DebtCon
##  Min.   :0.0000   Min.   :0.00000   Min.   :0.00000   Min.   :0.0000
##  1st Qu.:0.0000   1st Qu.:0.00000   1st Qu.:0.00000   1st Qu.:0.0000
##  Median :0.0000   Median :0.00000   Median :0.00000   Median :1.0000
##  Mean   :0.2141   Mean   :0.01829   Mean   :0.03238   Mean   :0.6591
##  3rd Qu.:0.0000   3rd Qu.:0.00000   3rd Qu.:0.00000   3rd Qu.:1.0000
##  Max.   :1.0000   Max.   :1.00000   Max.   :1.00000   Max.   :1.0000
##  FLAG.Reason.HomeImp
##  Min.   :0.0000
##  1st Qu.:0.0000
##  Median :0.0000
##  Mean   :0.2987
##  3rd Qu.:1.0000
##  Max.   :1.0000
```

```
#Print the first six records
dim( df )
```

```
## [1] 5960   29
```

```
df_flag = df
```

##ANOVA REGRESSION TREE

```
t1a = rpart( data=df_amt, TARGET_LOSS_AMT ~ ., control=tr_set, method="anova"
)
rpart.plot( t1a )
```

```
p1a = predict( t1a, df )
RMSE1a = sqrt( mean( ( df$TARGET_LOSS_AMT - p1a )^2 ) )
print( RMSE1a )

## [1] 2471.854
```

##POISSON REGRESSION TREE

```
t1p = rpart( data=df_amt, TARGET_LOSS_AMT ~ ., control=tr_set,
method="poisson" )
rpart.plot( t1p )
```

```
p1p = predict( t1p, df )
RMSE1p = sqrt( mean( ( df$TARGET_LOSS_AMT - p1p )^2 ) )
print( RMSE1p )

## [1] 3001.205

t2_f = rpart( data=df_flag, TARGET_BAD_FLAG ~ ., control=tr_set )
rpart.plot( t2_f )
```

```
p2_f = predict( t2_f, df )
```

##Use the rpart library to predict the variable TARGET_LOSS_AMT using only records where TARGET_BAD_FLAG is 1.

```
df_amt = subset( df, TARGET_BAD_FLAG == 1 )
df_amt$TARGET_BAD_FLAG = NULL
head(df_amt)
```

```
##   TARGET_LOSS_AMT LOAN IMP_MORTDUE M_MORTDUE IMP_VALUE M_VALUE IMP_YOJ
M_YOJ
## 1             641 1100       25860         0     39025       0    10.5
0
## 2            1109 1300       70053         0     68400       0     7.0
0
## 3             767 1500       13500         0     16700       0     4.0
0
## 4            1425 1500       65000         1     89000       1     7.0
1
## 6             335 1700       30548         0     40320       0     9.0
0
## 7            1841 1800       48649         0     57037       0     5.0
0
##   IMP_DEROG M_DEROG IMP_DELINQ M_DELINQ IMP_CLAGE M_CLAGE IMP_NINQ M_NINQ
```

```
## 1         0       0          0        0  94.36667       0        1      0
## 2         0       0          2        0 121.83333       0        0      0
## 3         0       0          0        0 149.46667       0        1      0
## 4         1       1          1        1 174.00000       1        1      1
## 6         0       0          0        0 101.46600       0        1      0
## 7         3       0          2        0  77.10000       0        1      0
##   IMP_CLNO M_CLNO IMP_DEBTINC M_DEBTINC FLAG.Job.Mgr FLAG.Job.Office
## 1        9      0    35.00000         1            0               0
## 2       14      0    35.00000         1            0               0
## 3       10      0    35.00000         1            0               0
## 4       20      1    35.00000         1            0               0
## 6        8      0    37.11361         0            0               0
## 7       17      0    35.00000         1            0               0
##   FLAG.Job.Other FLAG.Job.ProfExe FLAG.Job.Sales FLAG.Job.Self
## 1              1                0              0             0
## 2              1                0              0             0
## 3              1                0              0             0
## 4              0                0              0             0
## 6              1                0              0             0
## 7              1                0              0             0
##   FLAG.Reason.DebtCon FLAG.Reason.HomeImp
## 1                   0                   1
## 2                   0                   1
## 3                   0                   1
## 4                   0                   0
## 6                   0                   1
## 7                   0                   1
```

##Plot both decision trees ##POISSON

```
t2_a = rpart( data=df_amt, TARGET_LOSS_AMT ~ ., control=tr_set,
method="poisson" )
rpart.plot( t2_a )
```

##ANOVA

```
t2_f = rpart( data=df_flag, TARGET_BAD_FLAG ~ ., control=tr_set, method
="anova")
rpart.plot( t2_f )
```

##Multiply the two values together for each record. -ANOVA PROBABILITY -POISSON PROBABILITY

```
p2_f = predict( t2_f, df )
p2_a = predict( t2_a, df )
p2 = p2_f * p2_a
head(p2)

##        1        2        3        4        5        6
## 2848.089 2848.089 2848.089 2848.089    0.000 2848.089
```

##Calculate the Root Mean Square Error (RMSE) for both trees

##PROBABILITY

```
print( RMSE1p )

## [1] 3001.205
```

##SEVERITY MODEL

```
RMSE2 = sqrt( mean( ( df$TARGET_LOSS_AMT - p2 )^2 ) )
print(RMSE2)

## [1] 2015.801
```

- Comment on how this model compares to using the model from Step 3. Which one would your recommend using?

Compared to the models from Step 3 which is - * The Probability Model : the highest RMSE meaning that Its deviation from the actual values is bigger than the other models. * The Severity Model : RMSE is better than the Linear Regression models & the Decision Tree model but is still higher than both the Random Forest and Gradient Boosting models.

The Gradient Boosting model has the lowest RMSE as 1146.7021 which outperforms the Severity Model as RMSE 2015.801. The Probability Model, with the highest RMSE (7701.568), would be the least preferred model. Recommendable model is going to be Gradient Boosting. model if accuracy is the top priority, as it outperforms the Severity Model and greatly surpasses the Probability Model in this aspect.

STEP02 : PCA Analysis

#Use only the input variables. Do not use either of the target variables. #Use only the continuous variables. Do not use any of the flag variables. #Do a Principal Component Analysis (PCA) on the continuous variables.

```
library( Rtsne )
df_pca = df
df_pca$TARGET_BAD_FLAG = NULL
df_pca$TARGET_LOSS_AMT = NULL
head(df_pca)

##   LOAN IMP_MORTDUE M_MORTDUE IMP_VALUE M_VALUE IMP_YOJ M_YOJ IMP_DEROG
M_DEROG
## 1 1100       25860         0     39025       0    10.5     0         0
0
## 2 1300       70053         0     68400       0     7.0     0         0
0
## 3 1500       13500         0     16700       0     4.0     0         0
0
## 4 1500       65000         1     89000       1     7.0     1         1
1
## 5 1700       97800         0    112000       0     3.0     0         0
0
## 6 1700       30548         0     40320       0     9.0     0         0
0
##   IMP_DELINQ M_DELINQ IMP_CLAGE M_CLAGE IMP_NINQ M_NINQ IMP_CLNO M_CLNO
## 1          0        0  94.36667       0        1      0        9      0
## 2          2        0 121.83333       0        0      0       14      0
## 3          0        0 149.46667       0        1      0       10      0
## 4          1        1 174.00000       1        1      1       20      1
## 5          0        0  93.33333       0        0      0       14      0
## 6          0        0 101.46600       0        1      0        8      0
##   IMP_DEBTINC M_DEBTINC FLAG.Job.Mgr FLAG.Job.Office FLAG.Job.Other
## 1    35.00000         1            0               0              1
## 2    35.00000         1            0               0              1
```

```
## 3    35.00000         1            0               0              1
## 4    35.00000         1            0               0              0
## 5    35.00000         1            0               1              0
## 6    37.11361         0            0               0              1
##   FLAG.Job.ProfExe FLAG.Job.Sales FLAG.Job.Self FLAG.Reason.DebtCon
## 1                0              0             0                   0
## 2                0              0             0                   0
## 3                0              0             0                   0
## 4                0              0             0                   0
## 5                0              0             0                   0
## 6                0              0             0                   0
##   FLAG.Reason.HomeImp
## 1                   1
## 2                   1
## 3                   1
## 4                   0
## 5                   1
## 6                   1
```

```r
pca = prcomp(df_pca,center=TRUE, scale=TRUE)
summary(pca)
```

```
## Importance of components:
##                           PC1     PC2     PC3     PC4     PC5    PC6
PC7
## Standard deviation     2.0093 1.60008 1.44788 1.28941 1.20068 1.1396
1.11902
## Proportion of Variance 0.1495 0.09482 0.07764 0.06158 0.05339 0.0481
0.04638
## Cumulative Proportion  0.1495 0.24435 0.32200 0.38357 0.43697 0.4851
0.53145
##                            PC8     PC9   PC10   PC11    PC12    PC13
PC14
## Standard deviation     1.07306 1.06717 1.0380 0.9901 0.97455 0.93766
0.91909
## Proportion of Variance 0.04265 0.04218 0.0399 0.0363 0.03518 0.03256
0.03129
## Cumulative Proportion  0.57409 0.61627 0.6562 0.6925 0.72766 0.76022
0.79150
##                           PC15   PC16    PC17    PC18    PC19    PC20
PC21
## Standard deviation     0.88723 0.8818 0.84057 0.81072 0.78299 0.76740
0.74985
## Proportion of Variance 0.02915 0.0288 0.02617 0.02434 0.02271 0.02181
0.02083
## Cumulative Proportion  0.82066 0.8495 0.87563 0.89997 0.92268 0.94449
0.96532
##                           PC22   PC23    PC24   PC25    PC26    PC27
## Standard deviation     0.56835 0.4348 0.41853 0.3601 0.28383 0.19728
```

```
## Proportion of Variance 0.01196 0.0070 0.00649 0.0048 0.00298 0.00144
## Cumulative Proportion  0.97728 0.9843 0.99077 0.9956 0.99856 1.00000
```

```r
head(pca)
```

```
## $sdev
##  [1] 2.0092989 1.6000756 1.4478827 1.2894107 1.2006816 1.1396361 1.1190166
##  [8] 1.0730598 1.0671697 1.0379573 0.9900525 0.9745511 0.9376626 0.9190919
## [15] 0.8872291 0.8818425 0.8405745 0.8107216 0.7829923 0.7673953 0.7498534
## [22] 0.5683505 0.4348459 0.4185282 0.3601443 0.2838264 0.1972765
##
## $rotation
##                             PC1          PC2         PC3          PC4
## LOAN                -0.08250951  0.222283188 -0.04305869  0.152184833
## IMP_MORTDUE         -0.08918963  0.479415124  0.14285515  0.004442962
## M_MORTDUE            0.20843999 -0.137305505  0.12220932  0.088324912
## IMP_VALUE           -0.11798662  0.474329010  0.17554428  0.028978467
## M_VALUE              0.06494666  0.009000081 -0.02990975 -0.271011548
## IMP_YOJ             -0.05646466 -0.025242178  0.07619147  0.023086128
## M_YOJ                0.23239109 -0.040215383  0.02086110  0.169419514
## IMP_DEROG            0.17832224  0.060782646 -0.15210014 -0.339988532
## M_DEROG              0.37557239  0.160335073 -0.07600357 -0.035869401
## IMP_DELINQ           0.10871014  0.083789335 -0.09038149 -0.432436455
## M_DELINQ             0.41520286  0.120390892 -0.05037720  0.031378217
## IMP_CLAGE           -0.02838715  0.156262874  0.17658088  0.113684505
## M_CLAGE              0.37347715  0.072094266  0.04316141  0.126973468
## IMP_NINQ             0.00399766  0.056821629 -0.24038900 -0.262416362
## M_NINQ               0.41206039  0.111832489  0.00925320  0.056279898
## IMP_CLNO            -0.07614245  0.343053396 -0.04903586 -0.166159010
## M_CLNO               0.40592755  0.113638782  0.04081641  0.091168939
## IMP_DEBTINC         -0.07083404  0.113129077 -0.12472809 -0.211546859
## M_DEBTINC            0.02482595 -0.043556075 -0.08593648 -0.457416358
## FLAG.Job.Mgr        -0.01948061  0.107401519 -0.10527505 -0.155128492
## FLAG.Job.Office     -0.03282995 -0.038685275  0.02706107  0.029893638
## FLAG.Job.Other       0.03139681 -0.311914930 -0.15602269  0.016738731
## FLAG.Job.ProfExe    -0.09674983  0.256120359  0.18255705  0.070838172
## FLAG.Job.Sales      -0.01947118  0.030949526 -0.05493065  0.008403280
## FLAG.Job.Self       -0.01733950  0.093862667  0.14953583 -0.104648439
## FLAG.Reason.DebtCon -0.09886759  0.148096475 -0.58283719  0.240587315
## FLAG.Reason.HomeImp  0.02872367 -0.159349132  0.57683893 -0.265502597
##                              PC5           PC6         PC7          PC8
## LOAN                -0.365469649  0.1053897192 -0.23587965 -0.291418039
## IMP_MORTDUE         -0.160026633  0.1259574329  0.08900637  0.018422799
## M_MORTDUE           -0.194689121  0.0178498600 -0.04990182 -0.237766401
## IMP_VALUE           -0.195239392  0.1037931159  0.04536164 -0.014604810
## M_VALUE             -0.009513889 -0.1255434902  0.04295948 -0.403251864
## IMP_YOJ             -0.084215312 -0.4706606783 -0.32098017 -0.188579189
## M_YOJ               -0.276207521  0.0125012000 -0.07890998 -0.030890546
## IMP_DEROG           -0.050334391 -0.0508976762 -0.01069704  0.035427344
## M_DEROG              0.060329253 -0.0475365391 -0.13069467  0.148691737
```

```
## IMP_DELINQ           0.030939009 -0.2362968349 -0.14020701 -0.054684138
## M_DELINQ             0.008375585  0.0315998807 -0.07020270  0.098810745
## IMP_CLAGE           -0.091361159 -0.4650605021 -0.31120442  0.074273987
## M_CLAGE              0.055850283  0.0326679224  0.16537904 -0.085437186
## IMP_NINQ            -0.152357591  0.1555730582  0.10846696  0.062708256
## M_NINQ               0.013938825  0.0166914350 -0.03283248  0.050264338
## IMP_CLNO             0.029822745 -0.2330883155 -0.14856550  0.286735787
## M_CLNO               0.081356699  0.0004037033  0.10332216 -0.013148079
## IMP_DEBTINC         -0.151960768  0.2206241569 -0.15350471  0.398226421
## M_DEBTINC           -0.011900265 -0.0708816509  0.20207356 -0.150125052
## FLAG.Job.Mgr         0.122766415  0.1224565176 -0.17716404 -0.414635763
## FLAG.Job.Office      0.444282422  0.2355961657 -0.49674381  0.090085262
## FLAG.Job.Other      -0.548655980 -0.1653401555  0.06555050  0.261215518
## FLAG.Job.ProfExe     0.202816788 -0.2820545148  0.50302016  0.008417161
## FLAG.Job.Sales       0.057772771  0.0095266563  0.01303622  0.206421725
## FLAG.Job.Self       -0.214975426  0.3565496474 -0.08395586 -0.161472347
## FLAG.Reason.DebtCon  0.046527690 -0.0557409224  0.02982909 -0.082252301
## FLAG.Reason.HomeImp -0.046675228  0.0723451114 -0.03530199  0.127141640
##                            PC9         PC10         PC11         PC12
## LOAN                -0.15724442  0.139618625  0.006042509  0.042053411
## IMP_MORTDUE         -0.02557466 -0.072917807  0.164371587 -0.162839333
## M_MORTDUE           -0.19888609 -0.242373351  0.389527878  0.031662553
## IMP_VALUE           -0.03030747  0.002744780  0.037771734 -0.143687481
## M_VALUE             -0.33147370 -0.064488231 -0.095440349 -0.359297462
## IMP_YOJ              0.17213411  0.152567367 -0.313086108 -0.043984421
## M_YOJ               -0.10798551 -0.240116528  0.214218340 -0.138942486
## IMP_DEROG           -0.09094103 -0.036467154  0.281506312  0.280248294
## M_DEROG              0.06942486  0.072316295  0.052129412  0.094779641
## IMP_DELINQ          -0.14252908  0.050819446  0.056390498  0.151346109
## M_DELINQ             0.03847033  0.076712066  0.043984061  0.111656088
## IMP_CLAGE           -0.02835269 -0.139627831  0.019027050 -0.008881908
## M_CLAGE              0.03816313  0.029414035 -0.258872902 -0.247199785
## IMP_NINQ             0.10996906  0.179836259  0.153421745  0.016716233
## M_NINQ               0.03422593  0.066816513 -0.043526179  0.123206483
## IMP_CLNO             0.01917201 -0.014116752 -0.020157363  0.069577417
## M_CLNO               0.05440417  0.041125200 -0.267691097 -0.210079555
## IMP_DEBTINC          0.09627614 -0.049176437 -0.142230226 -0.413908056
## M_DEBTINC           -0.18114047 -0.068891193 -0.164730029 -0.197020856
## FLAG.Job.Mgr         0.66873862 -0.260099586  0.126993050 -0.034728021
## FLAG.Job.Office     -0.39070065  0.167604197  0.135069684 -0.204776212
## FLAG.Job.Other       0.02490111  0.124018583 -0.011667119 -0.102990892
## FLAG.Job.ProfExe    -0.09999007  0.128869846  0.138877502  0.104767200
## FLAG.Job.Sales      -0.15966966 -0.780594664 -0.287519514  0.171423804
## FLAG.Job.Self       -0.16152629  0.113404576 -0.475953361  0.494875702
## FLAG.Reason.DebtCon -0.10188588  0.008403106 -0.040638950  0.045371974
## FLAG.Reason.HomeImp  0.12132572  0.010351172  0.052941483 -0.003191609
##                            PC13        PC14         PC15         PC16
## LOAN                 0.089944717  0.17914287 -0.290553082 -0.105610112
## IMP_MORTDUE         -0.090291963  0.12620707  0.197819474  0.243489490
## M_MORTDUE            0.126340189  0.01347966  0.020612256  0.087115086
```

```
## IMP_VALUE           -0.052607934  0.18044032  0.104355194  0.251335136
## M_VALUE             -0.339263803  0.10984065  0.253319441 -0.519605643
## IMP_YOJ              0.218996136  0.41003387 -0.216729937  0.066189351
## M_YOJ                0.128042808 -0.38327105 -0.310039570 -0.081656777
## IMP_DEROG            0.024506364  0.21539147 -0.150945542 -0.144941863
## M_DEROG             -0.111617192  0.15254184  0.011051557  0.001278627
## IMP_DELINQ          -0.210454985 -0.14264827 -0.118815661  0.324123768
## M_DELINQ            -0.104734666  0.13123558 -0.019824385 -0.024181422
## IMP_CLAGE            0.206139342 -0.35081899  0.221275532 -0.114862493
## M_CLAGE              0.187575264 -0.05557979  0.079370771  0.045101699
## IMP_NINQ             0.662942815  0.11653048  0.275721656 -0.265449588
## M_NINQ              -0.090371326  0.03480063 -0.014045273  0.023990833
## IMP_CLNO             0.003782662 -0.25941243  0.217194237 -0.154423838
## M_CLNO               0.116003226 -0.05673846  0.039687957 -0.000689296
## IMP_DEBTINC         -0.091840310 -0.08204488 -0.476922934 -0.215087166
## M_DEBTINC            0.283727332 -0.16018402 -0.123790945  0.451216802
## FLAG.Job.Mgr        -0.072290647 -0.11834104  0.007999572 -0.002138806
## FLAG.Job.Office      0.156993232  0.06077260  0.060996782  0.103897374
## FLAG.Job.Other      -0.197205237  0.06997205  0.228652892  0.140174969
## FLAG.Job.ProfExe     0.068765630 -0.02331906 -0.372917793 -0.207403111
## FLAG.Job.Sales       0.119521720  0.34264769  0.010458646 -0.023432381
## FLAG.Job.Self       -0.007150840 -0.29332786  0.045328567 -0.087746307
## FLAG.Reason.DebtCon -0.039981179 -0.06313275 -0.002258930  0.069107344
## FLAG.Reason.HomeImp  0.009088686  0.10240067 -0.011552642 -0.068189794
##                            PC17         PC18          PC19         PC20
## LOAN                -0.1886798707  0.215116712  0.4121064689 -0.364916755
## IMP_MORTDUE          0.0687933093 -0.053205240 -0.1662680585  0.126283709
## M_MORTDUE            0.4772470056 -0.140039431 -0.1382133859  0.080699667
## IMP_VALUE           -0.1123623166 -0.022248645 -0.0426220165  0.102438309
## M_VALUE              0.0667229602 -0.024777415 -0.0225218798 -0.024016432
## IMP_YOJ              0.1361072065 -0.090477774 -0.3974742441  0.071228944
## M_YOJ               -0.1610467086  0.148387839 -0.3653700792 -0.113604070
## IMP_DEROG           -0.5817373442 -0.301850445 -0.1369595019  0.293830088
## M_DEROG              0.2206592813 -0.086581344  0.1451189676 -0.031573180
## IMP_DELINQ           0.1209114031  0.631413709  0.0439401877  0.217745032
## M_DELINQ             0.1742902268 -0.149398579  0.1548499925 -0.168459985
## IMP_CLAGE           -0.0469192665 -0.188817236  0.4573682838  0.309726814
## M_CLAGE             -0.2202071888  0.174343618 -0.0007333249  0.194521635
## IMP_NINQ             0.2038588458  0.233032416  0.0135230041  0.060982840
## M_NINQ               0.0780089556 -0.119419917  0.0359466034 -0.164163492
## IMP_CLNO            -0.0305413087  0.011730870 -0.3578658596 -0.524365070
## M_CLNO              -0.1392450965  0.121356347 -0.0598287334  0.042728740
## IMP_DEBTINC          0.2440866718 -0.114542000  0.0598770902  0.240985931
## M_DEBTINC            0.0009164731 -0.386507160  0.1819593421 -0.301500530
## FLAG.Job.Mgr        -0.0280032403 -0.032421312  0.0570092667 -0.044132362
## FLAG.Job.Office     -0.0670080744 -0.025466510 -0.0528358089 -0.007300151
## FLAG.Job.Other      -0.0743646288 -0.003080056  0.0337601459 -0.040002177
## FLAG.Job.ProfExe     0.1598519530  0.004148369  0.0515331738  0.004683092
## FLAG.Job.Sales       0.0136325250  0.173113052  0.0775017509 -0.062201352
## FLAG.Job.Self        0.1229339424 -0.148159836 -0.1457503277  0.177041392
```

```
## FLAG.Reason.DebtCon  0.0796890544 -0.103796881 -0.0279250647  0.091839198
## FLAG.Reason.HomeImp -0.0448910143  0.062852946  0.0837783566 -0.121375063
##                             PC21         PC22         PC23         PC24
## LOAN                -0.2215036958 -0.040007150  0.007747665  0.120074892
## IMP_MORTDUE          0.0422445472  0.011027837  0.353075344  0.553368130
## M_MORTDUE           -0.4921244099  0.001571199 -0.101680485 -0.124260838
## IMP_VALUE            0.1747206692  0.029772285 -0.345157774 -0.591632248
## M_VALUE              0.1408617818  0.019339559 -0.015635281 -0.004653297
## IMP_YOJ              0.0824789938  0.020420224  0.062586666  0.030618770
## M_YOJ                0.4752087787 -0.087861039  0.018812944  0.019975855
## IMP_DEROG           -0.1592084688  0.007364856  0.010698802  0.010400638
## M_DEROG              0.1805992755 -0.647400830 -0.382974751  0.214575843
## IMP_DELINQ          -0.0146775325  0.085924998  0.044672642 -0.035300808
## M_DELINQ             0.1536349820  0.027851844  0.672589318 -0.394241397
## IMP_CLAGE            0.0693224367  0.068146075  0.032444194  0.014682760
## M_CLAGE             -0.2741943013 -0.118850072  0.103823073  0.113905017
## IMP_NINQ             0.1765457025  0.085661383 -0.021799682 -0.013984207
## M_NINQ               0.1228968477  0.716694122 -0.347372544  0.258624695
## IMP_CLNO            -0.3474545240 -0.049486805 -0.015833063 -0.057317691
## M_CLNO              -0.2200705106 -0.001590157 -0.060149171 -0.144504709
## IMP_DEBTINC         -0.1777473412  0.083905182 -0.019565822 -0.014786843
## M_DEBTINC            0.0809004478 -0.050076080  0.002465292  0.032444047
## FLAG.Job.Mgr        -0.0002101558  0.017359021  0.011236822 -0.027930560
## FLAG.Job.Office      0.0533205568  0.038362025  0.026779128 -0.001428482
## FLAG.Job.Other      -0.0216821058  0.005673004  0.017279269 -0.002493396
## FLAG.Job.ProfExe     0.0208955844  0.001777991  0.016577833 -0.007097095
## FLAG.Job.Sales       0.0519205053  0.025019174  0.013321592  0.005528852
## FLAG.Job.Self        0.0446196258 -0.081713171  0.031788411  0.002219788
## FLAG.Reason.DebtCon  0.0069209894  0.020914599 -0.002030880  0.010097642
## FLAG.Reason.HomeImp  0.0121554923 -0.015231800  0.017093077  0.055027702
##                             PC25          PC26          PC27
## LOAN                -0.037537367 -0.0153613766  9.466107e-03
## IMP_MORTDUE         -0.157683238 -0.0342568676  7.694669e-03
## M_MORTDUE            0.013733538  0.0346111053  1.339194e-02
## IMP_VALUE            0.134881926  0.0379399425 -1.578745e-02
## M_VALUE              0.020311979  0.0210307339 -3.766300e-04
## IMP_YOJ              0.020139448  0.0087774594  4.163574e-04
## M_YOJ                0.009134723  0.0476003765 -3.793511e-03
## IMP_DEROG           -0.028773354  0.0045535251  3.956591e-03
## M_DEROG              0.012236296 -0.0098873763  2.316941e-02
## IMP_DELINQ          -0.003920311  0.0131509183 -8.863126e-03
## M_DELINQ             0.061307667 -0.0127750325 -4.165305e-02
## IMP_CLAGE           -0.035584998 -0.0023367359 -1.595405e-02
## M_CLAGE              0.616818573  0.1040078364  1.932753e-02
## IMP_NINQ            -0.015523371 -0.0004069654  5.575714e-05
## M_NINQ               0.111611715  0.0008744859  1.238590e-02
## IMP_CLNO             0.108573951  0.0133452243 -8.845705e-03
## M_CLNO              -0.732317913  0.0359734165  7.829905e-02
## IMP_DEBTINC          0.039603062 -0.0212684083 -1.501068e-02
## M_DEBTINC           -0.004222748 -0.0120381342 -8.266618e-03
```

```
## FLAG.Job.Mgr         0.017712786  0.1304279603  3.774905e-01
## FLAG.Job.Office      0.017514125  0.1442678413  4.124675e-01
## FLAG.Job.Other       0.004779727  0.1727444055  5.429528e-01
## FLAG.Job.ProfExe     0.027213967  0.1510117517  4.648922e-01
## FLAG.Job.Sales       0.007037289  0.0476967673  1.557420e-01
## FLAG.Job.Self        0.001140725  0.0677772094  2.023665e-01
## FLAG.Reason.DebtCon -0.050140229  0.6730038918 -2.255646e-01
## FLAG.Reason.HomeImp -0.040613946  0.6553984108 -2.238740e-01
##
## $center
##                LOAN         IMP_MORTDUE           M_MORTDUE
IMP_VALUE
##        1.860797e+04        7.299939e+04        8.691275e-02
1.015360e+05
##             M_VALUE             IMP_YOJ               M_YOJ
IMP_DEROG
##        1.879195e-02        8.756166e+00        8.640940e-02
3.431208e-01
##             M_DEROG          IMP_DELINQ            M_DELINQ
IMP_CLAGE
##        1.187919e-01        5.030201e-01        9.731544e-02
1.794683e+02
##             M_CLAGE            IMP_NINQ              M_NINQ
IMP_CLNO
##        5.167785e-02        1.170134e+00        8.557047e-02
2.124782e+01
##              M_CLNO         IMP_DEBTINC           M_DEBTINC
FLAG.Job.Mgr
##        3.724832e-02        3.403929e+01        2.125839e-01
1.286913e-01
##     FLAG.Job.Office      FLAG.Job.Other    FLAG.Job.ProfExe
FLAG.Job.Sales
##        1.590604e-01        4.006711e-01        2.140940e-01
1.828859e-02
##       FLAG.Job.Self FLAG.Reason.DebtCon FLAG.Reason.HomeImp
##        3.238255e-02        6.590604e-01        2.986577e-01
##
## $scale
##                LOAN         IMP_MORTDUE           M_MORTDUE
IMP_VALUE
##        1.120748e+04        4.255304e+04        2.817308e-01
5.687040e+04
##             M_VALUE             IMP_YOJ               M_YOJ
IMP_DEROG
##        1.358010e-01        7.259424e+00        2.809912e-01
8.300165e-01
##             M_DEROG          IMP_DELINQ            M_DELINQ
IMP_CLAGE
##        3.235707e-01        1.083364e+00        2.964117e-01
8.357281e+01
```

```
##             M_CLAGE            IMP_NINQ              M_NINQ
IMP_CLNO
##        2.213944e-01        1.653866e+00        2.797522e-01
9.951308e+00
##              M_CLNO         IMP_DEBTINC           M_DEBTINC
FLAG.Job.Mgr
##        1.893856e-01        7.649022e+00        4.091700e-01
3.348860e-01
##     FLAG.Job.Office      FLAG.Job.Other    FLAG.Job.ProfExe
FLAG.Job.Sales
##        3.657631e-01        4.900756e-01        4.102267e-01
1.340042e-01
##       FLAG.Job.Self FLAG.Reason.DebtCon FLAG.Reason.HomeImp
##        1.770288e-01        4.740649e-01        4.577078e-01
##
## $x
##                   PC1           PC2           PC3           PC4
PC5
##    [1,] -3.334837e-02 -3.2559132021  9.638764e-01 -1.5156834168 -
0.0548213040
##    [2,] -1.048168e-02 -2.1528326969  1.177300e+00 -2.1902919576 -
0.1535836810
##    [3,]  6.012015e-02 -3.4133337685  8.952064e-01 -1.4853335842
0.0734267797
##    [4,]  9.792256e+00  0.9481554140  4.432035e-01 -1.6581530157 -
0.0083855508
##    [5,] -4.757578e-01 -1.1320132687  1.860498e+00 -1.3653405144
1.9339935350
##    [6,] -1.136180e-01 -3.0586688092  1.161052e+00 -0.4253453486 -
0.1027258205
##    [7,]  7.090125e-01 -2.1980519762  2.430598e-01 -3.6963485940 -
0.2433414728
##    [8,] -1.272380e-01 -3.1255402313  1.305413e+00 -0.2687395578 -
0.0202619479
##    [9,]  1.241226e-01 -2.5832997030  1.005814e+00 -2.2043534106 -
0.1172542170
##   [10,]  2.772100e-01 -2.0988463100  1.734384e+00 -1.0069532034
0.5653935360
##   [11,]  8.224972e+00  1.0727064695 -9.360276e-02 -2.5372514430
1.6811439775
##   [12,] -7.680138e-02 -2.7149952455  1.288060e+00 -1.8203907860
2.2933519111
##   [13,] -1.720853e-01 -2.2926987481  7.535398e-01 -1.9542894029 -
0.1590840842
##   [14,] -4.792788e-01 -0.4843148515  8.226781e-02 -1.4375398314
1.3646081991
##   [15,] -1.742320e-01 -2.0071267923  1.311628e+00 -1.8009238454 -
0.2717140616
##   [16,]  8.605663e-01 -3.0244064110  1.481627e+00 -0.8542094810 -
1.1202907565
```

```
##   [17,]  5.177954e-01  0.1109130076  4.708671e-01 -5.3625163069
1.0308044397
##   [18,]  8.443913e+00  0.7216403207  6.377736e-01 -0.5480561220
2.3121209665
##   [19,] -4.278882e-02 -3.0086365724  7.890782e-01 -1.6886282283
0.0274710098
##   [20,] -5.211849e-01 -0.9733325454  2.156313e+00 -0.1295575549
1.9745275627
##   [21,]  2.921702e-02 -2.7117571412  8.930820e-01 -1.9630497450 -
0.0627837694
##   [22,]  1.521636e+00 -1.1540655718  2.075976e+00 -0.9344619291
1.4493470367
##   [23,] -2.728148e-01 -1.8075448495  7.244833e-01 -2.4022029832
1.3339043307
##   [24,]  1.693318e+00 -1.1436865640  6.044623e-01 -5.0694452864
1.2915602237
##   [25,]  1.584682e+00 -3.8425402949  1.059465e+00 -0.9421658446 -
1.9148210624
##   [26,] -3.878196e-01 -1.5825425659  1.082155e+00 -1.1905923233
1.3349675475
##   [27,] -5.047633e-01 -1.0767507464  2.189204e+00 -0.0675962008
2.0105092439
##   [28,] -1.949180e-01 -2.4744226413  1.299845e+00 -1.6279507602
1.0219030921
##   [29,]  3.184339e-01 -2.7221213325  1.123557e+00 -2.3005818358 -
0.1937136743
##   [30,]  6.122845e-01 -2.0749940070  2.484133e+00 -1.2661562421 -
1.1095638985
##   [31,] -5.818745e-01 -0.7446353604  2.442224e+00 -1.0130923190
1.1600176467
##   [32,]  1.216177e+00  1.0844999660  4.634403e-01 -9.7090723906 -
0.3866248360
##   [33,]  7.674747e-01 -2.9441358384  1.692999e-01 -3.2385565879 -
0.5214424566
##   [34,] -7.837525e-01  0.7542775612 -6.736404e-01 -0.9918587742
1.1210479745
##   [35,] -4.911056e-01 -1.0238100419  2.158601e+00 -0.0792608261
2.0145835562
##   [36,] -5.173727e-01 -0.9459759517  2.209518e+00 -0.0607209731
1.9699902097
##   [37,]  4.617201e-01 -2.8057443704  6.022367e-01 -1.7094212684 -
0.5111375252
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##   [39,] -5.428401e-01 -0.8962987311  2.139999e+00 -0.1561071596
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##   [40,]  1.138445e-01 -3.5048422941  8.329487e-02 -2.2191832172 -
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##   [46,]  6.538137e-01 -3.1107242339  1.461961e+00 -1.2101281210 -
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##   [49,]  1.111047e+00 -0.1658897097  8.933939e-01 -3.2363066853
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##   [50,] -4.862831e-01 -1.7951068958  1.902014e+00 -1.2766250675
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##   [53,]  8.760501e-01  0.0690720610  1.133550e+00 -1.8629005053
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##   [54,] -3.085365e-01 -0.6621303589  1.692950e+00 -3.1055811459
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## [1037,] -5.211807e-01 -1.9944309596 -1.013461e+00  1.0351614754 -
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## [1038,] -4.581801e-01 -1.4269919615  1.351726e+00 -0.5334897031 -
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## [1039,] -7.535346e-01 -0.6786566678 -6.873057e-01  0.8269477475
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## [1040,]  8.698417e-01  0.1107603098  3.189700e+00 -0.2085649077 -
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## [1041,] -3.851098e-01 -0.9934244578  1.506981e+00 -0.7553011652 -
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## [1043,]  1.211820e+00 -2.5386108605  2.522913e+00  1.1642662387 -
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## [1044,] -6.642344e-01  0.1678958155  1.768060e+00 -2.0630273968
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## [1045,] -3.308371e-01 -0.5312699524 -9.829428e-01 -0.5655903844
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## [1049,] -2.171731e-01 -1.8484776719 -1.581250e+00 -1.4648577600 -
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## [1169,] -2.719547e-02 -2.0656180987  1.191481e+00 -1.9797013444 -
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## [1179,] -4.836161e-01 -1.7492520188 -1.427899e+00 -0.4826528687
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## [1189,] -5.253690e-01 -1.4377622591 -1.047758e+00 -0.0800493196 -
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## [1190,] -3.896173e-01 -1.9063243927 -1.791260e+00 -0.6022858620 -
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## [1205,] -5.954863e-01 -0.9529462090 -1.300903e+00 -0.0111835460
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## [1206,] -1.119083e+00  2.2695666964  3.100533e+00 -0.4649422655
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## [1207,] -5.147270e-01 -1.6409066676 -2.112824e+00 -1.1435519430 -
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## [1208,] -1.145777e+00  0.7447504506 -5.404175e-01  0.3437477459
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## [1209,] -9.162836e-01  1.1292034872  5.049304e-01 -0.0638496437 -
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## [1211,] -5.131648e-01 -2.0464997624 -1.039906e+00  1.0309677540 -
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## [1212,] -9.309653e-01  0.8793587140  2.955218e+00  0.2475094390
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## [1215,] -1.338198e-01 -3.1014954385  1.278672e+00 -0.0723080033 -
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## [1216,] -6.268683e-01  0.2337412767 -1.193869e+00 -0.5119182546
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## [1224,]  3.647937e+00  0.9060548159 -1.678359e+00  0.0438096851
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## [1232,] -2.658589e-01 -2.1556993187  1.256631e+00 -0.3350930217 -
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## [1283,] -5.955297e-01 -1.0484622576  1.556813e+00 -0.5127819913 -
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## [1284,] -8.797264e-01  0.4042836498 -1.383688e+00 -0.2248356527
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## [1286,] -6.586454e-01 -0.5064443490 -3.963161e-01  1.1330884779
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## [1306,] -7.216684e-01 -0.4923821389  3.423427e-01  1.3845283310
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## [1390,] -1.022211e+00  0.2062526087 -9.193368e-01  0.2301214074
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## [1537,] -6.710485e-01 -0.9555802429 -6.252721e-01  1.0699117500
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## [1539,] -9.111794e-01  0.1153879483 -1.053417e+00  0.8421463666
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## [1551,] -7.476142e-01 -0.0013395590  2.267878e+00 -0.1914275718
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## [1709,] -5.806051e-01 -1.3740276107  1.127884e+00 -0.8168260294 -
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## [2040,] -5.532409e-01 -0.7856131252  1.645720e+00 -1.5307012873
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## [2041,] -7.469590e-01 -0.6187997405 -3.590751e-01  0.1812096057
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## [2042,]  4.184786e-01 -1.6945788931  1.712172e+00 -0.4923503495 -
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## [2043,] -6.812008e-01 -0.4280556177  2.301815e+00 -1.0102212803
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## [2044,]  3.154571e+00 -1.4476885490 -1.846257e+00 -0.9250218037 -
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## [2045,] -7.449336e-01 -0.6633387060 -7.627680e-01 -0.6272595005
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## [2046,]  2.021478e+00 -2.4261369464 -6.682690e-01 -5.1862042007 -
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## [2047,]  3.549836e-01 -1.6972176087 -2.583565e+00 -2.7385054362 -
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## [2048,]  1.333398e-01 -1.4710653940 -1.599698e+00 -2.5224644383 -
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## [2049,] -6.454599e-01 -0.7087359756 -4.304677e-01 -1.4414749862 -
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## [2050,] -1.031381e+00  0.8425811177 -2.679138e-01 -0.1019271395
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## [2051,] -3.381907e-01  2.9367134721 -1.784488e+00 -4.5184807101
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## [2052,]  1.344861e+00 -0.7604080819  2.174953e+00 -1.6822907497 -
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## [2053,] -1.254404e+00  3.4271095742 -7.964931e-01 -2.0348360370
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## [2054,] -5.394945e-01 -0.7070223979 -1.294318e+00 -1.1164065467 -
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## [2055,] -4.625583e-01  2.4667938142 -8.016889e-01 -4.0366186809
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## [2056,] -9.681168e-01  0.6809604634  1.609742e+00 -2.0908258286 -
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## [2057,] -1.485211e-01 -2.8434166834  1.080236e+00 -0.2661270455 -
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## [2058,] -1.427960e+00  2.4413877145  2.956058e-01  0.8420927284
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## [2059,] -2.363125e-01  0.5134468464 -1.503867e+00 -1.6178883328
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## [2060,] -1.100687e+00  0.8799985007 -7.119703e-01  0.2983197316
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## [2061,]  3.848242e-01 -2.6153370099  2.692774e+00  0.7250966687 -
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## [2062,]  8.410896e+00  1.9483748467  3.053678e-01  0.1943808602
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## [2063,] -2.295408e-01 -1.5948242116 -1.252449e+00  0.6700160222 -
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## [2064,] -9.611101e-01  0.8949066127  2.893250e+00  0.2285371436
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## [2065,] -5.096523e-01 -1.1437889071  6.271320e-01  0.6751048143 -
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## [2066,] -6.971278e-01 -0.8587285601 -1.313415e+00  0.5249730592 -
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## [2068,] -6.522903e-01 -1.2502384033 -7.047640e-01  1.1961634885 -
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## [2069,] -1.032425e+00  0.1726971449 -7.777100e-02  1.1211728266
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## [2070,] -7.321157e-01 -0.1051375301  2.253408e+00 -0.1288085282
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## [2071,] -2.228752e-01 -1.3613339803  1.312753e+00 -1.5175275602 -
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## [2072,] -1.089423e+00  0.4601412976 -9.207499e-01  0.1800242534
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## [2073,]  8.755340e+00  1.6192681575  1.964091e+00 -2.5308390203
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## [2074,] -9.332787e-01  0.1931557731 -9.903255e-01  0.9216086017
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## [2075,]  5.529863e-01 -2.6333244390  2.384727e+00  0.7889026175 -
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## [2076,]  2.778584e-01 -2.5960896255  8.634374e-01 -2.0532990471
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## [2077,] -5.850714e-01 -1.1581091779  1.299929e+00 -0.6725495277 -
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## [2078,] -7.041756e-01 -0.4812895997 -1.146991e+00  0.5898664421 -
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## [2079,]  2.391056e+00 -2.0459563559  1.787912e+00  2.4666249577
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## [2080,] -5.946453e-01 -1.4593966933 -1.040574e+00  0.9476814689 -
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## [2081,] -9.047254e-01 -0.3389432140 -5.513680e-01  0.8875799251
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## [2082,] -5.418261e-01 -1.1124505413  6.324754e-01  0.6465770380 -
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## [2083,] -9.147126e-01 -0.0703931241 -6.578219e-01  0.8892588887 -
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## [2084,] -1.953969e-01 -1.4473125483  1.448126e+00 -1.3298133197 -
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## [2085,] -3.402291e-01 -1.7193432322 -1.372529e+00 -0.4865192457 -
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## [2086,] -1.990500e-01 -1.4524338731  1.255035e+00 -1.5410761324 -
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## [2087,]  2.165296e-01 -1.7697397351 -1.237834e+00  1.3015058235 -
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## [2088,] -1.258015e+00  2.0920398058  2.322340e+00 -0.7623219842
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## [2089,]  2.610226e+00 -1.9404618437  1.643351e+00  2.1011450179
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## [2090,] -7.057659e-01 -0.5417411176 -9.583834e-01  0.7975900035 -
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## [2095,]  7.138305e-01  0.0503545872 -2.104532e+00 -0.8093290249 -
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## [2096,] -6.397703e-01 -0.8439522481 -1.559957e+00 -0.6618550281 -
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## [2097,] -4.847301e-01  0.5362123375  1.368061e+00 -2.1388370836
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## [2101,] -6.691758e-01 -0.5403624669 -1.157413e+00  0.6196457341 -
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## [2102,]  7.659560e+00  0.7489957407 -1.663113e+00  1.0647665834
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## [2103,]  3.983060e-01 -1.6408062015  2.031554e+00  0.7908731591 -
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## [2104,]  1.106016e-01  2.3851950765 -1.387834e-01  0.1623715597
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## [2105,] -7.564456e-01  0.4306798306 -1.313843e+00 -1.3711115077
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## [2106,] -4.804472e-01  0.6000387244  1.458385e+00 -2.0522227583
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## [2107,] -6.623260e-01  0.9762492662 -4.173390e-01  0.1934047001
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## [2108,]  8.331072e+00  2.1463947456  5.532752e-01  1.3325335482
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## [2109,] -5.264042e-01 -1.1062160319  6.364966e-01  0.6701456504 -
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## [2111,] -8.582188e-01  0.5613444018  1.358952e-01  0.6142415561
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## [2112,]  6.006516e-01  0.4478296685 -1.533296e+00  0.3743801630
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## [2114,]  2.367425e+00 -1.9890698124  1.817138e+00  2.4741656397
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## [2115,] -1.598577e-01 -2.9604029379  1.308296e+00 -0.0043630328 -
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## [2116,] -6.674392e-01 -0.5859622731  2.432390e-01  1.8576116632
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## [2118,] -4.926414e-01 -1.1459918595  1.420861e+00 -1.6386384963
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## [2119,] -1.339036e-01  3.1425269908 -4.482961e-01 -0.0876659154
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## [2120,] -6.478435e-01 -0.5439510780  1.855387e+00 -0.4504769255
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## [2122,] -7.535697e-01  0.0173277891  2.505388e+00  0.1053644184
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## [2123,] -7.097372e-01  0.0793694253  1.957416e+00 -0.5133958303
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## [2124,] -8.321253e-01  0.4674535684  2.489503e+00 -0.4564804462
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## [2128,] -6.417678e-01 -1.0601652977 -1.011642e+00  0.8893255588 -
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## [2129,] -8.171108e-01 -0.4627099420 -1.461603e+00  0.1693277361 -
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## [2131,] -4.938264e-01 -1.5897258756 -8.675662e-01  1.2481410496 -
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## [2132,] -4.099023e-01 -1.5188244042  2.571746e+00 -0.6652370532 -
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## [2133,]  2.330392e-01 -1.8275636718 -1.227700e+00  1.3385709055 -
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## [2134,] -8.986791e-01 -0.2762264320  1.256836e-01  1.5057577908
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## [2136,] -9.184888e-01  0.9049241393 -1.349179e+00 -0.3460118073 -
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## [2137,] -1.502675e-02  3.2771108428 -6.285700e-01 -0.5829828173
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## [2138,] -5.492918e-01 -1.4396448986 -9.109927e-01  1.1272670671 -
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## [2139,] -6.051799e-01 -1.0351263412  1.281197e+00 -0.7200840284 -
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## [2140,] -9.254332e-01  0.5761338069 -6.260419e-01  0.6239295931
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## [2144,] -1.243373e+00  1.3766384759 -2.824355e-01 -0.4016679963
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## [2145,] -4.497740e-01  0.4526066312 -1.421287e+00 -1.3079092310
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## [2146,] -5.852160e-01 -1.0678609249 -7.571851e-01  1.1940031283 -
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## [2147,] -6.968096e-01 -0.4628614349  2.039179e+00 -0.1973719571
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## [2153,] -8.842301e-01  0.0153485269  1.262497e+00  0.7057121346
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## [2154,]  3.578561e+00  1.0933063525 -1.687560e+00  0.0377350660 -
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## [2155,] -1.093651e+00  0.8932119539 -6.937809e-01  0.3356273660
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## [2156,] -7.463497e-01 -0.3810628582  2.050738e+00 -0.2456510769
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## [2157,]  3.106997e+00 -1.3168242543 -1.515675e+00  0.3363766299 -
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## [2158,] -8.477700e-01  0.5189555652  2.387002e+00 -0.5904063868
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## [2159,] -7.759889e-01 -1.1123631932  2.012263e+00 -0.2540015260
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## [2160,] -1.975149e-01 -1.4133289713  1.282659e+00 -1.5039770237 -
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## [2161,] -7.468534e-01 -0.3144364664  2.638176e+00  0.2578384714
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## [2162,] -1.018833e+00  0.0642245715 -2.031843e-01  1.0844248644
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## [2163,] -5.461846e-01 -1.0008041364  6.017340e-01  0.6110971575 -
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## [2164,] -8.139689e-01 -0.5594725797 -1.182200e+00  0.4817049550 -
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## [2165,]  4.123836e-01 -1.6564459527  2.070656e+00  0.8532795396 -
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## [2166,]  8.224923e+00  1.9339867943 -1.354999e+00  1.2436809320
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## [2167,] -6.070415e-01 -1.0907951775 -7.560031e-01  1.1789810651 -
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## [2168,]  8.251697e+00  1.8948291232 -1.305744e+00  1.3252469895
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## [2169,] -8.735193e-01 -0.3319750318 -1.014943e+00  0.5649669792 -
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## [2170,] -8.145986e-01  0.4982986913  2.093576e+00 -0.8269073916
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## [2171,] -9.312928e-01  0.6869341971 -5.636531e-01  0.6728219375
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## [2172,] -5.386577e-01 -0.7234699989 -1.220017e+00 -0.6360634342 -
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## [2173,] -1.262231e+00  0.9525486091 -9.033173e-01 -0.3992619478
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## [2174,] -8.883796e-01  0.3823374064 -1.655939e+00 -1.1905192607 -
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## [2175,] -7.845178e-01 -0.4451329092 -7.656610e-01 -0.2504966969
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## [2176,] -4.176750e-01  0.9636518681 -1.410532e+00 -3.7527944496
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## [2177,] -6.486452e-01  1.1525750484 -9.785147e-01 -2.1111917659
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## [2178,] -7.604574e-01  1.2807545280  9.379335e-01 -3.1511080429
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## [2179,]  1.026917e+00  0.2372515914 -3.548631e+00 -5.4033916574 -
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## [2180,] -1.175602e+00  0.8466884816 -1.254297e-02  0.9816998838
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## [2181,] -1.457774e+00  2.5527642139  3.351312e-01  0.8523169041
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## [2182,] -9.658810e-01  0.3630501576 -9.953375e-01  0.8730696592
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## [2183,] -8.883805e-01 -0.3364414129 -1.040143e+00  0.5238548576 -
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## [2184,] -1.032110e+00  0.6396292045 -1.422731e+00 -0.1355778766 -
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## [2186,] -8.842087e-01  0.9528000826  2.729823e+00 -0.2598061948
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## [2187,]  1.098459e-01  2.4211430698 -1.778539e-01  0.1245860507
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## [2189,] -7.279377e-01 -0.5446013866 -1.170783e+00  0.5576536172 -
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## [2190,] -9.556541e-01 -0.3558162238 -5.783652e-01  0.8309679171
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## [2191,] -9.264166e-01  0.9391121334  2.788626e+00  0.1626050284
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## [2192,]  3.107477e+00 -1.3222128848 -1.417523e+00  0.4543515100 -
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## [2193,]  2.378620e+00 -1.9920402812  1.810819e+00  2.4873063095
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## [2194,] -7.597093e-01  0.6383957947  2.403947e+00 -0.8910552018
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## [2195,] -7.596932e-01 -0.2528147183  2.649482e+00  0.2498808199
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## [2196,]  5.313072e-01  1.0149277055 -1.474795e+00 -0.4039288905
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## [2197,] -2.036308e-01 -1.4279651921  1.276079e+00 -1.5159029695 -
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## [2199,] -6.849363e-01 -0.1973478611  4.091155e-01  1.1481947450
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## [2201,] -5.821580e-01 -0.8513546873 -1.414687e+00 -0.7146024250
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## [2202,] -9.687278e-01  0.1916108367 -2.747106e-01  0.0134228823
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## [2203,]  1.639335e+00 -1.6911765241 -3.268676e-01 -4.8593442240 -
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## [2204,]  9.705090e-01 -0.3737125516 -6.598791e-01  0.2820789262
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## [2207,] -8.122132e-01 -0.4430666010 -9.952573e-01  0.6989622353 -
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## [2211,] -5.724724e-01 -1.5916242112 -1.510736e+00  0.5150726275 -
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## [2212,] -1.097257e+00  0.5440316185 -1.044019e+00  0.0403275576
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## [2213,] -6.547606e-01 -0.6720535827  1.619354e-01  1.8073629111
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## [2214,] -1.409829e+00  2.4634312787  7.163499e-02  0.6426745502
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## [2215,] -9.377015e-01  0.8390129631 -6.444241e-01 -0.7678014622
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## [2377,]  3.107861e+00 -1.4066663203 -1.591853e+00  0.2986170096 -
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## [2378,]  5.223357e-01  1.0049551509 -1.551516e+00 -0.4711624799
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## [2540,]  1.166433e+00 -0.9575414752 -1.333302e+00 -3.1988165143 -
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## [2541,] -3.818803e-01 -0.0394996920  1.302268e+00 -2.5548117612
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## [2543,]  7.196533e+00  2.6197580835 -6.756869e-01  0.2929414699
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## [2544,] -5.245927e-01 -1.5627707301 -1.899178e+00 -0.8152308535 -
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## [2545,]  3.312894e-01 -1.0959859488 -2.279623e+00 -1.1445571561 -
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## [2546,] -1.129491e+00  1.0931009303 -6.352625e-01 -0.9387211719
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## [2547,] -1.072114e-01 -2.8771332649 -1.815344e+00 -0.5019185450
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## [2548,] -9.266655e-02 -1.6127701082 -1.609977e+00 -2.1168568175 -
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## [2549,] -6.964118e-01 -0.9259330195 -1.261043e+00 -0.3441982120 -
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## [2556,] -8.875084e-01 -0.1060021715  2.328255e+00 -1.1711098759
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## [2562,] -1.193035e+00  1.6777146473 -3.697078e-01 -0.4872742602
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## [2634,]  2.395294e+00 -2.0364325311  1.813806e+00  2.5506000598
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## [2639,] -7.497232e-01 -0.1223122382 -9.035010e-01  0.1009313561
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## [2664,] -1.217871e+00  1.7981983970  2.994524e-02  0.8623081456
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## [2670,]  2.069218e-01 -1.7385523220 -1.194522e+00  1.3820584882 -
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## [2711,] -6.758860e-01 -1.0139661503 -2.269190e+00 -0.4004424799 -
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## [2809,] -3.618137e-01 -2.3465921441  2.054561e+00  0.5148076505 -
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## [2879,] -2.192381e-02 -0.6502036725 -1.549074e+00 -0.2644918238 -
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## [2881,] -7.966744e-01 -0.4622223645 -1.029022e+00  0.7515090589 -
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## [2900,]  3.066771e+00 -1.2798719535 -1.469668e+00  0.4235647638 -
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## [2913,] -8.219973e-01 -0.6077867583 -1.206547e+00  0.5187530642 -
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## [2923,] -7.472052e-01 -0.6030560949 -6.321400e-01  1.0775631410
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## [3002,] -7.502512e-01 -0.4419361824 -5.741505e-01  1.1190840447
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## [3015,] -3.497922e-01  0.1197811298 -7.708662e-01 -2.3788025998
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## [3040,]  1.888922e+00  1.4831244816 -1.241821e+00 -0.0123234844
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## [3041,] -6.358688e-01 -0.5849264910  1.847044e+00 -0.3569378961
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## [3042,] -8.844555e-01 -0.0617663342 -6.336879e-01  0.9842653657 -
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## [3043,]  3.111562e+00 -1.2979616603 -1.574548e+00  0.3628412373 -
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## [3044,] -6.076441e-01 -0.7534718278 -1.079962e+00  0.6476704872
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## [3045,] -9.727343e-02 -2.8501232750  1.654230e+00  0.4831619628 -
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## [3046,] -4.298772e-01 -1.8830554344  1.812623e+00  0.1819007817 -
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## [3047,]  8.312663e+00  2.1905208991  5.445346e-01  1.3902636354
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## [3048,]  4.438111e-01  1.6712988856 -1.037669e+00 -0.6275623717
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## [3049,] -1.144579e+00  1.0962537091 -1.563453e-02  1.0343387587
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## [3050,]  9.725989e-01  0.0750711682  1.537163e+00  1.6021960015
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## [3051,]  3.175311e+00  1.0195967904  3.656346e-01  0.4848480527 -
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## [3052,] -1.097648e+00  0.9597248179 -5.038936e-02  1.1370416967
1.6038079566
## [3053,]  2.273433e+00 -0.4748371428 -1.709859e+00  0.2568011485 -
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## [3054,] -2.462097e-01 -1.4422837171  1.578145e+00 -0.4633541193
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## [3055,] -7.334072e-01 -0.0337605347 -8.696136e-01  0.6851614765
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## [3058,]  1.585535e-02 -1.4760800028 -5.167631e-01  1.1373138550
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## [3059,] -7.545455e-01 -0.5067994954 -5.512057e-01  1.1528715138
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## [3060,] -8.153283e-01 -0.4421436648 -1.461620e+00  0.2529075624 -
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## [3061,] -8.184232e-01 -0.3803502445 -4.416759e-01  0.6706544240
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## [3062,]  5.270948e+00 -0.2295663333 -8.254267e-01  1.5453030381 -
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## [3063,] -8.097295e-01 -0.1368927100 -1.040439e+00  0.5276424449
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## [3064,] -8.211252e-01 -0.1010276904  2.489156e+00  0.0839257619
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## [3065,] -8.052815e-01 -0.3941797177 -9.526037e-01  0.8133647617 -
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## [3066,] -8.204978e-01 -0.1919349813  2.671740e+00  0.2905183643
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## [3067,] -6.951158e-01 -0.1620461304 -4.944763e-01  0.8293130318
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## [3068,]  3.084670e+00 -1.3123807282 -1.627987e+00  0.2933252366 -
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## [3069,] -1.123807e+00  0.8664477855  1.038705e-01  1.2746234515
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## [3070,] -1.186494e+00  1.0720246689  5.211634e-01  1.5615626717
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## [3071,] -6.760841e-01 -1.5963170471 -1.198574e+00  0.8332521285 -
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## [3072,] -5.334269e-01 -1.2312817281 -8.640365e-01  1.0503689291
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## [3073,]  1.036551e+00  0.0434212870  1.043154e+00 -2.0810054667
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## [3074,]  9.360238e-01 -0.4550407225 -1.376096e+00 -0.1119447882 -
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## [3075,] -3.276328e-01 -1.8032448131  1.688048e+00 -0.2561016550 -
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## [3076,] -7.682457e-01 -0.6029359230 -1.220956e+00  0.5409305424 -
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## [3077,]  6.467683e-01 -0.4768429344 -7.830666e-01  1.1874156244 -
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## [3078,]  2.281712e+00 -0.2176285748  1.203224e+00 -0.8955831532
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## [3079,]  1.484856e-02 -1.4704259573 -6.036752e-01  1.0557297592
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## [3082,] -5.877261e-01 -0.8643614474  2.330101e+00  0.2799693627
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## [3083,] -4.268788e-01 -1.9327529090  1.779426e+00  0.1561543246 -
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## [3084,] -1.168701e+00  1.2539826914 -6.624643e-01  0.5549815096 -
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## [3085,] -7.525944e-01 -0.6903421773 -1.058977e+00  0.7469851922 -
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## [3086,] -8.214322e-01 -0.5044626480 -1.358496e+00  0.3724823829 -
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## [3087,] -3.851698e-01  0.5733961571 -2.982400e+00 -2.7948315806
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## [3088,] -1.096194e+00 -0.0461485206 -6.330773e-01  0.6258741834
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## [3090,] -5.580192e-01 -0.1384910890 -6.590482e-01 -1.0590630850
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## [3094,]  2.093898e+00 -2.2459186399 -4.090538e-01 -3.8109623128 -
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## [3095,] -6.029960e-01  3.1644692885 -1.101820e+00 -3.8985814361 -
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## [3096,]  3.593099e-01 -1.4708183499  2.044810e+00  0.8467036427 -
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## [3097,]  2.450122e-01  2.2896447202 -1.504191e-03  0.6262399779
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## [3098,] -1.026020e+00  1.0436089532  1.330840e+00  1.5782167016 -
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## [3099,] -6.605131e-01 -1.1218117701 -2.016106e+00 -0.0661081490 -
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## [3100,] -7.092910e-01 -0.7634360869 -8.995902e-01  1.0256106487 -
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## [3101,] -1.052486e+00  0.8788060261 -1.143897e-01  1.1334470777
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## [3102,] -4.485477e-01 -2.1470357741  2.017050e+00  0.4025111210 -
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## [3103,] -1.010748e+00  0.3532622073 -5.705747e-01  0.7154294214
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## [3104,] -7.639497e-01 -0.5658671544 -1.208000e+00  0.5543335513 -
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## [3105,] -3.893386e-01 -2.3234215120  1.963232e+00  0.4254515243 -
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## [3106,] -1.217327e+00  1.8265201399  2.030077e-02  0.8999172433
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## [3107,] -9.561965e-01  0.9787179555 -2.974761e-01  0.6161915672
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## [3108,] -1.093266e+00  0.6875531023 -2.176723e-01  0.9513518351
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## [3111,] -1.414739e-01 -2.7722530996  1.472070e+00  0.2471903284 -
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## [3117,]  2.292992e+00 -0.2911446459  1.245092e+00 -0.8312073902
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## [3118,] -8.024407e-01 -0.2095225638 -4.158850e-01  1.2150186076
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## [3119,] -9.746351e-01  0.1140474046  2.491856e+00 -0.0858712078
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## [3129,] -1.074937e+00  0.8914103936 -2.173475e-01  1.0533673230
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## [3130,] -7.194683e-01 -0.6391810541  1.467658e+00 -0.8062225600
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## [3131,]  7.648526e-01 -1.3708564133  2.011832e+00 -1.8169873001 -
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## [3132,] -7.916241e-01 -0.1412056969  2.497695e+00  0.1329697156
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## [3133,] -6.354915e-01  0.6125791655 -2.296873e+00 -2.2297923675
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## [3134,] -4.794703e-01 -1.4204705612  1.810164e+00 -0.0261811406
1.8062681041
## [3135,]  3.312352e-01  2.3668978238 -4.141480e-02  0.2574373204
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## [3136,]  2.968188e+00  0.9270701616  5.429185e-01  0.9120226046 -
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## [3137,] -3.455970e-01  1.3411355092 -2.759230e-01  1.2072820961 -
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## [3140,] -1.222521e+00  1.1181432693  5.883987e-01  1.5949953878
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## [3145,] -4.323030e-01 -2.2058155692  2.029219e+00  0.4412292931 -
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## [3147,] -5.452534e-01 -1.1742550104  2.320050e+00  0.3248925905
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## [3153,] -2.501604e-01 -1.6476594604 -1.866622e+00 -0.8160612250 -
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## [3154,] -5.163699e-01 -1.0108444876 -1.328213e+00 -0.6304570036 -
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## [3155,] -9.101605e-01 -0.1445581586 -6.498706e-01 -0.1812646348
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## [3156,] -1.103666e+00  0.4647294362 -3.112967e-02  0.1807463900
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## [3157,]  3.186040e+00  2.4093262573 -9.834231e-01 -0.8426994134
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## [3158,] -8.558501e-01 -0.6636500440 -1.548770e+00 -0.8288627087 -
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## [3159,]  6.284905e-01  1.1806561379 -5.390089e-01  0.2753205170 -
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## [3162,]  3.592757e-01  0.9530753925 -2.511626e+00 -3.3186249687 -
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## [3163,] -4.920944e-01 -1.6817222724 -1.391800e+00 -0.1174128733 -
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## [3165,] -6.795814e-01  0.6301520910 -1.000121e+00 -1.2612873711
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## [3166,] -6.783253e-01  1.2155865479 -9.351335e-01 -2.4932951934
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## [3167,]  6.165500e-01  1.4636122089 -4.573701e-01 -2.5483050872 -
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## [3169,] -4.832358e-01 -1.8256149260 -1.881424e+00 -0.6215181489 -
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## [3171,] -8.156242e-01 -0.6944926197 -9.359012e-01  0.8709556041 -
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## [3174,] -3.393288e-01  1.9016797914 -1.178282e+00 -1.0788034796 -
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## [3189,] -8.535032e-01 -0.3683161322 -8.189745e-01  0.8006260338
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## [3190,] -8.384427e-01 -0.2552809221 -4.084022e-01  1.1127181647
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## [3191,] -7.147050e-01 -0.2436805240 -1.740199e+00 -0.3303276638 -
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## [3193,] -5.525074e-01 -1.6930554486 -9.984964e-01  1.1636952943 -
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## [3195,]  3.179778e-01 -1.6610048772  1.030081e+00  0.9717036619
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## [3196,]  1.154178e-01 -0.8707574462  1.384583e+00 -0.1338766540 -
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## [3197,]  3.134571e+00  1.1773032705  3.988829e-01  0.4742288463 -
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## [3199,] -8.578267e-01 -0.4222872396 -1.530814e-01  1.5749822215 -
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## [3200,] -9.867167e-01 -0.0919298887 -6.792630e-01  0.5703052603
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## [3202,]  9.746111e-01  0.1315070154  1.388228e+00  1.4513204177
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## [3203,]  1.645133e+00  2.9106952726 -1.580014e+00 -0.9115144460
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## [3204,] -3.228172e-01 -1.8338691245  1.705495e+00 -0.2243053286 -
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## [3205,] -6.982216e-01 -0.9726504382 -9.724921e-01  1.3604094726
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## [3208,] -7.303103e-01 -0.2005203273 -1.537621e+00 -0.1371570357 -
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## [3209,] -6.879579e-01 -0.7213862110  1.604785e+00 -0.6107120609
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## [3211,] -9.137381e-01 -0.0176476468 -2.815764e-01  1.1565500533
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## [3215,] -5.354903e-01 -0.2274455525 -7.019406e-01 -1.0557694861
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## [3218,] -8.919867e-01  0.3692427398  2.116799e+00 -0.3699663532
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## [3219,] -4.799125e-01 -1.5477288340  1.748006e+00 -0.0647335315
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## [3220,] -7.887372e-01 -0.4337861996 -5.903131e-01  1.0723605851
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## [3221,] -6.120043e-02 -1.7175267036  8.914281e-01 -1.5603094684 -
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## [3309,] -6.364135e-01 -1.1086299773 -1.132436e+00  0.6271725026
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## [3312,] -8.005425e-01 -0.3559398968 -5.538825e-01  1.0986450948
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## [3339,] -7.254446e-01 -0.0771815902 -8.990771e-01  0.6984996346
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## [3340,] -8.867122e-01  0.2954889976  2.299814e+00 -0.1472951714
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## [3344,] -8.580814e-01  0.3087382977  2.303010e+00 -0.1182098899
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## [3345,]  1.103073e+00 -2.0429011528  8.378110e-01  1.5149753766 -
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## [3346,] -8.717263e-01 -0.0364069595 -1.153811e+00  0.5368634516 -
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## [3374,] -7.456707e-01 -0.2553573980  1.321181e+00 -1.0206452595
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## [3376,] -1.110992e+00  1.4439470731 -8.762787e-01 -0.0150231098 -
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## [3377,] -7.314312e-01 -0.0902183404 -9.241465e-01  0.6736698056
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## [3379,] -8.579837e-01 -0.3708280259 -8.045411e-01 -0.1900265104
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## [3390,] -5.215110e-01 -1.1541338922 -9.679183e-01  0.9728117069
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## [3397,] -1.116387e+00  0.3014720485 -5.319426e-01 -0.2646912994
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## [3412,] -2.150310e-01 -0.3027053668 -1.631915e+00 -0.5212048844 -
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## [3540,] -3.809603e-01  1.4866056336 -2.918854e-01  1.1817267342 -
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## [3541,] -7.449952e-01 -0.8277096602 -5.300206e-01  1.2487871727
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## [3542,]  1.100315e+00 -2.0179586334  8.340531e-01  1.5279858815 -
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## [3543,] -8.253133e-02 -0.8073358760 -3.961135e-01  0.0888448481
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## [3544,] -1.143917e+00  1.1137744956 -2.535990e-01  0.8375170029
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## [3545,] -7.403865e-01 -0.5794719850  1.487142e+00 -0.7686617163
0.3868394900
## [3546,] -1.014136e+00  0.3471721615 -2.224979e-01  1.1098304970
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## [3547,]  4.274953e-01  1.6763621631 -8.886973e-01 -0.4335425179
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## [3548,] -3.910701e-01 -2.2987593988  1.990828e+00  0.5023002809 -
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## [3549,] -1.087821e+00 -0.3346827685 -1.819238e-01  1.2188815649
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## [3550,] -2.841555e-01 -0.4770983149 -1.766979e+00 -0.6709975209 -
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## [3551,] -1.713403e-01 -1.3422733159 -1.240446e+00 -0.3020443820 -
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## [3552,] -9.275731e-01 -0.1951246077 -5.406388e-01  0.9863788161
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## [3553,] -7.347742e-01 -0.8771054383 -1.000210e+00  1.3317159584
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## [3554,] -4.682896e-01 -1.4929453250  1.619404e+00 -0.1622730541
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## [3555,] -1.250776e+00  1.8145586810 -7.367262e-02  0.8195103914
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## [3556,]  3.147471e+00  1.0678481088  3.028450e-01  0.4465593684 -
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## [3557,]  9.359209e-01  0.1783940644  1.525663e+00  1.5989812859
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## [3558,] -1.142670e+00  0.9606757069  1.331800e-01  1.3260788445
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## [3559,]  8.449226e-01 -0.4473996001 -1.371152e+00  0.2485782776 -
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## [3560,] -2.079243e-01 -0.3682220246 -1.680107e+00 -0.5351361036 -
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## [3561,] -1.039280e+00  0.8079203053 -9.932507e-02  1.1723812368
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## [3562,] -1.093535e+00  0.3630564000 -2.068663e+00 -1.4805582741 -
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## [3563,] -5.205159e-01 -0.3943250426  2.337363e+00 -0.4691683026
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## [3564,] -8.493979e-01 -0.1088727829 -9.610438e-01  0.6260212598
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## [3565,] -7.519354e-01  0.4520299341 -1.760687e+00 -0.6875734868
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## [3566,] -6.782942e-01 -1.2564398069 -1.669163e+00  0.3477711000 -
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## [3567,] -8.357694e-01 -0.4084500512 -8.143699e-01  0.8707583423
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## [3568,] -8.920460e-01 -0.3691893275 -1.246336e-01  1.6041962045 -
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## [3569,] -1.118609e+00  0.7924908213 -2.205530e-01  0.9593762595 -
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## [3570,] -4.019830e-01 -2.2710752021  2.009065e+00  0.5034928373 -
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## [3571,] -9.011854e-01  0.0581791725 -1.030105e+00  0.6650592540 -
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## [3572,] -7.765359e-01 -0.2808243798  2.339771e+00  0.1039887469
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## [3573,] -7.664567e-01 -0.4039617184  2.290780e+00  0.0806262382
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## [3574,] -1.051899e+00  0.3266761209  2.316001e+00 -0.2629173584
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## [3575,] -1.605849e+00  3.2418530953  7.159364e-01  1.1780249677
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## [3576,] -1.060715e+00  0.4886574349 -9.655820e-01 -0.0568383079
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## [3577,] -1.097550e+00  1.2713119747 -7.125642e-01  0.3798839316
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## [3578,] -7.957420e-01  0.5508915520  1.836822e+00 -0.6500796664
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## [3579,] -7.217325e-01 -0.9006191394 -9.875317e-01  1.3634292412
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## [3580,] -3.998058e-01 -0.4709482254 -1.620770e+00 -0.2314180603 -
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## [3581,] -2.513399e-01 -0.2918321788 -2.023821e+00 -1.9230667400 -
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## [3582,]  2.896314e+00  1.1431155200  5.312468e-01  0.8474975572 -
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## [3583,] -1.160798e+00  0.3892360392 -1.108942e-01  1.1191443074
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## [3584,] -5.683577e-01 -1.1538550052  2.321883e+00  0.3470207055
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## [3585,] -1.030574e+00  0.7666643077  4.674569e-02  1.3498221431
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## [3586,] -1.250479e+00  1.5757431274  3.056250e+00  0.1633328172
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## [3587,]  2.227515e-02 -1.5110964459 -5.845399e-01  1.1435440122
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## [3588,] -7.977606e-01 -0.8143447507 -8.475765e-01  1.0534204378 -
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## [3589,] -8.861137e-01  0.2825633939  2.091148e+00 -0.3350946627
0.5940797560
## [3590,] -6.997465e-01 -1.5787577958 -1.231336e+00  0.8372692483 -
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## [3592,] -1.213535e+00  1.0239956425 -3.606188e-01  0.7141770319
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## [3594,] -1.070012e-01 -0.2307740280 -1.666143e+00 -1.7577053399
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## [3596,] -1.875960e-01 -1.2131972965 -1.662589e+00 -1.1484294482
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## [3597,] -6.960940e-01 -0.2403744118  1.454554e+00 -1.7931427749
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## [3598,] -3.477338e-01  1.3325251418 -3.165284e-01  1.2171813382 -
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## [3599,] -1.100490e+00  0.5196490289  3.418740e-01  1.5889635693
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## [3600,] -1.026206e+00  0.7036922567 -1.577059e-01  1.3830984175 -
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## [3601,]  8.871864e+00  1.6482960548 -5.943962e-01  1.9731476017 -
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## [3602,] -1.096604e+00  1.3019023216 -6.962326e-01  0.3935287812
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## [3603,] -1.100234e+00  0.2192236834 -2.108813e-01  1.0546646141
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## [3604,]  5.145555e-01 -0.4862567609 -1.487974e+00  0.0550647285 -
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## [3606,] -8.340923e-01  0.6299503220  1.970886e+00 -0.5498829253
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## [3608,] -9.032589e-01  0.0749995054 -4.709143e-01  1.1920832802 -
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## [3610,] -1.179254e+00  1.2784295594 -1.346087e+00 -0.4104284481 -
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## [3611,] -1.243062e+00  1.0972129544  5.130073e-01  1.5746487859
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## [3612,] -8.525523e-01 -0.3293336727 -8.081246e-01  0.8616196071
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## [3614,]  8.254817e-01 -0.4562416980 -1.424989e+00  0.1800032127 -
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## [3615,] -1.613912e+00  3.2354183146  9.081674e-01  1.3786292050
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## [3616,] -1.087199e+00  0.9571321259  3.385736e-02  1.3537396974
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## [3617,] -1.590244e+00  3.1687701119  8.647797e-01  1.3720703381
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## [3618,] -7.641084e-01  0.2859424046  3.224784e+00 -0.3889837102 -
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## [3619,] -7.797184e-01 -0.2695975848  2.331213e+00  0.0934273802
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## [3620,] -1.133735e+00  0.8822726449  8.165864e-02  1.3026826736
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## [3621,]  3.556869e+00  0.9040382157 -1.509756e+00 -0.7467187515
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## [3622,] -5.862511e-01 -1.6247948372 -1.382898e+00 -0.1724917369 -
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## [3624,]  1.552354e+00  3.4464663037 -6.909517e-01 -1.1498506874
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## [3625,]  1.435668e+00  3.2227070116 -6.485112e-01 -0.9923893852
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## [3626,] -5.984582e-01 -0.9730576613 -1.895869e+00 -1.0603583640
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## [3627,] -8.232234e-01  1.2329941398 -6.671824e-02 -1.2495511395
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## [3628,] -6.333070e-01  0.6099616183 -1.530942e+00 -1.7335165160
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## [3629,] -5.773302e-01  1.6224059617 -9.813997e-01 -1.3641366107 -
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## [3630,] -8.128355e-01 -0.3614236038 -8.058883e-01 -0.0516462986
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## [3631,]  2.902114e+00  1.1249515847  5.038060e-01  0.8375704673 -
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## [3632,] -6.108776e-01  0.8988033415  2.577951e+00 -2.3763177049 -
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## [3633,] -1.489277e+00  2.3614154851 -1.673283e-02 -0.2454626131
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## [3634,]  3.562518e-01  1.5113996168 -1.213135e+00 -0.1585727450
0.5952745386
## [3635,] -7.830719e-01 -0.5567720075  5.088876e-01 -1.8893708624
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## [3636,]  1.852481e-01 -2.5508567090  5.475095e-02 -2.6715885330 -
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## [3637,] -1.257693e+00  1.3293564384 -7.048803e-01  0.3315589966
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## [3638,] -6.590405e-01 -1.3713825499 -1.724339e+00  0.3313149866 -
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## [3639,] -6.823813e-01 -1.2189739884 -1.657615e+00  0.3599598098 -
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## [3640,] -6.985097e-01 -1.5780186038 -1.360027e+00  0.6999446790 -
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## [3641,] -1.275334e+00  1.3904952502 -7.156945e-01  0.3013460642
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## [3642,] -7.641168e-01 -0.9987169530 -6.253949e-01  1.2855636582 -
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## [3643,] -1.226618e+00  1.5560113493  3.025862e+00  0.1616739269
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## [3644,] -1.088358e+00  0.5000338035  3.527436e-01  1.6176193194
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## [3645,] -6.046913e-01 -0.7574086233 -1.144527e+00  0.4751453219 -
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## [3646,] -5.357642e-01 -1.1520550566  2.319003e+00  0.3850366646
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## [3647,] -2.522742e-01 -0.2140767796 -1.819770e+00 -0.7364339062 -
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## [3648,] -8.682862e-01 -0.0290444452 -1.064111e+00  0.4977784238
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## [3649,] -8.450067e-01 -0.8556645000 -8.380121e-01  1.0019855449 -
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## [3650,] -6.479196e-01 -0.1090868233 -1.877298e+00 -1.6019466445
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## [3651,] -8.742380e-01  0.0031508927 -1.057061e+00  0.4935499924
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## [3652,]  3.158245e+00  1.0782639087  3.565653e-01  0.5220799645 -
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## [3653,] -8.884858e-01  0.3290331992  2.114068e+00 -0.3069596227
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## [3654,] -1.055055e+00  0.8299177726  4.159548e-02  1.3267381717
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## [3655,]  1.378724e+00  3.4134415035 -1.272622e-01  0.4530169994
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## [3656,]  2.261930e+00 -0.5823541017 -2.128164e+00 -0.1137343027 -
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## [3657,] -8.481527e-01 -0.8071599854 -9.215888e-01  0.8972020775 -
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## [3658,] -3.263447e-01 -2.0831358624  1.240979e+00 -1.1458544012 -
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## [3659,] -8.849676e-01 -0.2642611861 -8.122755e-01  0.8192164590
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## [3660,] -8.236310e-01 -0.7775317999 -6.814745e-01  1.1453230852 -
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## [3661,] -1.027796e+00 -0.1266250881 -3.625727e-01  1.0127082276
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## [3662,] -9.181386e-01  0.6517884247 -2.467020e+00 -2.0816474002
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## [3663,] -1.146472e+00  1.2736405225 -1.273789e+00 -0.2995835589
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## [3664,] -1.186596e+00  1.3234224780 -1.183300e+00 -0.2373625807
0.0850977502
## [3665,] -4.459002e-01  0.2430022276 -1.996656e+00 -1.0311375907
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## [3666,]  2.268449e+00 -0.4539275682 -1.736421e+00  0.2923702485 -
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## [3667,]  1.409768e+00  3.2816663018 -1.995227e-01  0.4292086890
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## [3668,] -2.042200e-01 -0.3122785372 -1.790312e+00 -0.6427065059 -
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## [3669,] -1.025732e+00 -0.1297785110 -3.993826e-01  0.9759849691
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## [3670,] -5.040660e-01 -1.0716443749 -1.073529e+00  0.5467976449
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## [3671,] -7.736898e-01 -0.0078825093  1.719699e+00 -0.6387359967
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## [3672,] -7.368605e-01  0.7376544934  1.682526e+00 -1.1589098321
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## [3673,]  7.252252e+00  3.8241659774  2.708180e+00 -1.4710572606 -
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## [3674,] -3.601470e-01 -1.9164413319  1.548489e+00  0.0947105219 -
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## [3676,] -7.274441e-01  0.6637865790  1.835788e+00 -0.9810713138
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## [3677,]  1.419940e+00  3.2569525975 -3.405884e-01  0.2879602156
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## [3678,] -1.032755e+00  0.8205976799  1.218997e-01  1.4268232109
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## [3679,] -4.078326e-01 -1.9311131396 -5.465414e-01  1.8926080155 -
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## [3681,] -9.188392e-01 -0.2515512699 -3.632017e-01  1.2128163825
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## [3682,] -3.867405e-01 -1.8939246454  1.555618e+00  0.0798060445 -
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## [3683,]  8.397971e+00  1.5958593214  1.908050e-01  1.2387883516
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## [3684,]  2.300720e+00 -0.5847098823 -2.259753e+00 -0.2142869561 -
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## [3685,] -1.606240e+00  3.2305446294  7.112115e-01  1.1926167357
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## [3686,] -7.834060e-01 -0.6722457941 -5.071108e-01  1.2422945898
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## [3687,] -3.818650e-01 -1.8998870824  1.545944e+00  0.0747695574 -
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## [3688,] -7.831362e-01 -0.9289337197 -1.117351e+00 -0.1945242035 -
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## [3689,] -1.281179e+00  1.3644939724 -6.208212e-01  0.4128243433
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## [3690,] -1.284255e+00  1.4206342644 -7.038347e-01  0.3068393054
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## [3691,]  1.275230e+00 -1.2147810741  2.028657e+00  0.8735559763 -
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## [3692,] -1.345792e+00  2.3563286328  3.055033e+00 -0.9780977050 -
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## [3693,] -4.558557e-01  0.2655961312 -1.844982e+00 -0.8725503154
0.7138711724
## [3694,]  3.208307e-01 -0.5795249126 -1.257374e+00  0.5495215394 -
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## [3695,]  3.127727e+00  2.6275871933 -6.779641e-01  0.4354045291
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## [3696,] -9.439733e-01 -0.0906445993 -5.470871e-01  1.0376196672
1.4993360137
## [3697,]  8.410775e+00  1.6202114018  2.507701e-01  1.3128254602
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## [3698,] -9.103352e-01  0.4379526757  2.493746e+00  0.0800296396
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## [3699,] -7.304744e-01  0.6911880552  1.870166e+00 -0.9486099984
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## [3700,] -1.111754e+00  1.0292231036 -7.327469e-01  0.3904452930
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## [3701,] -2.917882e-02 -2.6324438487 -2.222243e+00 -0.7856063588 -
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## [3702,] -9.441300e-01  0.9204769900 -4.528226e-01 -0.8041197763
1.2841953537
## [3703,] -2.411177e-01  0.2829975377 -3.868402e-01 -2.5029499429
0.5267346548
##                   PC6           PC7           PC8           PC9
PC10
##    [1,]  0.1547900691  1.1462494348  0.5469825187  0.5565542718
0.1619364215
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##   [11,] -3.945214e+00 -3.7756045297 -1.296048e+00  1.2089137851
1.719049e+00
##   [12,] -4.022885e-01 -0.7903837221  8.999838e-01 -0.0437816305 -
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##   [13,] -3.394651e-01 -0.5629924682  2.632391e-01 -0.4286588345
6.339533e-01
##   [14,] -1.031687e-01 -0.6368547183 -3.080376e-01 -1.3872334881
1.881467e-01
##   [15,] -5.423004e-01 -0.7126647673 -5.752502e-01 -0.1690108497
1.141501e-01
##   [16,]  1.068280e-01 -0.9725414886  4.313619e-01 -2.4205408005 -
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##   [17,]  1.012604e+00  0.7023310089 -9.871488e-01 -0.8262523649 -
7.887639e-01
##   [18,] -3.002209e+00 -1.6079037741 -1.582916e+00  1.9969389653
3.939389e+00
##   [19,] -5.604829e-01 -0.5388049596 -1.215818e-01 -0.1398623522
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##   [20,]  6.682519e-01 -0.7302117782 -5.622038e-01  0.5017377294
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##   [21,] -3.838230e-01 -0.4625786709 -2.205621e-01 -0.5409950780
1.551258e-01
##   [22,] -8.838618e-01 -1.1468419273  1.552502e+00 -0.2151480365 -
1.057638e+00
##   [23,] -3.977005e-01 -0.4276082796  7.260157e-01 -0.3481452669 -
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##   [24,] -1.082834e+00 -2.4174282504 -2.869614e+00  1.5593651956
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##   [25,]  1.804389e+00 -1.0779151080  1.500293e+00 -0.6551316318 -
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##   [26,] -1.148401e-01 -0.1832631949 -4.204315e-01 -0.0083516921 -
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##   [27,]  6.005032e-01 -0.6145794309 -4.594238e-01  0.6013662581
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##   [28,] -1.170536e+00 -0.2964922955  9.382086e-01 -0.0395296893 -
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##   [29,] -3.966860e-01 -0.0156469674 -1.580306e-01 -0.6724546480 -
2.930491e-01
##   [30,] -2.698401e+00  1.9727437222  7.895788e-01 -3.8176280659 -
1.301467e+00
##   [31,] -1.953799e-01 -0.4156928821  5.221148e-01 -0.6989258728 -
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##   [32,] -2.443078e+00  5.1780176007 -9.937674e-01 -3.0306236664 -
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##   [35,]  7.419420e-01 -0.6239515869 -5.520287e-01  0.4277646805
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##   [36,]  7.096492e-01 -0.6456011568 -5.153064e-01  0.4901366056
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##   [37,]  4.053037e-01  0.7775177950  1.929374e-01  1.6992211299 -
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##   [38,]  2.335500e-01 -0.6636731701  2.985929e-01 -2.0521076420
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##   [40,] -2.060801e-01 -0.4039503326  1.493458e+00  0.1410350926
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##   [41,]  1.042591e+00 -0.4340541110 -3.349444e-01 -0.1728282460 -
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##   [45,]  2.236352e+00 -0.4524268117  5.326773e+00  1.3333190019
1.995166e+00
##   [46,]  1.010796e+00 -0.4720268511 -1.044718e-01 -0.6088753383
3.424572e-01
##   [47,]  1.160597e-01 -0.0554522949  2.465611e+00 -0.8086846942 -
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##   [48,] -2.759926e-01 -0.2662729285 -6.000464e-01 -0.5718157256 -
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##   [49,]  2.708623e-01  0.2897316157 -5.690607e-01 -0.6242260269 -
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##   [50,] -8.625290e-01 -1.0966796006  1.122394e+00  0.1410883391 -
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##   [51,] -3.628412e-01 -0.5754660127  1.626331e-02 -0.6371951076
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##   [52,] -4.710278e-01 -1.5563792359  1.710565e+00 -1.4530877694 -
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##   [53,]  5.652136e-01  0.3106260987 -1.165355e+00 -0.0906922473 -
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##   [54,] -9.131481e-01  0.2715018419  4.947069e-01  0.0845718996 -
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##   [55,]  4.643834e-01 -0.6903353419 -8.542862e-02 -1.8216238293 -
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##   [56,] -1.022364e-01 -0.6273638118  6.719544e-01 -0.4400462376
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##   [57,]  1.215821e-01 -0.3881023048 -3.187644e-01 -0.3784156786 -
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##   [58,]  6.856514e-02 -0.0815543647 -3.224024e+00  2.2783189647
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##   [59,] -2.208139e+00  0.7706706877  8.649941e-01  2.4490308657
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##   [60,]  1.277817e-01  0.2093726987 -2.336499e+00 -1.0271408947
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##   [61,] -8.244203e-03 -0.8868861387  3.323386e-01 -0.6580920529 -
3.153262e-01
##   [62,] -9.246170e-01 -0.5863769567 -3.968880e-02 -0.2437582944 -
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##   [63,] -6.975923e-01 -0.5174673034 -3.615826e-01 -0.2423708375 -
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##   [64,] -2.309836e+00 -0.9073768526  1.103643e+00  0.1699668082 -
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##   [65,]  9.011805e-02 -0.5776682764  4.289138e-01 -0.3100569187 -
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##   [66,]  7.013733e-03 -0.4016967151  6.653463e-01 -0.7346867228 -
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##   [67,]  6.097565e-01  0.4026143083 -1.400987e+00 -0.2842947042 -
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##   [68,]  5.240520e-01 -0.6014274173 -4.012855e-01  0.7318345479
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##   [69,] -1.800388e-01 -0.0740949882 -2.321081e-01 -0.3894712357 -
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##   [73,] -1.174382e-01  0.1679238488  5.737726e-01  0.6759339575
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##   [75,] -2.409545e+00  2.0439696096  1.247057e-03 -3.4245189009 -
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##   [80,] -2.080539e-01 -0.1585497018  2.590845e-01 -1.1632329192 -
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##   [82,] -1.784876e-01  0.0526789835  5.832253e-01  0.7399575382
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##   [87,] -2.266067e-01 -0.2589554095 -1.074001e+00 -0.9641754313 -
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##   [88,] -4.006396e-01 -0.5829844202 -5.414389e-01 -0.7209254258
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##   [89,] -3.124479e-01 -0.7959395194 -1.178645e-01 -1.7479057102 -
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##   [91,] -1.101942e+00 -0.2767251136  6.528081e-01  0.1357580641 -
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##   [92,]  4.784191e-01 -0.1775149870  3.031526e-01 -0.1919274688
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##   [93,] -1.560821e-02 -1.5888746086  1.258687e+00 -0.7404531344
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##   [94,] -4.604973e-01 -0.7773428420 -4.954161e-01 -0.1956969640
1.840189e-01
##   [95,] -1.859645e+00  1.4687521364  1.425354e+00  2.4051446601 -
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##   [96,]  4.807309e-01  0.7699831245 -2.946045e-01 -0.4989657779 -
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##   [99,]  6.372027e-01  0.5104586584 -1.285927e+00 -0.2985886988 -
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##  [117,] -3.291507e-01 -0.6073431330  3.033195e-02 -0.7524802950
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##  [146,]  4.867838e-02  1.1123200243 -1.174038e+00  0.7422013580 -
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##  [161,] -6.442963e-01 -0.5502739933  6.288648e-02  0.1021063567 -
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##  [163,] -3.583412e-01 -0.5205148176  7.505794e-01  0.0792668505
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##  [164,] -3.169611e+00  2.8625856083  1.695078e+00 -3.6717603039
1.102068e+00
##  [165,] -1.655326e+00 -1.3549695873  1.245803e+00  0.9985862399
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##  [166,] -1.642296e+00 -1.4045385111  1.227655e+00  1.0608340594
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##  [167,] -2.832850e-01 -0.7357982805  1.257583e-01 -0.4405031695
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##  [168,] -6.891232e-01 -0.5239754729  6.981356e-01 -1.2249126419
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##  [171,]  9.307900e-01 -0.4407508494  6.420726e-01 -1.3791987294
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##  [174,] -2.024809e+00 -0.8593842787  6.654871e-01 -0.5866150348 -
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##  [175,]  1.435917e+00 -1.0461766996  5.757933e-01  0.2486012174 -
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##  [176,]  2.643849e+00 -0.6324932460  3.954194e+00 -0.8655405076
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##  [177,] -8.168038e-01 -0.4122579995  1.587257e+00  0.9876763758 -
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##  [178,] -6.680327e-01 -0.2516159426  9.843860e-01 -0.5799451699 -
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##  [179,]  6.493565e-01  1.0512795857 -7.640568e-03 -0.7086798293 -
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##  [180,] -4.463497e-01 -0.6757479298  4.891332e-01 -0.4603560343
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##  [181,]  2.258612e+00  1.4037883443  1.289192e+00  0.4612962466 -
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##  [182,] -1.345177e-01 -0.0961679741 -8.902981e-02 -1.4309185206 -
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##  [184,] -2.579866e-01 -0.1517597231  1.630956e-01 -0.7893382814
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##  [185,]  4.768791e-01  0.7050789512 -4.395173e-02  0.1702588049 -
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##  [187,]  8.021943e-01  1.5160748750 -6.247214e-01  1.3977150498
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##  [188,] -5.241117e-01 -0.7148605599 -4.821751e-01 -0.2888969177
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##  [191,]  1.449938e-01  1.3370188223 -1.340548e+00  0.6283052528 -
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##  [192,]  2.150260e-01 -0.2554080809 -1.617029e+00 -0.1875114654 -
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##  [197,]  4.205065e-01 -0.3273103227 -9.229677e-01 -0.1629232331
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##  [198,] -8.734175e-01 -0.5927142227 -3.096666e-01  0.0870690544 -
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##  [202,] -9.884173e-01 -0.5776204830 -3.437888e-01  0.6217080342 -
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##  [203,]  3.123679e-01  0.3527206117  3.045088e-01 -0.6465774369
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##  [205,] -1.524567e+00  1.7457679963  2.717661e-01  2.8089879019
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##  [206,]  8.076812e-01  0.0797209652 -8.640570e-01 -0.0128694146
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##  [207,]  8.857259e-02 -0.2524121448 -1.001159e+00 -0.1383582946
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##  [211,] -6.227395e-01 -0.6112008918 -5.100988e-01 -0.3173351513
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##  [212,]  7.880570e-01  1.6412524031 -5.458264e-01  1.4322578807
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##  [216,] -2.397163e+00  2.0021817800  3.728574e-02 -3.4656016295 -
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##  [218,] -1.830589e+00  0.2193371614  1.149372e-01  0.2276056363
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##  [225,] -1.932245e-01 -1.0468381299  4.754446e-01  1.6498583812 -
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##  [259,]  3.101485e-01  0.2751091258 -1.848432e-01 -0.5236419684 -
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##  [299,]  7.622336e-01  0.0840409903  8.728201e-01 -0.0062229797
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##  [300,] -1.522783e+00 -0.0212265178  9.962691e-02  0.0253364851
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##  [301,] -7.073033e-02  0.1392097560 -3.578740e-01 -1.0935361348
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##  [303,] -2.801974e-02 -0.9355525092  1.069469e+00 -1.0041613260 -
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##  [311,] -1.088576e+00 -3.2808657595 -2.507743e+00  0.2912599976
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##  [312,] -1.212942e+00 -0.6234346681  6.822701e-01  0.4800029632 -
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##  [329,]  1.375754e-01 -0.4053279814 -1.195915e+00 -0.6386517793
1.098568e+00
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##  [331,]  2.501751e-01 -0.5066542729  8.394539e-01 -0.5933814471
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##  [984,] -8.885758e-01 -0.4359829657  8.729150e-01 -0.0158803457
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##  [985,] -7.019127e-01  0.2150226215 -8.598720e-01  0.4154294286
2.813096e-01
##  [986,]  5.908632e-01  0.5105788717 -1.252919e+00 -0.8998462196
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##  [987,]  2.732604e+00  1.2396161394 -4.028740e-01 -0.3542291194 -
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##  [988,] -2.405028e+00 -0.7259960380 -3.712656e-01 -0.1283390158
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##  [989,] -5.362820e-01 -0.5060994998 -5.816547e-01  0.5587709288
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##  [990,]  1.756550e-01 -0.5113044929 -3.259325e-01 -0.7616388359
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##  [991,] -6.340584e-01 -0.1867558984 -1.067260e+00 -0.0090652278
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##  [992,]  2.586779e+00  0.8825019843 -9.565506e-01  0.5109574807 -
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##  [993,] -2.150259e-01 -0.1503410338 -1.017070e+00 -0.2410423066
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##  [994,]  1.063486e+00 -0.2086697462  8.964974e-01  0.0928654644
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##  [995,] -3.456645e-03 -0.3972939614 -6.345098e-01 -0.3951965075
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##  [996,] -7.490530e-01  0.0918223066 -3.334042e-01  0.4986327965 -
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##  [997,] -4.817861e-01 -0.7520382086  1.317275e+00  0.3603473814
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##  [998,] -7.685680e-01 -0.0229950707  8.176434e-02 -0.2766590153
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##  [999,] -4.861872e-01 -0.5882940293  4.368470e-01 -0.7115533887
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## [1000,] -8.191328e-01 -0.6304456041 -2.680268e-01  0.3584097409 -
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## [1001,]  1.039895e+00 -0.7075683016  7.566462e-01  0.5761475428 -
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## [1002,]  1.353309e-01  0.1671606905 -9.010031e-01 -0.5260637057
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## [1003,] -2.770250e+00  2.6759452565 -9.803053e-01 -1.8817645314
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## [1004,] -7.581946e-02 -0.6857748668 -1.097022e+00 -0.0055283453
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## [1005,]  7.266773e-02 -0.4298615899 -3.857872e-02  0.4886903811
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## [1006,]  8.562958e-01  0.2297003331  1.164183e+00  0.4743849459
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## [1010,]  3.178670e-01 -0.2707130735 -9.195545e-01 -0.5515359591
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## [1011,]  5.109589e-01  1.2307904444 -1.800130e+00  0.3451141721 -
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## [1012,] -7.290389e-01 -0.3735176684 -4.527139e-01  0.6951197400
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## [1013,]  2.139685e-01 -0.7928397204 -3.354519e-04  0.1500156754
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## [1014,] -8.825399e-01 -0.2639465744  9.426929e-01  0.0626938744
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## [1015,]  7.121468e-01  0.4487821796 -5.061017e-02 -1.0600758533
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## [1016,] -2.020060e-01 -0.1173749703 -1.011584e+00 -0.2029662120
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## [1017,] -4.095061e-01 -0.3516551879 -3.894383e-01  0.4929150685
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## [1018,]  1.394701e-01 -0.4218120076  2.556795e+00 -0.2581100288
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## [1019,]  3.735397e-01  0.1661779826 -4.041370e-01 -0.0850486179
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## [1020,] -2.772849e+00  2.5811824640 -7.721900e-01 -1.7457525070
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## [1021,] -2.330736e-01  0.2414593012 -7.564125e-01  0.3461157064
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## [1023,] -2.590154e-01  0.1009882774 -1.236223e+00  0.0984927431
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## [1024,]  6.795655e-01  0.5200732577 -1.550533e-01  0.5122269050
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## [1025,] -4.081907e-01  0.9952517658 -1.272766e+00 -0.9734913001
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## [1026,] -3.107479e-01 -0.1452592229  5.101792e-01 -0.5960126883 -
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## [1027,] -7.843883e-01 -0.1296265448 -6.337276e-01 -0.7872721322
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## [1028,] -6.637623e-01 -0.4810668097  4.982481e-01  0.2287158109 -
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## [1030,] -3.231871e-01  0.7500410730 -6.939775e-02 -0.1293071116
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## [1034,] -2.243773e-02 -0.0145822999 -4.444644e-01 -0.2502539057 -
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## [1037,] -7.350994e-01  0.0846624520 -8.781862e-01  0.6628003064
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## [1039,]  2.133163e-01 -0.5461171697 -3.614775e-01 -0.8393777391
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## [1055,] -1.148112e+00  0.5515474965  2.249818e-01  0.8267223712
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## [1059,]  2.011327e+00 -0.8279678949  4.728361e-01 -1.7606827192 -
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## [1060,] -6.613096e-01 -0.9442652046  1.201365e+00  0.5301276910 -
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## [1061,]  4.669133e-02 -0.7925405139  1.364250e-01  0.2104365571
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## [1066,]  2.210422e-01 -0.8256551575  2.177050e+00 -0.2285158811
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## [1067,] -6.469879e-01 -0.2101511211 -8.875308e-01 -1.3169439705
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## [1069,] -6.023819e-01 -0.1587392786 -1.086007e+00 -0.0591287905
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## [1070,] -2.071372e-02 -0.4521039990 -4.568945e-01 -0.2848223764
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## [1084,] -2.721126e+00  3.4338353790 -7.221271e-01  0.4029533609
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## [1099,]  2.885689e-01  0.0966387020 -2.545752e-01  0.6506528656
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## [1119,]  8.934665e-01  0.0562120496 -3.331901e-01  0.6374377109
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## [1120,]  6.513879e-01  0.4672003206 -3.648411e-04 -1.0111286884
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## [1122,] -6.808720e-01 -0.3017333721 -4.618587e-01  0.6313388277
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## [1129,]  5.478073e-01 -0.0919485137  2.641858e-01 -0.5917086998
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## [1130,] -5.860497e-01 -0.8820242196  1.303297e+00  0.6011861873
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## [1131,]  7.942675e-01  0.2129227708  1.176409e+00 -0.7446869305
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## [1132,] -8.383856e-01 -0.4830353419  6.517856e-01 -0.5098350300
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## [1137,] -5.223936e-01 -0.8405508025  1.799922e+00  0.6262032527
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## [1138,]  2.820362e-01  0.0543516252  1.325033e+00 -0.8102488208
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## [1143,] -1.233660e+00  2.9300049648  1.991539e+00 -3.0288312113
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## [1144,] -3.567085e+00  2.3889130764  1.281671e+00 -1.4434504274 -
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## [1257,] -1.270065e+00 -1.0605208260  3.870653e-01 -1.5963467978 -
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## [1272,] -1.030468e-01 -0.1581644776 -2.597535e-02  1.0899884912
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## [1311,] -1.174966e-01 -0.5947363332 -9.210466e-01  0.3075634730
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## [1313,] -2.985062e-01  0.7424381439 -4.824709e-01 -0.3854019940
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## [1316,]  2.457681e-01 -0.5759966712  3.298719e-01  0.2372190176
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## [1317,]  2.774659e-01  0.5050264334 -7.717730e-01 -1.2235909297
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## [1318,]  3.390915e-01 -0.5544563035  1.764367e+00  0.1399254462
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## [1319,] -1.360082e-03  0.2260068188 -1.140425e+00 -1.0567790431
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## [1320,] -5.665648e-02  0.0283689523  8.956846e-01 -1.4199846278 -
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## [1321,] -1.905129e+00 -1.2233911659  1.492489e+00  1.1915529658
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## [1322,] -1.202570e-01 -0.5285599615  5.402484e-01 -1.0527907645
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## [1323,] -7.141793e-01 -0.3140562754  1.501817e-01 -0.4119995577
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## [1328,]  3.253738e-01  0.0218930064 -2.744827e-01 -0.0723877848 -
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## [1329,]  2.210932e-01  0.3390264019 -3.179718e-01 -0.2691525456 -
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## [1330,]  3.421028e-01 -0.6160769935  1.755994e+00 -0.0303158027
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## [1352,] -8.687943e-03  0.1099272520 -4.259809e-01 -0.2372044047
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## [1399,]  2.150962e-01  0.3345585641 -1.264435e+00 -0.3813057039
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## [1403,] -1.379266e-01 -0.5083245730 -5.567054e-01 -0.2944643694
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## [1422,] -2.140133e+00 -1.4240582864 -3.464462e-01  0.9757328767
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## [1436,] -1.631712e-01 -0.2424652322 -1.002827e+00 -0.5720524077
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## [1437,] -2.737878e+00  2.5833415010 -7.917246e-01 -1.8030012998
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## [1472,]  6.050685e-01  1.0193685308 -3.771315e-01  0.7206266786 -
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## [1473,] -2.448568e-01 -0.0793669969 -6.342557e-01 -0.8017466411
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## [1474,]  2.775567e-01 -0.0253243301 -3.840599e-01 -0.4119731854
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## [1475,]  1.956108e-01 -0.2406819513 -2.530625e-01 -0.3667903791
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## [1476,] -2.376797e-01  0.1793777449 -1.680807e+00 -0.5208883320 -
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## [1477,] -1.902507e-01 -0.6602664005  5.081499e-01  0.2437815305
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## [1478,] -1.446724e-01  0.2346423956 -7.973832e-01  0.3475642275
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## [1479,]  4.747237e-01  0.5698005196 -4.768093e-01  0.0788122792 -
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## [1480,]  2.743260e-01  0.3813465961 -3.326308e-01 -1.0153363668
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## [1481,]  2.932711e-01 -0.2797765666 -1.146887e+00 -0.8744510951 -
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## [1486,]  2.851135e-01  1.0291221912 -3.070245e-01 -0.3777159741 -
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## [1487,]  4.886620e-02  0.3514937895  1.424210e-01  0.2895520833 -
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## [1488,]  6.138527e-01  1.3467782462 -1.853422e+00  0.4360891165 -
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## [1493,] -2.454561e-01  1.3504222955  8.163382e-01 -0.7143173847 -
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## [1502,]  8.913695e-02 -0.2089015112 -6.118121e-01 -0.3606264576
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## [1504,] -4.602107e-01  0.1993976381 -4.747813e-01  0.4017559444
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## [1505,]  7.845706e-01 -0.2128304460 -7.784353e-01 -0.3562158604 -
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## [1506,] -1.734280e-02 -0.0605500862 -7.273838e-02 -0.0115235619 -
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## [1510,] -2.647285e-01 -0.2920559754 -9.272644e-01  0.3254773553
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## [1511,] -1.242812e-01  0.6051425217 -6.707820e-01 -0.0651102420
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## [1512,] -3.467357e-01 -0.2577386984 -9.447230e-01  0.6560533071 -
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## [1515,] -3.079395e-01 -0.0004499418 -1.504087e+00 -0.3825700914 -
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## [1545,] -9.517596e-01 -0.2266441025 -7.022134e-01  0.7272715928 -
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## [1575,]  8.392042e-02  0.3563187083 -5.916715e-01 -0.3980204475
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## [1599,]  4.726755e-01 -0.0423187752  4.965385e-01 -0.8367283472
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## [1602,] -6.072880e-01 -2.0634762770 -1.491027e+00 -0.7651676399 -
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## [1604,] -3.712326e-02 -0.8788591608 -3.060663e-01  0.3020647366
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## [1605,]  1.557885e-01  0.6002161653 -8.464110e-02  0.0821750128
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## [1606,] -1.515149e-01 -0.9846971619  1.139075e-02 -1.6600655333 -
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## [1611,] -1.150617e+00  0.5446837006  2.368856e-01  0.9906578442
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## [1612,] -1.227819e+00  0.3786636979  2.287113e-01  0.8905675149
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## [1613,] -2.052169e-02 -0.0045497311 -2.212710e-01 -0.8812475847 -
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## [1615,]  8.108251e-01 -1.4419826916 -1.598807e-01 -0.3533232076
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## [1616,]  2.245830e-01  0.2409123932 -3.911706e-01 -0.2467286124 -
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## [1620,]  2.146837e-01 -0.4359276825 -2.933759e-01 -0.7109453099
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## [1633,] -7.616072e-01 -1.0221276768  1.843431e+00 -0.0419844438
4.108924e-02
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## [1634,]  1.342984e-01 -0.8160671154 -5.386180e-01 -0.4244804529 -
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## [1635,] -1.303624e+00 -1.1440694144  3.802487e-01 -1.5891566874 -
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## [1636,]  1.885719e-01  0.2872338932 -8.843447e-01 -0.4645726598
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## [1637,] -3.763344e-01  0.1052263708 -4.908641e-01 -0.2385512654
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## [1639,] -5.919313e-01 -0.2917093897 -4.999646e-01  0.6792091693
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## [1640,]  4.504154e-01 -0.2638946499 -5.269983e-01 -0.5401197121
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## [1641,]  4.558675e-01  0.4111752743  9.154112e-02 -0.7696367749
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## [1643,] -5.387128e-01 -0.3970464326 -7.354331e-01  0.3410600338
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## [1644,] -3.359309e-01 -0.6967506302 -9.260959e-02  0.2523332260
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## [1645,]  5.175149e-01  1.7849630125 -1.839480e+00  0.4384980304
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## [1646,]  1.597565e+00  0.1813518460 -3.686482e-01  1.6109472647 -
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## [1647,] -2.671335e+00  2.6123435989 -8.016088e-01 -1.8227620586
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## [1648,]  2.213100e-01 -0.4888141739 -3.803712e-01 -0.7144236320
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## [1649,]  2.884255e-01  0.1414116306 -6.011152e-01 -0.1835621327 -
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## [1650,]  2.479121e-01  1.0525747771 -1.660245e+00 -0.8225698121 -
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## [1651,]  2.050498e+00 -0.6932665239  4.895082e-01 -1.6804480922 -
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## [1652,]  2.467291e-01  0.7452930311 -2.597548e-01 -0.1938607051
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## [1653,]  1.468501e-01 -0.9845052207 -8.102782e-01 -1.2568593106 -
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## [1655,] -1.496603e-01 -1.0326963553  1.949848e-01 -0.2964055508 -
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## [1656,] -2.397694e-02 -0.7495723267  1.326730e+00 -0.5429029187
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## [1657,] -2.833808e-03 -0.8721279903  1.798835e-01  0.3016746450
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## [1660,] -6.362712e-01  0.1199083417  6.725464e-01  0.1357729820
4.740384e-01
## [1661,]  1.301540e+00 -0.0197936769  8.661521e-01  0.0848116501
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## [1662,] -5.242265e-01 -1.2011036542  1.214812e+00  1.4897089471 -
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## [1664,] -5.153303e-01 -0.2852606052 -7.130872e-01  0.3647457711
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## [1665,]  4.851638e-01  0.9071527691 -6.206659e-01  0.7620937275 -
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## [1666,] -9.254973e-01 -0.5661093721 -3.819037e-03 -0.8809905666
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## [1667,]  2.352313e-01 -0.5299143022  6.630973e-01 -1.1272116633
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## [1669,] -3.102090e-01 -0.7100699128 -1.706859e-01  0.1329612210 -
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## [1674,]  1.276184e-01 -0.5322814249  4.836226e+00  0.0358496636
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## [1676,] -6.438662e-01 -0.0880747452  6.222714e-01  0.1741597956
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## [1677,] -3.182794e-01  0.7352415787  4.702715e-01  0.6895298993 -
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## [1678,]  6.257587e-01  1.0675784386 -3.870004e-01  0.7937758286 -
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## [1679,] -5.252323e-01 -0.7082995765 -2.975410e-02  0.2227168562
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## [1680,] -1.049056e+00 -0.6097107156 -2.333152e-01 -0.2099870468 -
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## [1681,] -5.800171e-01  0.1146016400  1.090766e+00  0.2860154144
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## [1701,]  5.025532e-01  0.6359211614  1.551515e+00  0.6638580405
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## [1702,]  6.145452e-01  1.6251478308 -1.169626e-02 -0.0907071658
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## [1704,] -5.469205e-01 -0.1685245161  8.404649e-01  0.5041262202
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## [1709,] -3.648401e-01 -1.1539335281 -8.678308e-01  0.5044576226 -
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## [1710,] -1.017025e+00 -0.2264109922 -6.673064e-01  0.8176465077 -
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## [1711,]  1.177331e+00  0.3424085330  6.354896e-01 -0.2885265974
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## [1712,] -3.115413e-01  0.1465237756 -7.435587e-01 -0.9045154641 -
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## [1713,]  3.079487e-02 -0.3347715180  6.546430e-02 -0.3389610147 -
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## [1715,]  5.062355e-01 -3.0354734398 -2.258626e+00  0.1463030340
2.202134e+00
## [1716,] -5.881099e-01 -0.4927386604 -1.919872e-01 -1.4952878108
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## [1717,]  9.764201e-02 -0.5188487220  2.365004e+00  0.6765540967 -
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## [1718,] -7.139369e-01 -0.5525477492 -3.202743e-01 -0.7835540634
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## [1719,] -2.355026e+00  1.5725611783  7.564743e-01  2.9309559236 -
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## [1721,] -4.501466e-01 -0.6636105906 -5.969248e-01 -0.8857934120
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## [1722,]  6.409417e-01  0.8252036158  8.392584e-01 -0.1341194770 -
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## [1723,]  9.029778e-01  0.0980056863  1.185981e+00  0.3008222130
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## [1724,] -4.563746e-01 -0.0334001984  1.008568e+00 -1.1831344697 -
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## [1725,] -1.155112e-01 -1.5954416762  1.287086e+00 -0.7816046712 -
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## [1726,]  2.556395e-01 -1.2380959797  7.266581e-01 -0.2067362551
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## [1727,] -5.062222e-01 -0.7492020861  2.014189e-01  0.1059593523
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## [1728,] -1.005780e+00 -0.1721331073  7.611716e-01 -0.2726162728 -
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## [1730,]  2.613347e-01 -0.3459260330 -8.379484e-01 -1.2802420101 -
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## [1731,] -7.100996e-01 -0.5408828763 -3.342995e-01 -0.7918606349
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## [1732,] -2.576184e-01 -0.1866263475  1.155265e+00 -1.0150943186 -
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## [1734,] -7.000461e-01 -0.8694876589  1.663719e+00  0.8951489574
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## [1735,] -2.766602e-01 -0.5518128644  9.254534e-01 -1.1463509688
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## [1737,]  4.850292e-01  0.4284551533 -2.535304e-02 -1.2391267617 -
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## [1738,] -4.156659e-01 -1.2553103545  6.828877e-01 -0.1872099785 -
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## [1740,]  1.893951e-01 -0.1544580041 -3.858404e-01  0.5682769461 -
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## [1741,] -4.728444e-01 -0.4950853798  1.654218e-01 -1.1831400987
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## [1742,] -2.979645e-01 -0.8420961590 -3.600499e-01 -0.4553377611 -
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## [1746,]  4.350325e-01  0.2649180847  6.295470e-01  0.0323345378 -
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## [1747,] -8.323067e-01 -0.2863939805 -4.633721e-01 -1.2742416240
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## [1748,] -3.547336e-01 -0.5561794052  1.004413e+00 -0.3963257938 -
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## [1749,] -8.778960e-01  0.2858922774  6.399086e-01  0.1156123523 -
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## [1750,] -1.598475e-01 -0.5944571480 -2.861313e-01  0.6364111470 -
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## [1751,] -6.515758e-01 -0.3532853047 -2.265462e-01 -0.6475001848 -
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## [1754,]  9.729315e-02  1.0839407811  1.236122e-01 -0.7739556004 -
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## [1756,]  1.984555e+00 -0.8919036952  4.452664e-01 -1.7089451882 -
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## [1757,]  9.539503e-03 -0.1223706552 -6.573250e-02 -0.7559132651 -
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## [1761,] -9.025605e-01 -1.7025502345 -1.100673e+00 -1.1995140623 -
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## [1762,] -3.841904e-01 -0.4107352769 -1.977866e-01  0.5301656600
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## [1765,]  9.763807e-02 -0.2422857676 -6.616864e-01 -0.3861812013
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## [1773,] -2.318250e-01 -1.0797744575  2.534506e-01 -0.1949993608 -
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## [1774,] -1.366358e-01  0.3461512828 -9.520448e-01 -0.2023431086
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## [1775,]  5.253977e-01  1.3108185260 -1.777243e+00  0.4217858339 -
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## [1776,] -5.982081e-01 -0.3546972521  3.429939e-02 -1.0714849018
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## [1777,] -6.823479e-01 -0.2943926963 -2.921207e-02 -0.8593051735 -
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## [1778,] -3.597028e-01 -0.0984260147  4.449896e-01 -0.1132090045 -
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## [1779,] -2.088658e-01 -0.4416699840  1.903322e-01 -1.4087331356
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## [1785,] -1.823068e-02  0.2510733947 -8.453042e-01 -1.0679698692
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## [1787,]  5.407725e-01 -0.2211822806  1.591640e+00  1.0336671762 -
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## [1794,] -1.765821e-01 -1.0840597019  6.176243e-01 -0.0843542013 -
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## [1795,]  4.658473e-01  0.2661747509 -6.504869e-02 -1.2698949243
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## [1796,] -7.904482e-02 -0.0947078056 -7.278348e-01 -0.3646264672
6.837816e-01
## [1797,]  2.537650e-01  0.2156650853  2.775658e-01 -0.6311982974
1.838604e+00
## [1798,]  7.597951e-01  0.1221100715  6.334319e-02 -1.3959464353
1.156622e+00
## [1799,]  6.639895e-01  0.1637560001  6.173643e-02  0.3150310474 -
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## [1800,]  2.709845e-01 -0.3497222386  1.381273e+00 -0.4395975952 -
2.072744e-01
## [1801,] -8.331513e-01 -0.8112648259 -2.552581e-01 -0.4069383038
4.150798e-01
## [1802,]  8.582076e-01 -0.3704853476 -6.462106e-01  0.5800399339
3.245227e-01
## [1803,] -4.562356e-01  0.0936868833 -6.411219e-01 -0.4700978027
6.884800e-01
## [1804,]  3.227600e-01  0.1700708817  1.654091e-01 -0.7055565424
1.787849e+00
## [1805,]  7.192311e-01 -0.5246805679 -4.468278e-01  0.8161945560
2.648848e-01
## [1806,]  1.210786e-01 -0.8085048827  6.750317e-02  0.2274998059
2.731860e-01
## [1807,] -1.569515e-01 -0.5082309893 -1.142562e+00  0.5085565468 -
2.037926e-01
## [1808,] -2.485709e-01  0.7052417138  3.825825e-01  0.5967647778 -
8.469902e-01
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## [1809,] -7.104747e-01 -0.1356396359 -7.454554e-01  0.1570782535
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## [1810,] -1.070046e-01 -0.1820012512 -9.992315e-01 -0.5924794781
5.524200e-01
## [1811,]  3.074142e-02 -0.1953109305  3.310621e-01 -0.6478287466 -
5.056622e-01
## [1812,]  8.641623e-01  0.7930583930 -5.391192e-01 -0.6614970532 -
3.996133e-01
## [1813,] -2.107839e-02  0.0051890609 -4.571459e-01 -0.1221747521 -
1.200266e+00
## [1814,]  4.586395e-01  0.9367691367 -7.990130e-01  0.6277731070 -
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## [1815,] -1.978449e-01 -0.1022017664  5.533541e-01  1.3446064675
1.115231e+00
## [1816,] -1.287220e-01  0.3895508487 -1.019595e+00 -0.6828638926
7.227618e-01
## [1817,] -2.306282e+00  1.8569845037  2.437157e-01  1.9673159362
8.393554e-01
## [1818,]  1.076417e+00  0.1027304319  2.319525e-03  0.5610389377 -
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## [1819,]  1.189478e+00  0.7664377775  6.294163e-01  0.4712379480
1.795043e-02
## [1820,]  2.456251e-01 -0.6917069173 -1.176991e-01  0.4995267002 -
5.934779e-01
## [1821,]  4.410059e-01  1.0168024776 -7.307291e-01  0.6931251276 -
5.199019e-01
## [1822,] -6.102393e-02  0.6308482813 -6.766120e-01 -0.1116544459
1.677710e+00
## [1823,] -1.607948e-01 -1.1072959683  5.953334e-01 -0.1892199682 -
6.621475e-02
## [1824,]  2.623185e+00  2.3660699544 -9.126303e-01  1.1856887109
5.733792e-01
## [1825,] -1.308025e-01 -0.8099296167 -1.028893e-01 -0.3281367513
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## [1826,] -2.307728e+00  1.4929242562  1.143684e+00  1.7722089531
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## [1827,] -7.646301e-01  0.0996209665  1.766627e+00 -0.2464220625 -
1.386456e+00
## [1828,] -6.825717e-01  0.3737221267  1.489552e+00  1.2693638851 -
1.061288e+00
## [1829,]  5.019137e-01  0.2834852884 -5.251144e-01 -1.3874912623
5.609858e-01
## [1830,]  1.513917e-01  0.3959479783 -6.078558e-01 -0.4505246696
1.230114e+00
## [1831,]  7.153227e-01 -0.8658555140 -3.283292e-01 -0.4849358523
1.780293e+00
## [1832,] -4.341053e-01 -0.1433793446 -9.046953e-01  0.9040973160 -
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## [1833,]  1.099860e-01 -0.8119950335  9.593258e-02  0.2903321658
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## [1834,]  1.219100e+00  0.0477820193  5.585375e-01  0.7667174493
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## [1835,]  9.710068e-02 -0.4532749461 -6.410397e-01 -0.7178979425 -
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## [1836,] -1.063042e+00 -0.4783892270 -5.490094e-01  0.9018114222 -
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## [1837,]  2.057647e-01 -0.3860861030 -2.545445e-01 -0.7605247033
2.950226e-01
## [1838,]  5.380506e-01  0.6773140266  1.341524e+00  0.5238756698
9.999162e-01
## [1839,]  5.821948e-01  0.4185890986  4.887948e-01  0.2695840541
2.923194e-01
## [1840,]  8.299961e-01  0.2948993672 -1.863760e-01 -1.4229129117
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## [1841,]  7.612482e-01  0.8442065977 -1.050753e+00 -0.7916107935 -
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## [1842,] -1.882887e+00 -0.6375612693  8.694171e-02  0.0540857091 -
7.062653e-01
## [1843,]  1.867389e+00  0.9343900334  1.549490e+00 -0.7901039853 -
1.732832e+00
## [1844,] -2.412966e+00  1.7310839847  2.603132e-01  2.0485722968
6.777727e-01
## [1845,] -4.115947e-01  0.1188248526 -9.200553e-01 -0.7129177357
8.660103e-01
## [1846,]  8.688081e-01 -1.3438973524 -3.266788e-01 -0.5290908625
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## [1847,] -1.079235e+00  0.5675402879  2.141104e-01  0.8668965944
7.182673e-01
## [1848,]  5.723986e-01  0.0621361657 -4.011226e-01  0.1760638114 -
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## [1849,]  7.491904e-01  0.2935837148 -3.674840e-02 -1.4169671614
1.040954e+00
## [1850,] -4.283303e-01  0.1078203002 -9.177347e-01  0.0338597630
1.772102e-01
## [1851,] -6.416758e-02 -0.2906082551 -8.364880e-01 -0.6217063126
2.325340e-01
## [1852,]  7.799784e-01 -0.6563449925 -5.712495e-01  0.7260329496
2.027666e-01
## [1853,] -1.443534e-02  0.7608513155 -6.264976e-01 -0.3888390151
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## [1854,]  2.098853e-01  0.3930287058 -2.251473e-01 -0.3795405293
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## [1855,]  6.824790e-02  1.1406781016  1.047749e-01 -0.5886203300 -
1.069291e-01
## [1856,]  8.983475e-01  0.6374814061  9.828399e-01 -0.0135310217
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## [1857,] -1.232381e+00 -1.9733327336  5.554566e-01 -0.8421960024 -
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## [1859,]  5.001541e-01  0.1200493860 -6.569373e-02 -1.4280900292
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## [1860,] -6.613342e-01 -0.2545804417 -9.316087e-01  0.1459632328
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## [1861,]  3.422385e-01  0.5274404778  1.147099e+00  0.6331253605
8.915432e-01
## [1862,] -5.336813e-01 -0.2406470491 -1.003674e+00  1.1237608381 -
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## [1863,]  2.024920e+00 -0.7710708635  4.578427e-01 -1.6272973555 -
4.666040e-01
## [1864,] -2.339788e+00 -0.6687172336 -3.695542e-01 -0.1442753249
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## [1865,] -3.444037e-01  0.6977749939  4.637966e-01  0.6781185399 -
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## [1866,] -4.307605e-02 -0.4744228805 -6.483238e-01 -0.3302017608
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## [1867,]  4.527581e-01  0.3779111312 -1.007779e+00 -0.9259207334 -
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## [1868,] -9.734586e-01 -0.2540490886 -6.975163e-01  0.7418629016 -
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## [1869,]  2.613528e-01  1.0860830983 -1.599158e+00 -0.9046942396 -
1.624670e+00
## [1870,]  1.178916e+00  0.0717094561  6.059916e-01  0.8226089357
8.799412e-02
## [1871,]  4.639076e-01  1.5519044053 -2.149811e-01 -0.6597298307
1.724624e+00
## [1872,]  3.223019e-02 -0.9422309220 -3.757450e-01  0.0389099443
3.370779e-02
## [1873,] -5.759552e-02  0.1626553072 -8.650790e-01 -0.9574248671
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## [1874,]  6.766020e-01 -0.8489289850  3.869641e-02  0.1685601836
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## [1875,] -1.386911e-01  0.0756753488 -6.634714e-01 -0.7200705945
9.512090e-01
## [1876,]  6.601808e-01  0.1507476367 -4.264246e-01  0.1451041357 -
6.550592e-01
## [1877,]  5.086421e-01 -0.1507687006  3.715270e+00  0.2938193021
1.701654e+00
## [1878,]  2.555844e+00  2.2626037266 -8.766712e-01  1.2163583210
4.467583e-01
## [1879,] -4.219041e-01 -0.3773255152  5.780131e-01 -0.6515714765
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## [1880,] -6.642437e-01 -0.5235003387 -6.120500e-01 -0.4342646644 -
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## [1881,] -4.023290e-01 -0.4332708391 -3.966577e-01 -0.7311642237
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## [1882,]  7.218511e-01 -1.6170717156  1.469594e+00 -1.6309277321 -
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## [1883,]  3.936813e-01  0.3382942907 -1.015003e-01  0.6150963473 -
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## [1884,] -5.461431e-01 -0.3138125146 -9.769837e-02 -0.7446607916 -
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## [1885,] -9.254691e-02 -0.5851002832  4.439118e-01 -1.6669958998
4.229402e-01
## [1886,]  6.352556e-01  0.8863158678  5.264355e-01 -0.8264874142
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## [1887,] -3.955099e-02  0.2471418984 -8.237355e-01 -0.9753725354
1.205691e+00
## [1888,]  8.260298e-01  1.3373622228  2.092636e-01  0.2313528111 -
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## [1889,]  8.230382e-01  0.1455881559  7.185594e-01  0.3114380084
2.281339e-01
## [1890,]  8.317750e-01  0.1076896391  5.867734e-01 -0.4566687883
5.107777e-01
## [1891,] -1.125598e-01 -0.4340270974 -1.328711e+00 -0.4713697385
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## [1892,]  1.485887e-01  0.7535696286 -1.757990e-01 -0.0920630504
4.926545e-01
## [1893,]  3.969409e-01  0.3996161388 -3.376793e-01 -0.9154399045
7.047115e-01
## [1894,]  4.884064e-01 -0.1358918814  3.651251e+00  0.3914039682
1.597845e+00
## [1895,] -2.338575e+00 -0.6926759178 -3.764353e-01 -0.1288542145
5.289317e-01
## [1896,]  1.235456e+00 -0.5753571417  8.215700e-01 -0.9641101839
6.638471e-01
## [1897,] -1.013415e+00  0.0541193087 -7.595791e-01  0.7709490411 -
4.973670e-01
## [1898,] -6.116072e-01 -3.3185359928 -1.331046e+00  0.0385264215
1.721459e+00
## [1899,] -4.557055e-01 -1.0697500225  1.217185e+00  1.5592082926 -
4.794610e-01
## [1900,]  3.561682e-03 -0.0499920847 -6.841753e-02 -0.7405318043 -
5.433538e-01
## [1901,]  2.512686e-01 -0.3890102092 -2.455367e-01 -0.6999996200
2.269679e-01
## [1902,]  1.291927e+00  0.3867213325  2.909802e+00 -0.6496103413
9.624376e-01
## [1903,]  4.418482e-01 -0.0578364909  3.589933e+00  0.4738121669
1.322664e+00
## [1904,] -1.809315e-01 -0.4922611399 -9.895036e-01 -0.4053533023
5.666609e-01
## [1905,] -3.738236e-01  0.8666371113  2.137774e-01  0.2725451742 -
6.599125e-01
## [1906,] -4.416084e-01 -0.2799235794 -7.491848e-01  0.3588774191
2.623399e-01
## [1907,]  8.586425e-01 -1.2583924031 -3.231920e-01 -0.4908333351
8.558686e-01
## [1908,]  2.984828e-01  0.1612251570 -4.750972e-01  0.0595181049
4.373787e-01
```

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## [1909,]  3.114581e-01  0.0940023918 -6.526408e-01 -0.1657270809 -
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## [1910,] -1.101777e-01  0.6483880951 -6.789171e-01  0.0164444219
1.601268e+00
## [1911,]  4.413880e-02 -0.1279310788 -9.586426e-01 -0.3349941218
4.651132e-01
## [1912,]  4.842357e-01  0.7882293697  1.470981e+00  0.5541002772
1.103108e+00
## [1913,] -6.459273e-01 -0.5295892948  5.794044e-01  0.2888739159 -
2.191295e-01
## [1914,]  2.014353e-01 -0.0960590559  2.252232e+00  0.3191982139
8.923788e-01
## [1915,] -3.937322e-01  0.1818897095 -3.816044e-01 -0.2424822841
1.174336e+00
## [1916,] -7.461500e-01  0.1835393780 -5.060555e-01  1.1072049146 -
6.249538e-01
## [1917,] -1.047586e+00  0.0305822627 -6.926838e-01  0.7879190761 -
5.098804e-01
## [1918,]  4.379980e-01 -0.0514694054  1.295288e+00  0.9889592508 -
1.995058e-01
## [1919,] -1.144557e-01 -0.4743264032 -9.983184e-01 -0.4695866719
6.778644e-01
## [1920,] -2.099139e-01 -0.0817866042  1.049555e+00  1.4843881489
1.215031e+00
## [1921,] -1.019100e+00 -0.3776714829 -5.381385e-01  0.9527145983 -
4.626634e-01
## [1922,] -1.115969e-01 -0.4561705242  1.030736e+00  0.3804239291
9.984624e-01
## [1923,]  3.520523e-01  0.3489253437 -3.635723e-01 -0.9024618194
5.781176e-01
## [1924,]  8.134279e-01 -0.4478352024 -4.168460e-01  0.6941088558
4.771331e-01
## [1925,]  4.826631e-01 -0.0771573037  3.705771e+00  0.4852412387
1.653516e+00
## [1926,]  6.638998e-01 -0.8733938431  1.591588e-01 -0.2071961217
1.784228e+00
## [1927,] -4.176380e-01 -0.2231014749 -9.613457e-01  0.8270768069 -
4.761251e-01
## [1928,]  1.156174e+00  0.5082197058  4.946085e-01 -0.2283061503
1.603147e-01
## [1929,]  1.770515e+00  0.2744184506  1.954093e-01 -0.4337848353
1.363231e+00
## [1930,] -4.109789e-03 -0.2145184768 -5.160787e-01  0.4933352568
7.040233e-01
## [1931,] -5.035883e-02  0.4466698851 -5.212694e-01 -1.3449461161 -
8.751625e-01
## [1932,]  9.384755e-02  0.0389962053 -8.975398e-01 -0.3510171780
6.538645e-01
## [1933,] -3.097875e-01 -0.5977634847 -1.449871e-01  0.3054294034 -
2.391862e-01
```

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## [1934,] -1.096691e+00  0.5555077236  1.741092e-01  0.9078143724
6.600052e-01
## [1935,] -2.605451e-01  0.1480275504 -5.140939e-01  0.6380945753 -
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## [1936,]  3.024738e-01  0.4264477693 -5.824485e-01 -0.3588242776 -
5.932959e-01
## [1937,]  8.688453e-01 -1.3281527860 -3.541778e-01 -0.4301761394
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## [1938,]  2.658843e-01  0.1300679484  1.094035e-01 -1.0603928815 -
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## [1939,]  8.497717e-01  1.2258268483  2.311167e-01  0.0329566949 -
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## [1940,]  1.360577e-02 -0.9653475321  2.057620e-01  0.3467503928
3.446252e-01
## [1941,] -1.102285e-01 -0.6197804395 -1.219232e+00  0.4024300035 -
3.060063e-01
## [1942,] -9.406696e-02 -0.8090704990 -1.498739e-01  0.2439501956 -
1.561878e-01
## [1943,]  5.604295e-01  0.7425029156 -1.658363e-01 -0.1356562105
1.166833e+00
## [1944,]  4.384495e-01  1.6244902741 -2.224878e-01 -0.5082719991
1.742022e+00
## [1945,]  1.532039e-01 -0.3067929904 -1.330913e-01 -0.0186641324
6.963502e-01
## [1946,]  1.738024e-01  0.2944555664 -1.051523e+00 -0.0491730862
7.800622e-01
## [1947,]  1.363996e-01 -0.1954080443 -8.326276e-02  0.0531091722
7.567057e-01
## [1948,]  1.186446e+00  0.0496750284  3.733395e-01  0.6495748379 -
1.674944e-01
## [1949,]  6.175936e-01  0.3035639206  4.777865e-01  0.1178983340
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## [1950,] -1.074493e+00 -0.4158638958 -4.538635e-01  0.9122173262 -
5.167952e-01
## [1951,]  5.696397e-01 -0.8410483648 -3.878730e-01  0.1435507407
4.382641e-01
## [1952,] -6.332529e-01 -1.1452572644  8.588167e-01  1.4945814519 -
7.660359e-01
## [1953,]  9.876375e-01  0.1016346028 -3.166442e-01  0.6181334731
1.797535e-01
## [1954,]  3.766464e-01  0.3728462808 -3.960962e-01 -0.8074192290
5.629275e-01
## [1955,] -4.381102e-01  0.0536761938 -6.737020e-01 -0.3693503293
6.500644e-01
## [1956,]  3.166326e-01  0.3126223480 -1.118114e+00 -0.2635140873
9.056260e-01
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## [2121,] -1.281817e+00 -1.0825311042  4.049219e-01 -1.5580081322 -
9.381573e-01
## [2122,]  4.839710e-01  0.6890005673 -3.987412e-01  0.1552295285 -
1.270650e-01
## [2123,]  3.622859e-01 -0.1566933027 -5.519432e-01 -0.4503569200
5.741680e-01
## [2124,]  1.805407e-01  0.2348586384 -4.365056e-01  0.0182031014 -
7.864755e-01
## [2125,]  6.856661e-01  0.5673733008  1.252410e+00  1.4476180205 -
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## [2126,] -1.217318e-01 -0.3967571257 -5.194593e-01  0.5372548861
4.428428e-01
## [2127,]  5.278132e-01  1.7421698854 -1.862369e+00  0.3928862484
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## [2128,] -1.080464e-01 -0.1008135759 -6.433109e-01 -0.2290886702
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## [2129,] -9.806611e-02 -0.4210712582  5.631950e-01  0.2156553673
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## [2130,] -3.391797e-02 -0.0433158430 -1.022142e+00 -0.5850010574
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## [2131,] -1.147645e-01  0.2944237554 -9.591804e-01 -0.3032816773
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## [2132,] -3.158354e+00  3.0551304500  2.164731e-01 -0.9195352430 -
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## [2133,]  1.798396e-01 -0.8822715997 -7.758489e-01 -1.2175845003 -
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## [2134,] -2.558765e-01  0.8437004074  8.291053e-02  0.1464125424 -
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## [2135,] -5.009057e-02  0.4267913359 -9.539029e-01 -0.2443349867
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## [2136,]  3.095993e-01 -0.8679441405 -7.509359e-01  0.3060137748
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## [2137,]  1.283251e+00  0.2614990903  4.016853e-01  0.6467743999
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## [2138,] -1.096286e-01 -0.2016434664 -1.071019e+00 -0.5885770548
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## [2139,] -1.507913e-01 -0.2179531686  9.996937e-01  1.2848492294
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## [2140,]  7.541973e-02 -0.1256419476 -5.295005e-01 -0.2049674053
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## [2141,] -2.753770e-01  0.1575297332 -7.232005e-01 -0.2327667891
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## [2142,]  3.524276e-01  1.3464573899  4.056497e-01 -0.1769198400
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## [2143,]  4.951192e-01  0.3242482147  5.571249e-01  0.2223585381
1.820584e-01
## [2144,] -3.253358e-01 -0.4646591168  1.137951e+00 -0.1035743218 -
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## [2146,]  5.735910e-03  0.2824707935 -8.585309e-01 -1.0241836009
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## [2147,]  5.352740e-01 -0.8708520890 -3.936070e-01  0.1724844597
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## [2148,]  4.394362e-01  0.5924606222  1.114847e+00  0.5471033136
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## [2149,] -1.779739e-01 -0.6389225596 -1.205623e+00  0.6125014657 -
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## [2151,]  1.141407e+00  1.8572232017  3.679091e-01  0.1404115663
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## [2152,]  1.419090e-01 -0.2225379415 -8.336388e-02  0.1149829728
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## [2153,] -6.044862e-02 -0.9937674604  2.877722e-01  0.3071765658
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## [2154,]  5.194657e-01  1.7723798823 -1.859038e+00  0.5176423470
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## [2155,]  3.430761e-01  0.1568919814  9.774770e-02 -1.0871873232 -
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## [2156,]  4.113429e-01 -1.0277177225 -3.472263e-01  0.2374449469
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## [2160,] -6.197817e-01  0.2726746755 -1.265413e-01  1.2456446505 -
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## [2161,]  2.424640e-01  0.0873662053 -1.306193e-01 -0.1121133049 -
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## [2162,] -2.627675e-02 -1.0964972199 -7.814045e-02 -0.0407930475 -
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## [2163,] -3.078583e-01  0.0814446470 -5.133989e-01 -0.4121529883
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## [2165,]  7.398085e-01 -0.4073230051 -1.453174e-02 -1.6560586612
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## [2166,] -1.312185e+00 -1.2325745077  3.679185e-01 -1.5491012228 -
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## [2172,] -6.156174e-01 -0.3877964551 -2.024891e-01  0.0454041434 -
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## [2173,] -3.673733e+00  0.8551195079  1.732888e+00  1.8722390106
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## [2193,]  8.839577e-01  0.5868360100  9.793030e-01  0.0041010914
2.172115e+00
## [2194,]  2.149193e-01  0.3050712165 -6.219480e-01 -0.1882095254 -
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## [2195,]  2.735267e-01 -0.0112329698 -1.526648e-01 -0.2006028824 -
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## [2196,] -1.952534e+00  2.0793292500  9.455001e-02  3.5022973148 -
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## [2197,] -6.515919e-01  0.1860664253 -1.127282e-01  1.1985961258 -
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## [2198,] -5.697390e-02 -1.0084807169  5.963504e-01 -0.2034902605
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## [2199,] -2.775275e-01  1.3614156394  3.914501e-01 -0.7507554595 -
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## [2200,] -2.556243e-01 -0.4380735139 -3.199604e-01  0.1886638352 -
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## [2201,] -2.292318e-01 -0.4738700135  1.512651e-01 -0.8131885711 -
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## [2202,] -5.183587e-01 -0.1779040824  4.121145e-01 -0.7882035135 -
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## [2203,]  2.358231e+00  2.3404982408 -9.886368e-02  0.8876942656 -
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## [2204,] -1.857918e+00 -1.8890577346  1.000219e+00 -0.2925482578 -
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## [2205,] -2.566251e-01 -0.6228033463  3.088937e-01  0.3810628820
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## [2206,] -5.224543e-01  0.0436370229  7.358053e-01  0.4390685440 -
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## [2207,] -1.614272e-01 -0.5874886860 -1.352033e+00 -0.4580093898
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## [2209,]  1.120049e+00  0.1173842592 -2.820349e-02  0.6765360509 -
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## [2210,]  5.347874e-01  0.3972348315  5.589387e-01  0.2749488783
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## [2211,] -3.238985e-01 -0.2150148733 -3.292027e-01  0.0664536503
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## [2212,]  1.415707e-01 -0.7586561892  1.673730e+00 -0.5679258012
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## [2213,]  3.254798e-01  1.5423397549  1.468433e-01 -1.1339035084
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## [2214,]  5.792925e-01  0.1596822512 -1.557460e-01 -1.4186991657
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## [2215,]  4.772472e-02 -0.9241263881  8.028655e-01 -1.4302302617
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## [2216,]  1.997247e-01  0.4887873045 -5.468677e-01 -0.0961427914 -
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## [2217,]  5.981469e-01 -0.9648719078 -4.896233e-05  0.1734154499
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## [2218,] -1.257759e+00 -1.0588480657  4.091655e-01 -1.5148403219 -
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## [2219,]  1.030155e+00 -1.5560398278  6.773769e-01 -1.2244118723 -
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## [2220,] -2.703635e-01  0.0482720813 -1.614092e+00 -0.9660262638
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## [2221,]  1.502442e-01 -0.1717895664  2.655967e-01 -0.8315224165 -
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## [2222,]  4.750068e-01  0.0609515113 -8.108626e-01  0.1330115238 -
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## [2223,] -9.430441e-02 -1.0778888355 -7.532407e-02  0.1821283550 -
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## [2224,] -6.271404e-01 -0.4718856071  5.805468e-02 -1.0997091484 -
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## [2225,] -4.066398e-01  0.0675170314  1.433903e+00  0.2716739888
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## [2227,] -4.578615e-01 -1.0370499501  7.548681e-01  1.4509298912 -
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## [2228,] -3.490470e-01 -0.6047165291 -1.147078e-01  0.3741766288 -
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## [2229,] -2.163303e-01  0.1065407525 -2.061727e-01 -1.1350848042 -
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## [2231,] -2.518900e-01 -0.1374171130  1.091264e+00  1.5554623084
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## [2232,]  4.351513e-02  0.8276968203 -5.973846e-01 -0.4377183738
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## [2234,] -1.593381e-01 -0.3699767463 -4.817687e-01  0.6058772652
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## [2235,] -9.312793e-02  0.1831941742 -1.462111e-01  0.8274238620
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## [2236,] -2.858674e-04  0.0682896837  1.007503e-01  0.2638426396 -
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## [2237,]  1.829179e-01 -0.7104331371  2.183993e+00 -0.4386189479
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## [2238,]  2.197981e-01  0.3391358793 -1.363262e+00 -0.1321112170
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## [2239,]  7.166313e-01 -0.4694960664 -9.548199e-03 -1.7334175238
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## [2240,]  2.858096e-01  0.3412487911 -4.804029e-01 -0.0979481459 -
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## [2241,] -2.662051e-01 -0.2207692408 -1.091753e+00 -0.4760247667
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## [2242,] -1.333483e-01 -0.6738125116  1.108003e-01 -0.1338414239
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## [2243,]  3.051488e-01 -0.1093785854 -4.339540e-01 -0.4214759765
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## [2244,] -7.582551e-02  0.9482242316  4.786384e-01 -1.7495027288 -
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## [2245,]  1.460868e-01 -0.2893265033 -1.708143e-01  0.0880953814
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## [2247,]  4.334672e-02 -0.8732331061  7.326156e-01 -0.3492227259
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## [2248,]  5.523928e-01 -0.4305605506 -1.447156e+00 -0.8454593646 -
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## [2250,] -1.201826e-01 -0.2483115068 -9.240745e-01  0.4504152776
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## [2253,]  3.513060e-01 -0.8209181008  1.219435e-01 -1.3398672635 -
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## [2254,] -1.437598e-01  0.1628219072 -5.507373e-01  0.6610277612
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## [2260,]  5.315950e-01  0.0028988957  3.709891e+00  0.4215073786
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## [2264,] -2.413592e+00  1.8392193318  3.522399e-01  2.1131082014
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## [2265,]  2.313402e-01  0.9948695145 -9.748307e-01  0.6780235625
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## [2268,] -5.825332e-01 -0.1109628080 -1.357972e+00 -0.3626844541
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## [2269,]  7.585997e-01 -2.6044833966 -3.327108e+00  0.5634452202
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## [2270,] -2.591879e-01  0.8222980289 -5.150919e-01 -0.3257782594
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## [2271,] -3.255157e-01 -0.7488134583 -1.639075e-01  0.2806338162 -
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## [2285,] -1.316679e-01 -1.1452370060 -7.328750e-02  0.3135904121 -
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## [2286,]  1.168520e-01  0.0482559989 -1.279325e-01 -0.7537240313
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## [2287,] -7.896921e-01 -0.6061617171 -1.058127e+00  0.7165773864 -
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## [2288,]  6.513517e-01  1.0399473068 -1.143469e+00  0.8366806895
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## [2289,]  8.070749e-01 -1.2879741799 -2.970314e-01 -0.4164333272
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## [2290,] -8.126661e-01 -1.7037415426 -2.179796e-01 -0.4860812902
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## [2291,]  8.935182e-01 -0.1952328343  9.323973e-01  0.1356434576 -
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## [2292,] -7.670539e-02 -0.5119357049 -1.374847e+00 -0.4746832384
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## [2293,]  3.417298e-01 -0.0854055388 -4.949928e-01 -0.4282715522
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## [2294,]  8.303965e-01  1.4165498343 -2.217780e-01  0.0364225610 -
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## [2295,] -5.164740e-01 -0.0560382340 -6.722987e-01 -0.2978712646
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## [2296,]  2.045726e-01  0.6499271366 -1.486397e-03 -0.2156234103 -
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## [2297,] -2.179165e+00 -0.0167677280  2.956347e-01  0.5523429346
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## [2298,]  1.579900e+00  1.1849883717 -9.717572e-01  1.6813855511 -
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## [2299,] -9.419839e-02  0.2905794145 -8.028436e-01 -0.8845377722
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## [2300,]  1.544302e-01  1.0259568504  4.523814e-01 -0.5526219505 -
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## [2301,]  1.949623e-01 -0.6078336638  3.686221e-01  0.7263535891
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## [2302,]  2.478647e-01  0.4387134017 -1.942030e-01 -0.3183588378
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## [2304,] -5.798769e-01 -3.2229220388 -1.299042e+00  0.0803397001
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## [2305,] -3.648852e-01 -0.2763528075 -9.676188e-01 -0.0111036381
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## [2306,]  1.362594e-01 -0.8748612120 -7.719962e-01 -1.2404969445 -
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## [2308,]  4.699046e-01  0.4976018501 -4.747960e-01  0.1083414256 -
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## [2310,] -5.932127e-01 -1.5594327717  1.337116e+00 -1.3577769515 -
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## [2311,]  4.376210e-01 -0.0271320037 -3.123994e-01  1.4587690776 -
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## [2312,] -7.612780e-01 -0.5955862056  2.797176e-01  0.2825091085 -
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## [2313,] -6.081761e-01 -0.1317557057  6.689036e-01 -1.1750566061
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## [2315,] -3.441109e-01  0.1521549218  9.104298e-01 -1.8391477128 -
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## [2316,] -8.677193e-01 -0.2045230427  1.274257e+00 -0.1483190309 -
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## [2317,] -3.426974e-01 -0.2674943957  3.952313e-01 -0.6638641084 -
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## [2318,] -1.825191e+00 -3.1037969311 -2.558564e+00  1.3416758641
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## [2319,] -1.659351e-01 -0.8224360095  6.601195e-02 -0.6592620655
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## [2321,] -1.861116e+00 -3.1967814356 -2.278566e+00  1.0113131361
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## [2323,]  9.363754e-02  0.3003860867 -5.746968e-01 -0.4946895575
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## [2324,]  3.652370e-01  1.0851647879  2.391047e-01 -0.2310131914
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## [2325,]  3.141829e-01  0.1402523729  3.304961e-01  0.0147267876 -
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## [2326,] -1.975779e-01  0.5813768908 -3.083099e-01 -0.7652325868
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## [2327,] -2.225909e-01 -0.5994833981 -2.197185e-01 -0.2626039257
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## [2328,]  4.424972e-01  0.2272950601  9.830390e-01 -0.2180653671 -
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## [2329,]  7.855623e-01 -1.0513746150 -3.756825e+00  1.0121265914
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## [2330,]  4.197993e-01 -0.2031642507  1.161929e+00  1.0974154058 -
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## [2331,] -1.168228e-01  0.3544519116  1.448456e-01 -0.1917123505 -
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## [2336,]  5.367242e-01 -0.4138983848  3.952994e+00  0.7601260799
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## [2349,] -3.812005e-01  0.8981672878  2.016744e-01  0.3383914155 -
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## [2354,]  2.928598e-01 -0.3685998901 -9.132764e-01 -0.5216729762 -
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## [2355,]  5.341131e-03 -0.5364727931  7.628819e-01 -0.8318188844
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## [2356,]  1.129726e+00  0.8050228626 -8.900393e-01 -0.3656241688
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## [2361,]  3.330120e-01  0.3166300780 -1.075297e+00 -1.1126595109 -
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## [2368,]  2.112893e-01  1.0456161165 -1.204304e-01 -0.3212989826 -
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## [2373,]  3.341641e-01  0.4960301587  1.175825e+00  0.6504213338
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## [2374,] -2.895083e-02 -1.0592879383 -8.717337e-02  0.1442567322 -
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## [2375,] -3.158312e-02 -0.0628304472 -3.234336e-02 -0.6115686074 -
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## [2377,]  1.614372e+00  1.2441664174 -5.268380e-01  2.0008341295 -
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## [2379,] -1.356548e+00 -1.3543642724  5.734153e-01 -0.7204212060 -
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## [2380,]  1.549534e-01  1.0655579884 -4.403732e-03 -0.6837550307 -
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## [2382,]  6.638220e-02  0.0029111826 -1.002464e-01 -0.6830019783
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## [2387,]  2.059733e-01  0.0619629063 -2.952972e-01 -1.1970919830 -
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## [2388,]  8.961644e-01  0.6338804808  9.962947e-01  0.0175659644
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## [2389,]  2.222337e-02  0.8849166547 -5.590206e-01 -0.2130637598
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## [2390,] -2.242305e-01  0.5842713139 -6.321707e-01  0.8318806784
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## [2393,]  3.046750e-01 -0.3037070517 -2.642516e-01 -0.6933717811
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## [2397,] -8.062454e-02  0.6920061252 -1.566111e-01 -1.5074008810 -
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## [2398,] -1.365643e-01  0.4715368172  2.257431e-01 -0.5564886701
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## [2399,]  7.790263e-01  1.3216251152 -2.316099e-01  0.1447715741 -
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## [2400,]  1.979546e-01 -0.8129413428 -7.026933e-01 -1.3131968270 -
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## [2401,]  4.958096e-01  0.2857818065  3.431547e-02 -1.3491973832
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## [2402,] -4.040259e-01 -0.4168461580 -9.514807e-01  0.0295959112
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## [2403,]  6.138598e-01  0.7452517187 -4.368802e-02  0.2425908722
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## [2404,] -1.370202e-01  0.3245032117 -9.202255e-01 -0.2093467446
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## [2405,] -1.730701e-01 -0.0657169278 -3.050775e-01  0.7332863268
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## [2406,] -8.225131e-02  0.3319962769 -9.441791e-01 -0.2977537562
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## [2407,]  1.729485e+00  1.2342996136 -6.056173e-01  1.7469763188 -
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## [2409,] -1.157951e-02  0.7429146383 -2.112122e-01  0.8898524465
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## [2410,]  1.602359e-01  0.1190710807 -1.585115e-01 -0.7638370370
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## [2411,]  2.516102e+00  2.0647815091 -9.580162e-01  1.3232485079 -
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## [2412,] -1.257828e+00 -0.3848261930  1.173174e-01  0.5058381853 -
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## [2413,] -1.593036e-01 -0.8256830369  4.118145e-01 -1.1957413613
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## [2414,] -1.505743e+00 -2.6617214122 -1.693917e+00 -1.1737391878
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## [2415,]  5.814142e-01  0.4371594975  5.254120e-01  0.2630972728
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## [2416,] -2.047937e-01 -0.4841201628 -1.092622e+00  0.7281492997 -
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## [2417,] -2.114539e+00  0.0125826724  2.500659e-01  0.4248977987
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## [2418,]  1.615839e+00  1.2461979737 -9.593349e-01  1.7639384100 -
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## [2419,]  4.811648e-01 -0.1855637183  3.720484e+00  0.3050557108
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## [2420,] -6.090737e-02  0.3696800887 -2.540457e-01 -1.4959040452 -
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## [2421,] -3.530182e-01 -0.0921528689 -8.017031e-01 -0.5533960909
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## [2423,] -6.114065e-01 -0.2273643163  8.806527e-01  0.6056399600 -
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## [2424,] -1.289971e-01 -0.1239949769 -9.548775e-01 -0.4621379926
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## [2425,]  3.133437e-01  0.0377317882 -1.737961e-01  0.0187214159
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## [2426,]  3.562321e-01 -0.8953070834  9.931409e-02 -1.3066310487 -
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## [2427,] -2.167720e+00 -0.0340725233  2.709919e-01  0.4827035250
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## [2428,]  1.711025e-01 -0.5198600044  7.396891e-01 -0.4939575913 -
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## [2429,] -1.028682e+00 -0.4256523632  2.001158e-01 -0.5997100489 -
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## [2430,]  8.193424e-01 -0.4881604842 -4.313817e-01  0.7953927850
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## [2431,] -4.678270e-02  0.6498863731 -2.546239e-01  0.7818964922
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## [2432,] -5.669202e-01 -0.0872253514  9.132715e-01  0.5925118585 -
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## [2435,] -1.309353e-01  0.2190280344  3.230352e-01  0.7001157138
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## [2448,] -7.341174e-01 -0.1720994067 -7.331680e-01  0.1778179958
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## [2449,]  1.230286e-01 -0.5619886470 -8.765555e-01 -0.1019317883
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1.836342e+00
## [2451,]  2.841257e-01  1.4672297325  1.428688e-01 -1.1425124559
1.608388e-01
## [2452,]  7.329548e-01  1.2521331828 -2.059524e-01  0.0477819541 -
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## [2453,] -1.023524e-01 -1.0765702596 -4.532910e-02  0.1722391142 -
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## [2455,]  6.609423e-01  0.3381107903  8.987595e-01  0.3422364863
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## [2456,] -9.107361e-02  0.2641676014 -9.624998e-02  0.8342747516
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## [2457,]  4.606600e-01  0.6811528457 -3.784961e-01  0.1705969801 -
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## [2460,]  2.982049e-01  1.0801985727  3.388396e-01 -0.6437762531 -
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## [2461,] -4.346667e-01  0.4547179123 -4.001422e-01 -0.1119319937
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## [2462,]  9.480449e-01  1.3187590898 -1.094110e+00  1.0165990191
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## [2465,]  7.950076e-01  0.9095375506 -8.429681e-01 -0.6368324829 -
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## [2466,]  1.168527e-01  1.0244609187  7.069258e-02 -0.7462111346 -
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## [2467,]  6.776577e-01  1.0477711500 -1.115099e+00  0.6779471350
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## [2468,] -2.368505e-01  0.0141386169  1.372409e+00  0.8006168105
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## [2469,] -1.457968e-01  0.5164011583 -1.675069e-02 -0.5021494951
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## [2471,] -3.880331e-01 -0.0841892723 -7.572349e-01 -0.4790656376
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## [2472,] -2.681852e-01 -0.1929367427 -1.023572e+00 -0.4141952983
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## [2473,] -1.161426e+00 -3.4199363729 -1.190354e+00  0.7372742648
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## [2474,]  5.620189e-01  0.5451443592 -1.131556e-01 -0.5733305173
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## [2475,]  1.649785e-01 -0.1503302849  1.190903e-01 -0.8509412775 -
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## [2476,]  2.034423e+00  0.6283475095  2.904385e-01 -1.4086246286 -
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## [2477,] -7.694356e-02 -0.3158440970 -8.447959e-01 -0.1667589946 -
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## [2479,]  9.230297e-01 -1.6075593548  2.474484e-01 -1.2720055460 -
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## [2481,]  1.362632e-01  1.2057985301  4.918711e-02 -0.6258889837 -
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## [2486,] -3.185983e-01 -0.0690401432  9.464075e-01  0.6218709442
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## [2491,]  1.852771e-01  0.2017096822  3.754583e-01 -0.5023612579
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## [2498,]  9.062885e-01  0.8460385004 -4.734856e-01 -0.6723685492 -
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## [2501,] -6.891498e-01 -0.5075143704 -1.034304e+00  0.6438282996 -
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## [2516,] -5.707626e-01 -0.0381081587 -6.301002e-01 -0.2163576271
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## [2524,]  7.220907e-01 -2.6936956718 -2.131944e+00  0.6497458224
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1.080582e+00
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## [2546,] -5.562538e-01 -0.3439262704  7.418577e-01  0.8105119522 -
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## [2547,] -7.188864e-01 -0.2474293742 -8.445002e-01 -0.2234526302 -
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## [2555,] -3.341788e+00  2.2667126911  5.446174e-01 -2.6396601976
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## [2556,] -7.967825e-01 -0.3681828859  1.442776e+00  0.2013072308 -
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## [2557,] -9.792811e-01 -0.3345776707  8.224838e-01 -0.3484046909 -
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## [2559,]  1.417519e-01  0.3448211197 -4.159413e-01 -0.7136087184
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## [2561,]  6.916432e-01 -1.4567982784  2.992176e-01 -2.2207775092 -
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## [2562,] -1.868605e-01 -1.0704579046 -1.735649e-02 -0.6848032614
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## [2566,] -5.002464e-01 -0.8528873877  8.100247e-01 -0.6457312106
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## [2567,] -9.805640e-01 -0.0975252574  7.148218e-01 -0.3951696174 -
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## [2569,]  7.269701e-01  0.0309461661 -4.506856e-02 -0.0296983226 -
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## [2573,] -3.382923e-01 -0.6632762126 -1.743796e-01 -0.6844048582
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## [2574,] -1.697498e-01 -0.9132138857  3.723863e-01 -0.9504320484
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## [2575,]  1.498720e-01 -0.7879628989  9.581627e-02 -1.1591344191
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## [2577,]  9.255752e-01 -0.0666306012  5.210151e-01  1.0736747137
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## [2579,] -1.885898e-02 -0.2857419119 -9.335689e-02 -0.9877813761 -
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## [2581,] -1.111118e+00 -0.8920843003  7.214965e-01 -0.0093786938
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## [2582,] -2.333799e-01 -0.7798593933  7.022420e-01 -1.1140795398 -
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## [2585,] -4.891963e-01 -0.3238300397  1.951318e-01 -0.3176836476 -
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## [2586,]  1.329416e+00  0.0604974849  1.244724e-01  0.0681874576 -
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## [2587,] -1.679652e+00 -2.9975953020 -3.068179e+00  0.2893708174
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## [2589,]  1.412029e+00  0.0304598131 -3.240654e+00  1.0758940979 -
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## [2590,] -8.328717e-01 -0.8641356770  2.894502e-01 -0.2751843861
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## [2598,]  9.651976e-04 -0.0480257917  8.090778e-01 -0.6815913196 -
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## [2599,]  2.231177e-02  0.5633522376 -3.081426e-01 -0.7836606816 -
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## [2601,]  2.352214e+00  2.2072779698  1.755008e+00  1.0227783305 -
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## [2606,] -2.700494e+00  3.0280188440 -2.844663e-01 -2.2426171010 -
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```

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## [2609,]  1.055139e+00  0.3354249972  2.877477e-01  0.8251169895 -
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## [2610,] -2.579031e+00  0.9063391671  1.295704e+00  2.1900712513
1.579197e-01
## [2611,] -1.639341e+00 -3.7190353388 -1.050263e+00  1.0952592113
1.466075e+00
## [2612,]  3.702283e-01 -0.0863165221  1.327122e+00  1.1210710986 -
3.887550e-01
## [2613,] -5.249985e-01  0.7560965987  4.210589e-01  0.0652596042 -
1.364044e+00
## [2614,] -2.450933e+00  1.2524634882  6.092515e-01  1.2018431610 -
2.271132e-01
## [2615,] -1.658573e-01  0.3629193956  2.445522e-01 -0.6067980970
1.546323e+00
## [2616,] -2.586871e-02 -0.3321464312 -5.013239e-01  0.3562591774
5.397684e-01
## [2617,] -2.863077e-01 -0.2137538090 -3.025118e-01  0.8008283818
2.825437e-01
## [2618,]  8.640030e-01  0.6685917811  1.040440e+00  0.0850588723
2.182662e+00
## [2619,]  3.666368e-01 -0.8183002679  2.005669e-01 -2.4315723778 -
3.236154e-01
## [2620,] -1.132730e-01 -0.0632393671  9.969612e-01  1.4591548869
1.195816e+00
## [2621,] -1.983825e+00  2.0295080521 -3.171774e-01  3.2292953536 -
4.029338e-01
## [2622,] -4.320792e-02  0.3441277893 -7.764652e-01 -0.9741610250
1.199850e+00
## [2623,]  3.280839e-01 -0.3486994729 -6.602404e-01 -0.1999969271
8.944740e-01
## [2624,] -1.959299e-01 -0.5346375510 -1.264775e+00 -0.4486563645
3.100011e-01
## [2625,]  4.231324e-01 -0.1625637409  2.358797e+00  0.5144245901
1.383755e+00
## [2626,]  2.465810e+00  1.1292215754 -3.708740e-01 -0.9924441110 -
4.199185e-01
## [2627,] -7.484298e-02 -0.3514698995 -5.121776e-01  0.5006104798
4.265705e-01
## [2628,] -4.371511e-02 -0.2322350478 -4.863874e-01  0.5138500458
5.371420e-01
## [2629,] -2.321957e-01 -0.1443627659 -1.066411e+00 -0.4658561426
2.747895e-01
## [2630,]  5.023926e-01  0.2478202233  2.031076e-01  0.1095122463
1.101924e+00
## [2631,]  1.723370e+00 -0.5701583083  2.636659e-01  0.1136621126 -
1.969788e-01
## [2632,]  5.565142e-01 -0.8540095050 -3.643143e-01  0.1859011102
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## [2633,] -4.687531e-02  0.2700668837  7.249508e-01  0.1222417857 -
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## [2634,]  9.117156e-01  0.6973919356  1.016789e+00  0.0270436559
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## [2635,] -6.987902e-02  0.4840218087  1.516290e-01  0.1856514902
1.340088e-01
## [2636,] -7.993672e-01 -4.2952657469 -1.210330e+00  0.1592756043
1.748731e+00
## [2637,]  4.373106e-01  0.6584067776 -3.932295e-01  0.3941427861 -
6.795441e-01
## [2638,]  2.132682e-01  0.1915570825  1.755974e-01 -0.2600685937 -
8.291282e-01
## [2639,] -4.882750e-01  0.1304638811  5.465920e-01  0.2777427328 -
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## [2640,]  4.912601e-01 -0.1684622348  1.201304e+00  0.9717503425 -
3.729772e-01
## [2641,]  1.736748e-01 -0.8865484119 -7.517201e-01 -1.2469001264 -
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## [2642,] -2.281168e-01  0.2330804695 -4.315095e-01  0.7523080274
2.185056e-01
## [2643,]  6.118202e-01 -0.4333442332 -4.126073e-01  0.3356908597
1.149998e+00
## [2644,]  1.609905e-01  0.2782940944 -8.224541e-01 -0.3676008390 -
5.128628e-02
## [2645,]  1.926283e-01  0.8354472133 -2.382314e-01  0.4298556928 -
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## [2646,]  1.548973e+00  1.2077040720 -9.630665e-01  1.8368802158 -
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## [2647,] -7.466431e-02 -0.1194630761 -2.186123e-02 -0.6303856189 -
7.829616e-01
## [2648,]  2.060243e+00 -0.5571145063  5.087738e-01 -1.0581860199 -
3.375924e-01
## [2649,]  6.107147e-02 -0.1530911250  6.875472e-01 -0.4563934455
5.930727e-01
## [2650,] -2.545093e+00  1.2203268580  6.220622e-01  1.4219249387 -
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## [2651,]  3.684840e-01  0.9004633946  1.641930e-01  0.4208152622
1.214233e-01
## [2652,]  4.091987e-01  0.5714051955 -3.876963e-01  0.3639454793 -
7.824632e-01
## [2653,] -1.770022e-01 -0.0434441947  1.120697e+00  1.4598702552
1.260508e+00
## [2654,] -3.880241e-01  0.9660277403  2.517632e-01  0.4067166542 -
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## [2655,]  3.447261e-01 -0.2828160492 -6.298458e-01 -0.2194856538
1.009933e+00
## [2656,]  5.319508e-01 -0.8786190854 -3.642015e-01  0.2641682617
3.197765e-01
## [2657,] -6.048210e-02  0.3235771351  9.452425e-02 -0.1804114000 -
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## [2658,] -8.397892e-01 -0.2861486685  4.616174e-01  0.0877317572 -
6.163451e-01
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## [2659,] -2.573260e-01 -0.0465935637 -2.154270e-01  0.8336300851
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## [2660,]  8.306217e-01  0.5759738251  1.021663e+00  0.0663794868
2.065542e+00
## [2661,]  2.024197e-01 -1.3578725508 -1.285258e-01 -0.3493762440 -
1.778763e+00
## [2662,] -6.401006e-01 -0.0212575203 -1.254655e-01 -0.0572271407 -
1.703614e+00
## [2663,]  4.327605e-02  0.8726555115 -6.456823e-01 -0.1722651281
7.246733e-02
## [2664,]  3.441574e-01 -0.2248991736 -5.752221e-01 -0.1789717243
1.089941e+00
## [2665,]  5.646462e-01  0.3517468080 -1.613412e+00  0.4684992813
2.810116e-01
## [2666,]  2.104510e-01  1.1943382798  7.812257e-02 -0.7391931519 -
4.582496e-02
## [2667,]  1.689055e-01  0.4236142335  1.243293e-01 -1.6597443273 -
4.047422e-01
## [2668,]  3.045289e-01 -0.7731238256 -2.194598e-01 -1.4012048117 -
1.102200e+00
## [2669,]  5.565019e-01 -0.3366390922 -1.377542e+00 -0.8687434878 -
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## [2670,]  1.676837e-01 -0.8616806902 -6.901108e-01 -1.3270432818 -
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## [2671,] -4.546470e-01  0.3430787581 -4.535059e-01 -0.1491971171
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## [2672,]  2.581356e-01 -0.9401542111  1.922348e+00 -0.4935165697
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## [2673,]  5.777803e-01 -0.9085624537 -3.586234e-01  0.1495131161
3.925797e-01
## [2674,]  1.927327e+00 -0.7005588762  5.996002e-02 -1.0853361294 -
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## [2675,]  1.942407e-01  1.0977632626 -5.638641e-02 -1.0772577324 -
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## [2676,]  1.615742e-01  0.0493697717 -1.507442e-01 -0.7796789309
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## [2677,] -2.401375e+00  1.3539151244  5.500715e-01  1.4044525525 -
1.818307e-01
## [2678,]  4.305313e-01  0.0640331000 -1.678509e-01 -0.4072287076
1.017696e+00
## [2679,]  1.123498e+00  0.3618713369 -7.474620e-01  0.3333510951 -
1.313898e-01
## [2680,] -2.199808e+00 -0.1313983199  2.532792e-01  0.4761310755
7.659551e-01
## [2681,]  7.328462e-01 -0.2749404557  1.266292e+00 -0.0202546533
1.138731e+00
## [2682,]  9.832462e-02 -0.6380601429 -7.754836e-02 -0.7253561789 -
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## [2683,] -2.829517e+00  3.1072847870 -4.953059e-02 -2.0702737935
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## [2684,]  2.174622e-01 -0.3278023886  2.366045e-01  0.1492682798
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## [2685,]  3.749297e-01  1.4412562894  7.136680e-02 -1.2456793250
1.805066e-01
## [2686,]  3.530385e-01  1.2089828305 -2.823928e-01 -1.3990120177 -
3.940930e-01
## [2687,]  9.234612e-01  0.4599470167  1.552071e+00  0.8030514790
1.110290e+00
## [2688,] -9.840700e-01 -0.4637292425  7.064909e-01 -0.1227819211 -
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## [2689,]  3.697298e-01 -0.0053236055 -1.290620e-02 -1.0731853340 -
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## [2690,] -1.375161e+00 -1.4371567445  5.596078e-01 -0.7197132643 -
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## [2691,]  1.408686e-01 -0.8828523446 -7.564432e-01 -1.2389924601 -
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## [2692,]  6.682407e-01  1.1015993896 -1.101178e+00  0.8403297540
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## [2693,]  9.651057e-02 -0.3231143603  5.263070e-01 -0.3587870784 -
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## [2694,] -1.748509e-01 -0.7904857441  1.399499e-01 -0.4169951883
7.638452e-01
## [2695,] -5.956273e-01 -0.5096053112  8.032551e-01 -0.0316657470
1.680671e-01
## [2696,] -5.172469e-01 -0.1859158999  1.982560e+00 -0.4268594507 -
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## [2697,] -9.988461e-01 -3.3570059172 -2.862311e+00  0.1365135788
2.300914e+00
## [2698,]  7.674909e-02 -0.6238791652 -1.028706e+00 -0.2527865418
6.060154e-01
## [2699,]  1.078251e+00 -1.0577546839 -4.387442e-01 -1.7820866761 -
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## [2700,] -1.443998e-01 -0.0481973083  5.772606e-01  1.3250657059
1.091813e+00
## [2701,]  2.183344e-01  1.0603338051 -1.381399e-01 -0.2085557964 -
4.564454e-02
## [2702,]  4.157752e-01  0.0139134476 -8.771266e-01 -0.6274914057 -
5.444229e-01
## [2703,]  1.803265e-01  0.3503471917  2.924627e-01 -0.1813830135 -
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## [2704,]  1.995293e-01 -0.2720402670 -1.462191e+00  0.4046374847 -
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## [2705,]  1.671038e+00 -0.5644199677  2.853307e-01  0.1526125148 -
2.426894e-01
## [2706,]  9.246065e-01 -1.6281330192  3.041342e-01 -1.3220635453 -
1.237218e+00
## [2707,] -3.879401e-01 -0.2753347425 -7.560971e-01 -0.1996231405 -
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## [2708,]  1.246793e-01 -0.4749214326 -1.629903e-02 -0.5972774776 -
1.343521e-01
```

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## [2709,]  5.003770e-01  0.6473014021 -9.867403e-01  1.0121650964
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## [2710,]  4.900420e-01  0.0290176444  3.563002e-01 -1.0407080143 -
2.805352e-01
## [2711,]  7.434220e-02 -0.3897021701  1.019355e+00  0.3203771379
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## [2712,]  5.688288e-01 -0.1779618945  4.000314e-01 -0.7091694353
1.680997e+00
## [2713,] -2.391870e-01  0.0865917913 -4.522748e-01  0.7557746597
1.070489e-01
## [2714,]  5.329922e-01  0.3978495214  5.758254e-01  0.3197258342
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## [2715,] -2.688508e-01  0.9413942690  1.692121e-01  0.2245505755 -
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## [2716,]  2.031910e-01  1.0636548922  4.318705e-01 -0.5678270395 -
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## [2717,]  2.619775e-01  1.4937380140  2.025397e-01 -1.0810763548
1.945063e-01
## [2718,] -8.291114e-01 -0.2743828766  4.465753e-02 -0.1485137386 -
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## [2719,]  8.984405e-01 -0.3658553953 -1.222797e+00 -1.2887671500
1.442311e+00
## [2720,]  4.024817e-01  0.0945603246 -1.912522e-01 -0.3948916960
9.572848e-01
## [2721,]  9.469592e-02  0.2337712326 -7.648742e-01 -0.4343721107 -
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## [2722,]  1.125611e-01 -0.6615728794 -8.341058e-02 -0.6942521581 -
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## [2723,]  3.786547e-01 -0.3837691553 -1.744023e-02 -0.7351651007
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## [2724,]  1.081341e-01  1.0176046968 -8.745646e-02 -0.1106662942 -
1.832292e-01
## [2725,]  1.780447e+00  0.2942715963  2.711427e-01 -0.4975171500
1.390147e+00
## [2726,]  2.634822e-01  1.0950358281  3.996950e-01 -0.6034960475 -
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## [2727,] -8.258141e-01 -0.7802104127  6.823971e-01  0.1616505491 -
1.822096e-01
## [2728,]  3.796925e-01  0.3672260818 -4.684702e-01 -0.3583413841
2.455816e-01
## [2729,]  1.727415e+00 -0.5502472853  7.176275e-01  0.2927550168 -
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## [2730,]  5.816913e-01  0.4467957431  2.858058e-01 -0.3063608509
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## [2731,] -1.187991e-01  0.7583332808 -5.976261e-01  0.8135365263
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## [2732,]  1.862121e-01  1.0319074943 -5.857435e-02  0.2744516764 -
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## [2733,]  1.402954e+00  0.4855766167 -1.897962e-01  1.6144736682
5.592769e-01
```

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## [2734,]  2.355256e-01  1.4862428157  2.189314e-01 -1.1435274403
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## [2735,] -1.406543e-01  0.0522132623 -6.463138e-01  0.2898022267 -
3.151800e-01
## [2736,] -2.948268e-01 -0.2248268809 -1.082178e+00 -0.3529396529
1.425212e-01
## [2737,] -4.589510e-01 -0.0268789824 -8.238302e-01  0.1011981871
3.870771e-01
## [2738,]  1.161634e-01 -0.3109112024  6.623071e-01 -1.0885524635
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## [2739,]  1.138862e+00  0.0937362477  6.269295e-01  0.9602357268 -
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## [2740,]  1.413948e-01 -0.1769860638 -5.519547e-02  0.0874677832
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## [2741,]  1.025882e+00 -1.2403515804 -4.393516e-01 -1.8726392660 -
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## [2742,]  1.464865e-01  1.0083949531 -6.457408e-04 -0.7332108256 -
2.822603e-01
## [2743,] -1.065350e-01  0.8199006900 -9.034904e-02 -1.4405985174 -
1.801048e-01
## [2744,]  5.007774e-02 -0.5707970671  1.268401e-02 -0.6225565186 -
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## [2745,] -2.038046e+00  1.9717114685 -1.596146e-01  3.5726389667 -
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## [2746,]  5.418967e-01  0.7104180042 -1.073810e+00 -1.1270816656 -
3.501918e-01
## [2747,]  4.936865e-01 -0.1569858437  3.719451e+00  0.3751848272
1.532625e+00
## [2748,] -4.508065e-01 -0.2809939819 -8.501685e-01  0.2048293568
7.026097e-01
## [2749,]  5.633872e-01 -0.1020345641  4.122924e+00  0.4404421939
1.702435e+00
## [2750,]  1.117968e+00  0.1091326895 -8.090988e-01 -0.6012860134
2.981809e-01
## [2751,] -1.406660e+00 -1.0882935926  1.373341e+00  0.5174606788 -
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## [2752,] -3.131429e+00 -1.2174183063  6.995621e-01  0.4618249926
1.331939e-01
## [2753,] -6.866327e-01  0.2279258074  2.017764e-01 -0.6693231441 -
1.306253e+00
## [2754,]  1.758701e+00  2.6865151364 -1.093886e-01  0.2306488489 -
9.376438e-01
## [2755,]  5.780962e-03  0.7867203058 -2.231210e-01  0.8429850309
9.497024e-01
## [2756,]  2.049528e-01 -0.5006558634 -7.381677e-02 -0.7552944249 -
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## [2757,]  2.079077e-01  0.6335225609  4.633510e-01  0.0149811081 -
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## [2758,] -9.522296e-01 -0.3311084581  1.415675e-01 -0.1334048023 -
7.678179e-01
```

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## [2759,] -2.511710e+00 -0.4689642837 -8.222104e-03  0.8377330730
8.774536e-01
## [2760,] -2.703649e+00  3.2252013584 -1.076271e-01 -2.0776160532
1.213644e+00
## [2761,] -2.684113e+00 -0.0256910314 -1.511804e-01  2.2203663125 -
1.269628e+00
## [2762,] -4.906491e-01 -0.4826731912 -6.662923e-02  0.6869326837 -
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## [2763,]  7.292994e-02 -0.6205044487 -8.037325e-02 -0.7264658237 -
3.533886e-01
## [2764,] -1.190782e-01 -1.1428160985 -2.553414e-02  0.2659848616 -
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## [2765,]  1.185616e+00  0.5347769504 -4.246747e-02  0.4739639910
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## [2766,]  4.611347e-01 -0.0833412498 -2.281638e-01 -0.0015723560 -
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## [2767,]  5.151349e-01 -0.1975414043 -2.408306e-01 -1.0004478704
1.234565e+00
## [2768,] -3.129331e-01 -0.1303717755 -9.828435e-01 -0.3688281846
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## [2769,] -9.236991e-02 -0.2445956336  1.684644e-01 -0.0078442965
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## [2770,] -5.982866e-02 -0.5833179555 -1.076391e+00 -1.4239179355
1.343753e+00
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## [2773,]  1.595801e-01  0.0648169762 -3.055565e-02  0.0260241450 -
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## [2774,]  4.398030e-01  0.1751817341 -8.107218e-01 -0.0387838820
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## [2775,]  5.183640e-01 -0.1091310059 -3.178114e-01  0.0134856275 -
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## [2777,]  3.507958e-01  0.5137554695 -3.487942e-01  0.3751856975 -
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## [2778,]  1.836474e-01  0.6869409998 -1.346467e+00 -0.5091480089 -
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## [2779,] -1.414681e+00  1.9391210339  1.547971e+00  2.6532695208 -
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## [2780,] -5.277770e-01 -0.4506126048 -8.844951e-01  0.1829207261
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## [2781,]  3.146988e-01 -0.0370775557  2.815516e-01 -0.0715818666 -
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## [2782,] -9.472577e-02  0.5667902110  2.557570e-02 -0.6458674830
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## [2783,] -2.664689e+00  2.8386164991 -9.468434e-01 -2.0551187840 -
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## [2784,]  5.855204e-02 -0.2776293685  2.354660e-01 -1.2219396426
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## [2785,]  2.534552e-01 -0.2956774269 -1.592736e+00 -0.7306579629 -
1.335522e+00
## [2786,]  4.097557e-01 -0.1624103142  3.776297e+00  0.4750219745
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## [2787,]  5.397518e-01  0.1412965968 -1.983174e-01 -0.5252997879
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## [2788,] -3.952685e-01 -0.0880102367  6.899169e-01  0.5341105924 -
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## [2789,]  3.519311e-01 -0.3442441602 -6.847167e-01 -0.2698196452
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## [2790,]  6.235839e-01  1.0369453100 -1.123446e+00  0.8228819891
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## [2791,] -1.523947e-01  0.5986940219 -6.223469e-01  0.7669287830
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## [2793,]  2.825466e-01  0.6357740694 -6.497584e-02 -0.2827750735 -
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## [2794,] -5.317358e-01 -0.6290199044 -7.150275e-02  0.4782239925 -
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## [2798,]  1.704017e+00  1.2947969185 -5.567345e-01  1.8353639755 -
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## [2799,]  6.488587e-01  0.0112258866  4.155536e+00  0.4970675811
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## [2801,]  3.163208e-01 -0.0936197269 -5.878537e-02 -0.8513168323 -
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## [2802,] -1.333190e+00 -2.1477432879  4.180064e-01 -0.0922357989
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## [2803,] -4.911380e-02  0.7693080725 -5.402443e-01 -0.3052244009 -
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## [2807,]  1.097114e+00  0.8518721505 -8.842689e-01 -0.1909577502
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## [2811,]  4.986875e-01 -0.0944067044  3.785012e+00  0.2833881324
1.644596e+00
## [2812,] -8.601926e-01 -0.4203122145  6.858175e-01  0.9425629097 -
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## [2814,] -1.339850e+00 -1.3531550666  5.794853e-01 -0.6879716483 -
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## [2815,] -2.000642e+00  1.9606062487 -1.342032e-01  3.4544061867 -
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## [2816,]  1.119600e-01 -0.3932819120  6.433733e-01 -1.2225046031
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## [2817,] -2.488227e+00  1.2403931616  5.651416e-01  1.4220614632 -
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## [2818,]  1.767531e-01  0.9352574344 -1.280183e-01 -0.3253279122 -
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## [2819,]  2.638142e-01 -0.8008833377 -2.014031e-01 -2.4949340493 -
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## [2820,]  1.686200e+00  1.2222842381 -5.775774e-01  1.8678402461 -
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## [2824,]  2.025464e+00  0.2898070920 -8.323234e-01 -0.9192975259 -
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## [2825,]  1.991764e-01 -0.4417931500 -8.761633e-01 -0.3860413670 -
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## [2827,]  1.327748e+00  0.4414968666 -6.167172e-01  1.4296432068
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## [2828,] -1.428075e-01 -0.5781114471 -1.351567e+00 -0.5508270945
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## [2839,]  2.938154e-02  0.8088307036 -6.299822e-01 -0.2341737588
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## [2840,]  6.452851e-01 -0.7156283868  3.139397e-01 -0.9135575856 -
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## [2842,] -1.357040e+00 -2.4938681700 -3.283186e+00  1.9451396775
1.471759e+00
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## [2844,]  4.704616e-01 -0.0968382165 -1.582367e-01 -0.9980958749
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1.102912e+00
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## [2849,]  4.539830e-01  0.5977334962 -1.377811e+00 -0.2739143820
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## [2851,]  5.460892e-01 -0.8350103106 -3.606073e-01  0.2050567746
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## [2860,]  1.972907e-01  0.1530092341 -1.519963e-01 -0.6562699736
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## [2864,] -6.245470e-01 -0.5634944015 -4.370853e-01  0.5472547147 -
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## [2865,] -3.170637e-01 -2.2601858568 -3.199825e+00  0.7618210514
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## [2871,]  1.181824e-01 -0.0863075872  3.709638e-01 -0.6212896410 -
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## [2872,] -2.815688e+00  3.1514818357 -7.798056e-03 -2.0637402250
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## [2873,] -4.314590e-01 -0.6188163044 -6.272122e-01  0.9166365796
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## [2874,]  3.256574e-01  1.4989259948  1.144113e-01 -1.0315925782
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## [2875,]  3.510201e-01 -0.2186999002 -2.309091e-01 -0.7304048443
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## [2876,]  2.525016e+00  1.3307173743 -3.459251e-01 -0.9286328130 -
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## [2877,] -4.043107e-01  0.0384156391  7.672890e-01  0.7051839405 -
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## [2879,]  1.002699e+00  1.3417898507 -6.641732e-01  1.2153301903
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## [2881,] -8.734866e-02 -0.4713198591 -1.387039e+00 -0.3825132567
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## [2882,]  1.090282e+00 -1.1519135647 -4.376435e-01 -1.7662426959 -
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## [2887,] -4.810356e-01 -0.5311146312 -5.335708e-03 -1.0710114952
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## [2889,] -1.291628e-01 -0.9461079109  5.096152e-01 -0.2523465517 -
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## [2894,]  4.297103e-01  0.2216212105  2.280927e-01 -1.0353912511 -
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2.919092e+00
## [2896,]  6.889340e-02 -0.2344688283  9.981589e-01 -0.9764821681
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## [2897,] -2.752320e-01 -0.0512997003  2.536042e-01 -1.2213773545 -
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## [2899,]  7.374120e-01 -0.4608011064 -2.898774e-02 -1.6080456343 -
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## [2900,]  1.547402e+00  1.1979341651 -9.517455e-01  1.8402407712 -
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## [2901,] -4.096073e-02 -0.1213929415 -2.664042e-01 -0.2795688654
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## [2903,] -1.540274e-01 -0.1136420973  1.151212e-01  0.8467062339
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## [2904,] -1.662363e-01  0.5647681257 -3.632453e-01 -0.7508191978
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## [2905,] -4.488486e-02 -0.5407800439  1.583741e-01 -0.1579726704
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## [2909,]  4.580560e-01 -0.2190404231 -7.205405e-01 -0.2347985310
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## [2910,]  5.737801e-01  0.6907286711 -4.106884e-01  0.1687247927 -
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## [2911,]  3.609604e-01  0.2295228775 -1.664092e-01  0.1286745495
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## [2912,]  7.326361e-01  0.8266779851 -1.037571e+00  0.1574984863
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## [2915,]  6.390090e-01  1.0253773545 -1.111967e+00  0.8573590333
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## [2916,]  3.804854e-01 -0.1715718263 -6.351103e-01  0.6512558406 -
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## [2919,] -9.669853e-01 -0.5308468301  7.197025e-01  1.0710965684 -
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## [2929,] -7.995602e-01  0.1591285071 -2.622226e-01 -0.1927144021
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## [2934,] -4.554002e-01 -0.5759963602 -3.997478e-01  0.3353156489 -
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## [2935,]  7.270686e-01  1.1100860304 -7.411511e-01  1.0036797684
7.519626e-01
## [2936,]  3.544070e-01  1.2686111669 -2.846846e-01 -1.3333833965 -
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## [2937,]  3.990339e-01  0.0573178095 -1.589920e-01 -0.3244458857
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## [2938,]  4.253306e-01 -0.2681785752 -1.489514e-01  0.0537679296
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## [2939,] -2.048309e-01  0.9359517398  1.102797e+00  0.5461694801 -
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## [2940,]  1.360624e+00  0.4874384948 -5.980772e-01  1.4572819763
4.160248e-01
## [2941,]  4.702573e-01  0.2314180810 -1.121958e-01 -0.4188726105
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## [2942,]  3.441733e-01  0.3235799033 -4.515879e-01 -0.2515857646
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## [2943,] -4.803208e-01 -0.0101069963  2.783712e-01  0.6705604482 -
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## [2944,] -4.980253e-01  0.1279190911  1.209692e-01  0.6174252863
1.166244e+00
## [2945,]  9.087615e-01  0.0969131105 -1.032120e+00  0.4948433174 -
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## [2946,]  2.028791e+00 -0.6308258730  4.923604e-01 -1.0513434385 -
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## [2947,] -1.207755e-01 -0.0478244058  1.474232e-01  0.9037252360
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## [2948,]  4.868719e-01  0.1524009335 -1.885236e-01 -0.4401136102
1.090814e+00
## [2949,]  6.060315e-01 -0.1027451372  1.845882e+00  0.1913474809 -
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## [2950,]  7.267355e-02  0.5172024347 -9.263165e-01  0.9749416442 -
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## [2951,]  3.622326e-02 -0.2297252872  8.805554e-02 -0.3115746720
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## [2952,] -1.379890e+00 -1.4339533936  2.532898e-01 -0.0017060346 -
3.185237e-01
## [2953,]  1.197713e+00  0.9530777909 -4.192315e-01 -0.2056667479
1.004821e+00
## [2954,] -2.473113e-01  0.7333604682  1.230796e-02  0.1081499831
5.181157e-02
## [2955,] -1.802249e+00  1.7647674684  1.131891e+00  2.0613790070
1.946517e+00
## [2956,]  3.332415e+00  2.9564220385  2.856681e+00  1.4576474716
5.351620e-01
## [2957,] -6.357538e-01  0.0225175785 -2.641574e-01  0.4245377610
9.155594e-01
## [2958,]  2.202948e-01 -0.5356282945 -6.479431e-01 -0.0592032269
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## [2959,]  1.170177e-01 -0.1262203367 -8.706856e-01 -0.1883143477
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## [2960,] -2.865030e-02  0.3517582867  1.119713e-01 -0.3110395915 -
3.126960e-01
## [2961,] -4.850252e-01 -0.2047465685  4.118843e-01  0.0037395011
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## [2962,] -2.299228e-01 -0.4004198903 -8.257045e-01 -1.3767990573
6.781171e-01
## [2963,] -4.292041e-01  0.5141145305 -6.850967e-01 -0.4079807820 -
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## [2964,] -2.868494e+00  3.1224180941  3.463318e-04 -2.0161060740
1.025134e+00
## [2965,] -4.855584e-01  0.4149409909 -4.264469e-01 -0.0330163995
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## [2966,] -3.175657e+00  1.1855654252  9.632293e-01  2.2335202502
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## [2967,] -2.175291e-01  0.0429612295  1.408499e+00  0.6928067073
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## [2968,] -6.653190e-02  0.0890932908 -1.030814e+00 -0.7153225989
1.085918e+00
## [2969,] -7.235049e-02 -0.6152383798 -1.085364e+00 -1.4147656415
1.272195e+00
## [2970,]  7.333686e-01 -0.3109506194 -8.675097e-01 -1.0221191946 -
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## [2971,] -5.996333e-02 -0.0303055282  6.332189e-02  0.7955158576
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## [2972,] -1.380800e-01  0.0570294288  1.690435e+00 -1.3823133319 -
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## [2973,] -6.837848e-01 -0.5074988264 -2.510960e-01 -0.7903004230 -
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## [2974,] -9.943077e-01 -0.3727335107  1.204929e+00  0.0148092896 -
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## [2975,]  7.388250e-01 -0.3668829851 -2.564079e-02 -1.5803396233 -
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## [2976,] -4.250635e-01 -0.4355935455 -3.508968e-01  0.6344650714 -
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## [2977,]  2.869620e-01  0.0001789239  2.835983e-01  0.0756011851 -
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## [2978,]  3.240283e-01 -0.7374765570 -1.891305e-01 -2.4279192832 -
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## [2979,] -5.169457e-02 -0.2442048102 -2.422801e-01 -0.3486048361
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## [2980,] -1.227224e-01  0.1658993014 -6.272603e-02  0.8982474108
2.878538e-01
## [2981,]  6.230020e-01 -0.3717116639  8.797080e-01 -0.1224639705
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## [2982,]  2.932398e-01  0.5950638070  6.185036e-01 -1.1293895262
9.431240e-03
## [2983,] -1.261437e-01 -0.5973885562  1.703650e-01 -0.1288295542
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## [2984,] -2.105775e+00 -0.0109698377  2.540207e-01  0.4641631426
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## [2985,] -3.701313e-01 -0.0809353613  6.013115e-01 -0.5909033234 -
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## [2986,] -1.203160e-03 -0.0932374536 -7.456703e-01 -0.6829605112
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## [2987,] -5.853240e-01 -0.6687971676 -4.870494e-01  0.4810091895 -
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## [2988,] -1.339806e+00 -1.3995107019  5.701955e-01 -0.6712073809 -
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## [2989,]  9.029249e-01  0.5084955776 -3.236332e-01 -1.2347128539 -
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## [2990,] -3.420903e-01  0.7793728045  2.960832e-01  0.3398868371 -
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## [2991,] -3.149555e-02 -0.5236344227  1.174561e-01 -0.2301226150
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## [2992,]  7.363982e-01 -0.4634274066 -1.902288e-02 -1.6215418994 -
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## [2993,] -3.622095e-03  0.8459747466 -2.985676e-01 -1.6816572082 -
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## [2996,] -1.743262e-01 -0.2992868684  1.497210e+00 -0.1429825853 -
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## [2997,]  1.882124e-01  1.0628201148 -7.964380e-02 -0.1730009458 -
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## [2998,]  2.470863e+00  1.1774845258 -3.833351e-01 -0.9434006552 -
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## [2999,]  1.208942e-01 -0.5980211462 -1.032234e+00 -0.1839310038
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## [3000,]  3.614783e-01  0.6101069218  9.429490e-01 -0.9112367905
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## [3001,] -8.317891e-01 -0.5808334895  5.907961e-01  0.8103759772 -
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## [3002,]  5.669846e-01  0.1121880252  1.286148e-01 -0.0056287252
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## [3003,] -1.087209e-01  0.1246707544  1.170465e+00  0.5161634647
6.874330e-01
## [3004,]  4.323819e-01  0.1926700709 -8.258549e-01 -0.5825145701 -
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## [3005,]  2.910086e-01  0.7087031756 -2.934232e-01  0.2808033014 -
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## [3006,] -1.341925e+00 -1.3671906654  5.805203e-01 -0.6947587137 -
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## [3007,]  3.265166e-01  0.2149324136 -7.205567e-01  0.3150185141 -
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1.115228e+00
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## [3009,] -3.470112e-01 -0.4054796314 -3.856555e-01  0.1877166401 -
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## [3010,]  1.044556e+00  0.2286019360 -5.773997e-01  0.5615351522 -
1.674512e-01
## [3011,] -7.166829e-01  0.1781849864 -2.900927e-01 -0.2194886743
6.308115e-01
## [3012,] -1.838383e-01 -0.3717469003  4.505142e-01  0.2858580072
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## [3013,] -3.005153e-01 -0.3877389555  4.661721e-02  0.3283838603
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## [3014,]  8.550017e-01  0.5366548329  1.627096e+00  0.9335500228
1.096602e+00
## [3015,] -9.794393e-01 -3.6491493436 -2.019817e+00  0.2026102070
1.731713e+00
## [3016,]  8.852368e-01  0.3743311842 -1.003550e+00  1.7903626459 -
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## [3017,]  9.330832e-01  0.8986933166 -7.025803e-01 -0.0201976520
6.754303e-01
## [3018,]  9.952019e-01  1.4389986904 -1.057972e+00  1.0874186040
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## [3019,]  2.357437e-01  0.1789332186 -4.102651e-01  0.1412046966 -
5.276907e-01
## [3020,] -3.466461e-01  0.0603711884  5.005073e-01  0.3955669549 -
1.297242e+00
## [3021,] -5.358317e-01  0.5032811412  1.027491e+00  0.2458870291 -
1.287737e+00
## [3022,]  4.797175e-02  0.6082240264 -1.218700e+00  0.2203749772
7.808018e-01
## [3023,]  1.957869e-01 -0.4408505698 -6.110299e-01 -0.1178367022
4.724146e-01
## [3024,]  1.664503e+00  0.3248718235 -6.258787e-02 -0.4904123376
1.214697e+00
## [3025,] -2.401900e-01 -0.3398943232  2.021309e-01  0.1852101001 -
1.631240e+00
## [3026,] -2.672621e-01 -0.5834675280  1.143628e+00 -1.1252102754
9.667490e-01
## [3027,] -4.007676e-03 -0.7209868899  7.184327e-01 -0.7211537103
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## [3028,] -3.189096e-01 -0.5922784787  2.388466e+00 -0.5379492616
6.783311e-01
## [3029,] -1.003458e+00 -0.1892453595  1.576827e+00  0.3658745466
1.993305e-01
## [3030,] -5.756462e-01 -3.1295976444 -1.657662e+00  0.0585257519
1.799494e+00
## [3031,]  1.422775e+00  0.8143707406  7.756067e-01 -0.3542235267 -
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## [3032,]  6.539953e-01 -0.4623094097  2.035874e-02  0.4900460626
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## [3033,]  1.933577e-01 -0.2756480262  1.098732e+00 -1.0686109297
1.916417e+00
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## [3034,] -3.322236e-01  0.8071822903  2.304828e-01  0.3319752556 -
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## [3035,] -3.247872e-01 -0.2458430392  7.684465e-01  0.0316804460
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## [3036,] -8.001564e-01  0.2763910656  6.035248e-02  1.0517819096
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## [3039,]  7.086062e-01 -0.3370604925  7.901943e-01 -0.0729486693
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## [3041,]  5.670883e-01  0.3595608465  9.449763e-01 -0.2005322386 -
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## [3042,] -4.003313e-02 -0.2294702953  1.460036e-01 -0.1403993238
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## [3043,]  1.769887e+00  1.3404157921 -5.354200e-01  1.7693292272
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## [3044,]  3.224461e-01  0.3572904901 -4.534987e-01 -0.2470281112
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## [3045,] -4.807719e-02  0.7732318591 -6.334554e-01  0.8271036419
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## [3046,] -5.356359e-01  0.2253861940 -2.330529e-01  0.0786171570
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## [3047,] -1.344209e+00 -1.2707870442  6.121096e-01 -0.6785746282 -
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## [3048,]  1.071231e+00 -0.0167491827 -6.068735e-01 -0.4054739717
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## [3049,]  3.916949e-01  0.0295009962  2.470710e-02 -1.0325363678 -
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## [3050,] -9.782706e-01 -0.3597827447  7.459963e-01 -0.1083123829 -
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## [3051,]  1.112796e+00  0.1063585526 -8.022409e-01 -0.7582081218 -
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## [3052,]  4.757575e-01 -0.3321066077 -2.716612e-02 -0.8503957283
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## [3053,]  3.235042e-01  0.8522370042 -2.016727e+00  1.3909283665 -
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## [3054,]  7.308631e-01 -0.0387646295 -1.951872e-01  0.3901035045 -
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## [3055,]  5.083237e-01  0.3925455207 -1.079379e+00 -0.3874417467
4.987899e-01
## [3056,] -8.109773e-01 -2.4292184426 -3.344149e+00 -0.3945226709
1.610344e+00
## [3057,]  1.746299e+00 -0.7222595324  6.643402e-01  0.0813506434 -
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## [3058,]  1.622105e+00 -0.6259640080  3.551193e-01  0.1864623780 -
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## [3059,]  4.583191e-01  0.1755260497  2.109183e-01  0.2243369087
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## [3060,]  1.159043e-03 -0.4856747881  5.573777e-01  0.0375770357
8.325423e-01
## [3061,] -3.925652e-01  0.8282344555  8.625598e-01  0.1604010751 -
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## [3062,]  2.509491e+00  1.2878686358 -3.183983e-01 -0.9482527634 -
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## [3063,]  8.275455e-01 -0.2076166679  1.247813e+00 -0.0002820502
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## [3064,]  2.393726e-01 -0.0539879357  3.027748e-01  0.1402404447 -
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## [3065,] -1.733608e-01 -0.0818976953 -1.076205e+00 -0.7626209380
8.010215e-01
## [3066,]  9.191277e-02 -0.0482237852 -2.161287e-02  0.0940349462 -
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## [3067,]  5.716952e-01  0.2663653195 -4.313671e-01 -0.5982432536
9.498559e-01
## [3068,]  1.645607e+00  1.2334867441 -5.478290e-01  1.9563588367 -
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## [3069,]  2.488500e-01  0.2009187815 -6.546407e-01  0.4382704700 -
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## [3070,]  5.082664e-02  0.4029120688  6.030006e-02 -0.2587311582 -
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## [3071,] -8.983406e-01 -0.2453600284 -8.670361e-01  0.3557650851 -
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## [3072,] -1.725421e-01  0.4878615660 -2.296022e-01  0.2576917959 -
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## [3073,]  1.164643e+00  0.3664764260 -8.170674e-01  0.4081333414 -
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## [3074,]  3.941495e-01  0.6262618752 -1.565194e+00 -0.2175666563 -
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## [3075,] -4.604077e-01  0.3112440457 -4.732311e-01 -0.1250815687
4.678767e-01
## [3076,] -7.577044e-03 -0.5859268788  3.434850e-01 -0.7819567214
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## [3077,] -8.180382e-01 -0.0579334851 -6.543272e-01  0.9461591336 -
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## [3078,]  8.737576e-01  0.1943363367 -1.125244e+00  1.8172340955 -
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## [3079,]  1.638179e+00 -0.6649109319  2.515286e-01  0.1999852847 -
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## [3080,] -3.994096e-01  0.8017650896  8.283182e-01  0.2097921676 -
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## [3081,]  3.038427e-01  1.4546210961  1.466521e-01 -1.0529424993
1.154636e-01
## [3082,]  3.733569e-01  0.5738481948 -3.949912e-01  0.4067346368 -
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## [3083,] -5.763648e-01  0.1865192733 -2.184589e-01  0.0164600986
5.410855e-01
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## [3084,]  6.019344e-03 -0.5024400669 -1.101836e+00 -1.4463920011
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## [3086,] -1.195794e-01 -0.5969351144  1.262842e-01 -0.0169523062
5.146360e-01
## [3087,] -1.628312e+00  2.0355831758  3.045825e+00  2.1912482681
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## [3088,] -5.693205e-01 -0.7547652561 -6.571491e-01 -0.2004741151 -
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## [3089,]  3.934682e-01  0.8201447925 -6.701260e-02  0.2340720340 -
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## [3090,] -1.175353e+00 -3.3111932173 -1.777604e+00  1.4823922298
1.722178e+00
## [3091,]  9.338723e-02 -0.2999763841  1.133810e+00 -0.9100897604
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## [3092,] -9.330769e-02  0.9217821610 -3.746903e-01  0.3630515900 -
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## [3093,]  7.000741e-03 -0.0697015362 -7.311508e-01 -0.8042189461
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## [3094,]  3.436329e+00  3.8233181406 -4.459050e-01  2.4313824409 -
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## [3095,]  1.132251e+00 -0.3387435825 -8.354518e-01 -0.8983035909 -
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## [3098,] -1.943434e-01 -1.1291436275  1.919616e+00 -4.0794701797
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## [3099,]  8.803104e-04 -0.3175895793  7.139674e-01  0.4208809304
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## [3100,] -4.127439e-02 -0.1687424707 -1.239232e+00 -0.1836791802
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## [3101,]  5.831477e-01 -0.1982692865 -1.058429e-01 -0.9116901273
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## [3102,] -9.154325e-01  0.1543058957  8.151828e-02  1.1849678441
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## [3103,]  1.927760e-01  0.3339461194  2.559017e-01 -0.1805127152 -
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## [3104,]  4.387253e-02 -0.5344823246  3.506139e-01 -0.9040329743
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## [3105,] -8.445017e-01  0.2444396231  4.146715e-02  1.0817779678
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## [3106,]  4.127491e-01 -0.1970866512 -6.344708e-01 -0.0802005039
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## [3107,]  6.727833e-01 -0.0142487628  1.812315e-01 -0.9668669652
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## [3108,] -5.333148e-01 -0.5815802576 -5.054138e-01  0.4625002305 -
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## [3109,]  5.895010e-01 -0.5802788270 -4.375268e-01  0.3878027618
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## [3110,]  1.641296e+00 -0.6482996617  2.645252e-01  0.2077648553 -
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## [3111,] -1.100636e-01  0.6499186646 -1.958003e-01  0.9658021168
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## [3112,] -9.959896e-02 -0.1283314478 -1.206955e+00 -0.6166027172
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## [3113,] -6.785824e-01  0.1611579835 -3.077157e-01 -0.2916237021
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## [3114,]  6.276521e-01 -0.4588747705 -1.994119e-01 -2.1322071191 -
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## [3115,] -9.154540e-02  0.3436163648 -8.787699e-01 -1.6266932534
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## [3116,] -3.357389e+00  1.1132567589  1.048938e+00  2.3832510484
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## [3117,]  8.182709e-01  0.2999359973 -1.023495e+00  1.9156300367 -
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## [3118,]  5.262815e-01  0.0847471367 -2.389086e-01 -0.4946018435
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## [3119,] -3.278151e-01 -0.0253670553  6.515172e-01  0.5535097709 -
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## [3121,] -9.191189e-01 -0.4958647702  6.648727e-01  0.9317009215 -
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## [3122,] -5.495762e-01  0.1017185318 -2.806485e-01  0.4458910983
1.019259e+00
## [3123,]  3.494304e-01  0.3207964329 -4.782536e-01 -0.3150343342
1.241572e-01
## [3124,]  1.676320e-01  1.0204081789 -8.702294e-02 -0.2013462360 -
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## [3125,] -1.334352e+00 -1.2478876080  6.187777e-01 -0.6734975715 -
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## [3126,] -6.597450e-01 -0.5915906076 -4.668565e-01 -0.6103638627
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## [3127,] -6.388303e-02 -0.1188813997 -2.755917e-01 -0.1158305653
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## [3130,] -3.830924e-01  0.0406754875  5.198489e-01  1.3474544883 -
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## [3137,]  1.067831e+00 -1.1013692096 -3.966559e-01 -1.7942408659 -
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## [3146,] -2.428475e+00  1.3253131601  6.039806e-01  1.3230976136 -
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## [3149,]  1.274831e-01  0.2263661882 -2.299832e-01 -0.2637108075 -
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## [3173,]  9.842395e-01  0.0750372542 -1.128714e+00  0.4443551719 -
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## [3174,]  1.656719e+00  0.2115341350 -9.127911e-01  1.6415031831 -
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## [3175,]  1.272715e+00  0.4435265077 -5.425631e-01  1.4614488585
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## [3176,]  2.214408e-02 -0.2752246999  1.248653e+00 -0.2812883055
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## [3185,]  3.447620e-01  0.8940985509 -2.059741e+00  1.3040797340 -
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## [3196,]  2.330399e-01 -0.9136233465 -2.203028e-01 -2.4748135122 -
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## [3199,] -4.835923e-01  0.1274784505 -2.888734e-01  0.3681685901
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## [3201,] -1.715061e-01  0.3492740538  7.998025e-01  1.0474601175 -
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## [3202,] -8.680251e-01 -0.3005283873  1.159482e+00 -0.0559319783
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## [3204,] -4.802859e-01  0.3281620323 -3.967231e-01 -0.2505112831
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## [3205,] -2.413226e+00  1.3855466821  6.291759e-01  1.2848181566 -
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## [3209,] -3.661297e-01  0.0929956591  6.502990e-02  1.2126829001 -
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## [3210,]  1.762661e-01  0.3197537959 -7.822246e-01 -0.3461339888 -
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## [3211,]  9.407362e-02  0.7983627922  1.439939e-01 -0.2555050587 -
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## [3215,] -1.183395e+00 -3.2001798869 -1.782715e+00  1.5243814047
1.741616e+00
## [3216,]  3.316879e-01  0.6143558790  9.995732e-01 -0.8687220820
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## [3217,] -9.131073e-01 -0.2498186972 -3.729945e-01  0.6132257967 -
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## [3218,]  4.684980e-01 -0.0796754096 -2.508076e-01  0.0631731527 -
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## [3222,] -3.375754e-01 -0.4297707979 -1.083160e-01  1.0034190047
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## [3223,] -7.999964e-02 -0.1556088022 -2.348072e-01 -0.1665575969
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## [3224,] -9.203912e-01 -0.2916488403  5.837979e-01  0.1641267417 -
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## [3225,]  4.344707e-01  0.5473844911 -3.516356e-01  0.3991972249 -
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## [3227,] -1.808779e-01  0.6447291422  2.057887e-01 -0.1629889503 -
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## [3229,]  6.445596e-03  0.5387698019  1.364139e-01  0.2144850693
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## [3230,]  1.450677e-01  0.0594166735  3.526826e-01  0.2419629035 -
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## [3234,]  6.081244e-01  0.2666912328  1.726264e+00  0.3029855442
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## [3235,]  4.864666e-01 -0.1516272532 -7.189353e-01  0.6132710368 -
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## [3236,]  5.319209e-01  0.6185661271 -9.235326e-01 -0.2326553244
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## [3237,]  9.879340e-02 -0.4719534198  3.166581e-02 -0.6704954157 -
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## [3243,]  4.231013e-01 -0.0412802323 -6.389128e-01  0.0354021663 -
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## [3245,]  9.432336e-01 -0.0166544147 -9.232473e-01 -0.5095282657
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## [3246,] -9.183064e-02  0.4310379891 -1.846693e-01 -1.5040046646 -
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## [3247,]  3.733156e-01 -0.1324494073 -1.932259e-01 -0.7535786497
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## [3248,]  3.393732e-01 -0.3567591509 -1.673686e-01  0.3099866341 -
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## [3249,]  2.420884e-01  0.3252315098 -8.351387e-01 -0.3276947870 -
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## [3259,] -8.060480e-01 -0.2314342987  5.054725e-01 -0.0051209384 -
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## [3260,] -1.488472e-01  0.4621522253  2.829965e-01 -0.5699567745
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## [3261,]  1.587818e-01 -0.9060396797  2.148495e+00  0.4723438956
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## [3262,]  3.729220e-01  0.4313785685 -9.410979e-01 -0.4558869283
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## [3263,]  4.211936e-01 -0.6214431536 -1.096687e+00 -0.8806740368
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## [3264,]  2.136369e+00  1.5872207434 -3.235226e-01  0.5721415649
2.228169e-01
## [3265,] -4.529701e-01 -0.4736508269 -5.488966e-02  0.6424837048 -
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## [3266,] -8.493548e-01 -0.3380133548  4.819327e-01  0.0971937404 -
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## [3267,]  2.448859e-01 -0.8738762244 -2.135335e-01 -2.4610425785 -
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## [3268,]  5.931975e-01 -0.4708226010 -3.745643e-01  0.3507202249
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## [3269,]  5.288335e-01  0.2832908937 -2.246483e-01 -0.2598652597
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## [3270,] -4.691791e-01 -0.0414991890 -1.753815e-01  0.5518307970 -
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## [3271,]  4.387294e-01  0.1922347287 -7.667971e-01 -0.6705422093 -
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## [3272,]  1.050681e+00  0.1253540674 -5.636434e-01  0.4924867959 -
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## [3273,]  2.326815e-01  0.7842816181 -4.301897e-01  0.2897069235 -
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## [3274,]  3.029448e-01  0.0766947177 -7.078724e-01 -0.8222325509
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## [3275,] -3.182588e-01 -0.5044816646 -2.102470e-01  1.0489546315
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## [3276,]  5.830632e-01 -0.5049217080 -6.661887e-01 -0.7374053067
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## [3277,] -9.086952e-01  0.0412295605  4.812960e-01 -0.2873604749
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## [3278,]  3.590099e-01  0.0934132030 -7.758795e-01 -0.5957811461 -
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## [3279,]  1.082592e+00 -1.1383593422 -4.372675e-01 -1.7377231452 -
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## [3280,]  3.264448e+00  2.8431161113  1.472940e+00  2.8248896148 -
1.276727e+00
## [3281,]  3.467420e-01 -0.4501428859 -1.917171e-01  0.1731681606 -
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## [3282,]  6.564442e-01 -0.3572486348  8.801599e-01 -0.0842501427
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## [3283,] -9.019809e-01 -1.6000378623  8.130769e-02  0.4767209148
1.770165e+00
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## [3285,]  1.404416e+00  0.5494763852 -1.338688e-01  1.5627732137
5.661989e-01
## [3286,]  3.144015e-01 -0.5213250158  6.237212e-01 -0.1734263785
9.656453e-01
## [3287,]  1.123805e+00  1.2824051223  2.769985e+00  0.5589818610 -
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## [3288,]  9.620666e-03 -0.6639475011  2.738567e+00  0.7647111699
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## [3289,] -2.867734e-01 -0.4111551286  6.910353e-02  0.3011401803
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## [3290,] -4.939534e-01  0.0076335044  5.618942e-02  0.5490297247
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## [3291,]  4.587702e-01  0.0180332688 -1.705557e-01  0.1008788350 -
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## [3292,]  6.358305e-01  0.7198899825 -1.739808e-02  0.3825581720 -
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## [3293,]  2.699814e-01 -0.2454252304  1.278474e+00 -0.9352374740 -
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## [3294,] -3.866410e-01 -0.4008948547 -4.185887e-02  1.0368820695
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## [3295,] -3.237695e-02 -0.4473623447 -1.012073e+00 -1.4545587043
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## [3296,]  1.371708e+00  0.5578879684 -6.007618e-01  1.5373697594
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## [3297,] -1.035138e-01  0.7235538056 -2.739599e-01 -0.2026704588 -
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## [3298,] -8.068061e-02  0.3709141597  1.967548e-01 -1.2255213585 -
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## [3300,]  1.978145e+00 -0.5221160595  9.600719e-02 -0.9911384446 -
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## [3301,]  1.900731e-01 -0.2293431849 -1.374918e+00  0.4655037589 -
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## [3302,]  1.481498e-01  0.5879536992 -2.970477e-01  0.4715028260 -
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## [3303,]  1.081696e-01 -0.0756629341 -8.277513e-01 -0.2217586720
8.137409e-01
## [3304,] -8.899684e-02 -0.2800307080 -1.249036e+00 -0.2399093006
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## [3305,]  4.108059e-02 -0.2406155557 -8.268116e-01 -0.1989702712
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## [3306,]  8.693379e-01  0.0540124789  8.007621e-01  0.4815836083
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## [3307,]  4.300114e-01 -0.2499856791 -1.693238e-01  0.1568753174
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## [3310,]  5.027412e-01  0.4991096654 -8.703424e-01 -0.1659128644
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## [3311,]  5.834006e-02 -0.5962127686  3.176595e-01 -0.8236234276
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## [3312,]  3.861752e-01 -0.1042525820 -2.087253e-01 -0.7091797074
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## [3313,]  6.969669e-01 -0.2267160139  8.698261e-01  0.0197823221
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## [3314,]  4.008312e-02 -0.4200913175 -1.026708e+00 -1.5059532772
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## [3315,] -3.780756e-01 -0.1124369782  6.343168e-01  0.5568558241 -
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## [3316,]  3.479412e-01  0.1032470462 -1.920850e-01  0.1589337985
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## [3317,] -9.013257e-01 -0.2617041450 -3.708169e-01  0.6312551072 -
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## [3318,] -3.782824e-01 -0.5246960817 -4.102432e-01  0.1763084580 -
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## [3319,]  1.264026e+00  0.5061294681 -5.341563e-02  0.3363769421
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## [3335,]  4.599455e-01 -0.7977055317  1.382008e+00  0.8200671735 -
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## [3336,]  4.517488e-01  0.7865217614  9.913543e-01 -1.0114936689
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## [3337,]  1.747323e+00 -0.6243015167  6.969863e-01  0.2679671487 -
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## [3338,]  2.560374e-01 -0.4723627533 -5.779835e-01 -0.1762898571 -
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## [3339,]  5.050609e-01  0.4325073041 -1.078212e+00 -0.3484397730
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## [3347,]  3.504297e-01 -0.2113085020 -2.241290e-01 -0.6960618630
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## [3348,] -8.461887e-01 -0.4094109085  6.919111e-01  1.0020357296 -
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## [3349,]  4.004375e-01  0.5479297624 -3.675113e-01  0.3730053083 -
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## [3350,]  9.060558e-01  0.9024446588 -8.535436e-01  0.0340340640
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## [3354,] -3.550294e-01 -0.0427569800  4.887151e-01  1.2663605248 -
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## [3355,] -3.320811e-01  0.0239301519  4.834355e-01  1.3190381719 -
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## [3356,] -4.582128e-01  0.3728275344 -2.145626e-01  0.0556993137
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## [3357,] -6.878252e-02  0.6950301888 -6.362728e-01  0.8084402543
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## [3359,]  2.665953e-01  0.2825971281 -4.743382e-01  0.5888065102 -
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## [3360,] -2.657409e-01  0.9248886560  3.094542e-01  0.3072176930 -
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## [3361,]  3.647427e-01  0.6570289384  1.001114e+00 -0.9684528230
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## [3362,] -2.331077e+00  3.1486942634 -1.308573e+00 -1.8850741236 -
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## [3363,] -9.289123e-03  0.3493613721 -2.761954e-01 -1.5819712272 -
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## [3364,]  2.183574e-01  0.0774499416 -1.304547e-01  0.2918350276
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## [3365,]  6.981034e-01 -0.2290263763  9.169508e-01 -0.0621301100
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## [3366,]  7.369494e-01 -0.3204496461 -8.773079e-01 -0.9767161801 -
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## [3367,]  2.715048e-01  1.0271464335 -5.540812e-01  0.2116313976 -
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## [3368,]  4.763322e-01  0.3542360186 -1.099495e+00 -0.5188233519
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## [3369,]  2.719816e-01  0.9625112462  2.006948e-01  0.6906126501 -
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## [3370,]  9.049819e-01  0.2614000099 -1.126133e+00  1.8633522702 -
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## [3371,]  6.190751e-01 -0.4172114572  2.279393e+00  0.8581051763 -
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## [3372,]  1.224065e+00  0.4743867437 -4.598376e-01  1.5778464843
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## [3373,]  1.072672e+00  0.0935802268 -6.758145e-01  0.5860665583 -
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## [3374,] -1.068051e-01 -0.4552028571 -7.634681e-01 -0.2548519597 -
6.111837e-01
## [3375,] -4.182085e-01  0.2029390548  5.473638e-01  0.2845109596 -
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## [3376,]  4.779734e-02 -0.4684942002 -8.160871e-01 -1.4628374427
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## [3377,]  4.703929e-01  0.3873670153 -1.078363e+00 -0.3710424650
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## [3378,]  1.311029e+00  0.2717518769 -2.363085e-01  1.1465761054 -
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## [3379,] -2.712072e-01 -1.0880716863  1.534478e+00 -0.0982492327 -
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## [3380,] -1.796629e-01  0.4604243663  2.879733e-01 -0.4748738482
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## [3381,] -9.199851e-02 -0.5035873143 -6.265342e-03 -0.7273496629
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## [3382,]  1.131856e+00  0.7408010604 -4.635922e-01 -0.1975568755
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## [3383,]  4.903726e-01  0.1618076598 -2.033776e-01 -0.3577044215
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## [3384,] -4.487710e-01  0.0191398813  3.097214e-01  0.5344154098 -
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## [3385,]  2.527755e+00  1.3362123674 -3.314517e-01 -0.8903477614 -
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## [3386,]  2.697991e-01  0.2268724118 -4.960509e-01  0.5990171439 -
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## [3387,]  5.455981e-01  0.8213741792 -5.270778e-02 -0.0799825549
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## [3388,] -6.851868e-01 -0.0097961150 -2.004900e-01  0.4930007687
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## [3389,] -8.784964e-01  0.0253492863  1.130158e+00 -0.4100868711 -
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## [3391,]  2.591388e-01 -1.2955585858  2.103178e+00 -0.1779605530
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## [3392,]  1.481134e-03  1.2768073157 -7.703275e-01 -0.6364702193
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## [3393,]  1.695615e-01 -1.2104400409  1.368508e+00 -2.4747623374 -
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## [3394,] -3.675848e-01 -0.7207439271  8.750058e-01 -0.4535911253
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## [3396,]  4.124064e-01 -0.6647197459  3.050551e-01 -1.4373729780
3.873216e-01
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## [3398,] -5.661719e-01  0.0863675505  9.201109e-01 -1.2444821084 -
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## [3399,] -6.559707e-01 -0.3819146573 -7.429399e-02 -0.5111198609 -
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## [3400,] -4.045390e-01 -0.5551321946  8.915237e-01  0.8021405858 -
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## [3401,]  6.508364e-01  0.3888449092  7.305923e-01  0.0923311215 -
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## [3402,] -9.811656e-01 -0.6948513767  8.138288e-01  0.2984326414 -
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## [3403,]  2.756926e-01 -0.2153332607  8.873148e-01  0.6854863747
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## [3404,]  1.492084e-01  0.1305675927  1.826227e+00  1.0038816683 -
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## [3405,]  4.846033e-01  0.8212458920  1.210288e-01  0.1280987436 -
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## [3406,]  4.068558e-01  0.5017466025 -1.344613e+00 -0.1554602648
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## [3407,]  9.682102e-01  0.1862073495 -1.029737e+00  0.5876399100 -
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## [3408,]  3.801328e-01  0.0448530528 -8.387121e-01 -0.6108979318 -
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## [3409,] -3.607157e-01  0.0192438010 -1.137169e+00  0.6986204926 -
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## [3410,] -8.107843e-01 -1.7072752681  4.478677e-01  0.5427025814
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## [3411,]  2.786219e-02 -0.1732466418 -2.406742e-01 -0.1464119122
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## [3412,]  7.973521e-01  0.7606602749 -1.026488e+00  0.0406288645
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## [3413,] -2.581048e-01 -0.9970348188  2.020232e-01  0.2390469335
5.049328e-01
## [3414,] -2.689922e-01  0.2754714483 -2.775989e-01 -0.9825825435 -
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## [3415,] -1.700676e-01  0.3981529210  1.739581e-01 -0.8378264895 -
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## [3416,] -8.843603e-01  0.3318004409  1.452334e-01  1.1917231116
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## [3417,]  2.075769e+00 -0.5017349987  5.049470e-01 -0.9149091101 -
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## [3418,]  4.872991e-01 -1.1291972152  9.349104e-01  0.1383388641
8.173673e-01
## [3419,]  4.377094e-02 -0.1702877025 -1.239234e+00 -0.2722835845
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## [3420,]  4.018517e-01 -0.2210434333 -5.999265e-01 -0.1463807825
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## [3424,] -2.363762e-01  0.8342034169  2.791760e-01  0.2258190063 -
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## [3583,] -3.022565e-01 -0.6874481371  1.400181e+00  0.9108255467
4.191039e-01
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## [3584,]  8.807986e-02  0.6243088948 -4.444115e-03  0.0144367168 -
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## [3585,]  4.917759e-01  0.8778643324  5.688252e-03  0.1386208929
7.557054e-02
## [3586,]  2.030018e-01 -0.4396169616 -2.270147e-01  0.8159768519 -
7.322999e-01
## [3587,]  1.628666e+00 -0.5398451852  3.369674e-01  0.2773960720 -
3.779022e-01
## [3588,] -3.972729e-01 -0.3891943396 -5.572887e-01  0.9913388606
1.170205e-01
## [3589,]  4.155637e-01 -0.0586848440 -2.100603e-01  0.1735634347 -
1.004222e+00
## [3590,] -9.454765e-01 -0.3054876981 -8.751367e-01  0.5367942555 -
6.905605e-01
## [3591,] -6.328365e-01  0.0392370083 -2.274051e-01  0.6093454499
8.793446e-01
## [3592,]  1.134121e-01 -0.1242167232  2.810888e-01  0.2067864893 -
1.014051e+00
## [3593,] -9.019408e-01 -1.6290137587  8.229103e-02  0.5125080194
1.723594e+00
## [3594,]  7.361690e-01  0.2273676074 -1.093894e+00 -0.3014838510 -
1.276299e+00
## [3595,] -2.576832e-01 -0.3877040976 -4.645891e-01 -0.2081725133 -
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## [3596,]  3.325380e-01 -0.0211054561  1.544057e+00 -0.0364115061 -
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## [3597,] -4.574809e-01 -0.6653194375  2.129312e-01 -0.3623065283 -
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## [3598,]  1.071501e+00 -1.0817910639 -4.083382e-01 -1.7246904798 -
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## [3599,] -2.136156e-01  0.7059706599  2.033190e-01  0.0442368832 -
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## [3600,]  2.256997e-01 -0.2852800567 -1.104613e+00  0.3063936075
1.391900e+00
## [3601,] -2.896772e-01 -1.3606806196  9.600305e-01 -1.0117776329 -
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## [3602,]  5.313561e-01 -0.5371912181 -6.126506e-01 -0.7028528727
3.972850e-01
## [3603,] -5.033476e-01  0.2140811043 -6.699163e-02 -0.1728688538 -
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## [3604,]  1.213441e+00 -0.3917282774  1.768883e-01 -1.0039788163 -
1.408976e+00
## [3605,]  1.008606e+00  1.5038182049  3.009791e-01 -0.6616982829 -
8.055651e-01
## [3606,]  6.063204e-01 -0.7968505810 -7.065460e-01 -1.0819181110
2.114018e-01
## [3607,] -2.594959e-01  0.6042635826  1.987114e-01 -0.0082935139 -
6.632429e-01
## [3608,]  1.287105e-02 -0.1669458599 -3.031307e-01 -0.2543350202
1.307966e+00
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## [3609,]  4.078668e-02 -0.5375104508  3.606507e-01 -0.7006158649
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## [3610,]  1.260126e-01 -0.3599183925  1.562535e+00 -0.1587504520
7.245343e-01
## [3611,] -2.724680e-01  0.8585860986  3.024951e-01  0.1664551497 -
1.375197e-01
## [3612,]  3.012492e-01 -0.4287496516 -5.919791e-01 -0.0772270493
2.123366e-02
## [3613,]  7.721663e-02 -0.6782032415 -2.730315e-01 -1.3140596366 -
1.775588e+00
## [3614,]  4.454512e-01  0.4995805204 -9.010598e-01 -0.1838402704
2.280864e-01
## [3615,]  5.431621e-01  0.2856452472 -2.168015e-01 -0.2699871959
8.924843e-01
## [3616,]  6.955446e-01 -0.3854679685 -3.982518e-01  0.3827840497
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## [3617,]  5.802382e-01  0.3458163318 -2.802469e-01 -0.2345994349
9.040119e-01
## [3618,] -2.781798e+00  3.1313143968 -6.320050e-02 -2.0392859039
9.952219e-01
## [3619,]  2.294546e-01  0.1819105952 -4.497363e-01  0.6319749569 -
1.222048e+00
## [3620,]  2.587497e-01  0.1797235708 -6.615770e-01  0.5228324102 -
9.065072e-01
## [3621,]  3.348488e-01  0.6199614624 -2.375934e-01  0.7136731255 -
5.314997e-01
## [3622,] -9.542340e-01 -0.6393742353  1.551560e-01  0.3624844534 -
4.674341e-01
## [3623,] -1.926254e+00 -1.5385898986  1.431348e+00 -1.2949983182 -
1.291284e+00
## [3624,]  5.851994e-01  0.0636721179  3.252469e-01 -1.2512135801
1.368163e+00
## [3625,]  4.939366e-01  0.4081936100 -3.779139e-01  1.4781799075 -
1.193908e+00
## [3626,] -2.785089e-01 -0.4405271480  9.182919e-01  0.0955895202 -
7.570712e-01
## [3627,] -6.473877e-01  0.2084785265  3.142443e-01 -1.1865807300 -
1.613954e+00
## [3628,]  5.543691e-01  0.5060479622  2.663722e+00 -0.6483225429 -
4.894253e-01
## [3629,]  6.036504e-01 -0.2940804197 -4.483241e-01  1.0341855702
1.834831e-01
## [3630,]  9.596236e-03 -1.1974169566 -1.309233e-02  0.1800845434 -
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## [3631,]  7.549145e-01 -0.3618701139 -8.758594e-01 -0.9688987993 -
4.810209e-01
## [3632,] -2.522162e+00  2.3998532501  6.276938e-01 -1.9256760437
4.363363e-01
## [3633,] -7.275294e-02 -1.6538789822  9.396458e-01  0.1571032527
7.999480e-01
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## [3634,]  1.140866e-01 -0.0954881856 -1.623699e+00  0.2210280842 -
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## [3635,] -4.534970e-01 -0.8594806782  1.187414e+00  0.0354615168 -
1.032514e+00
## [3636,]  1.171568e-02  0.1560805966  6.809442e-01  0.0562096450 -
2.782553e-01
## [3637,]  5.540940e-01 -1.1471283661  1.336473e+00  0.2045051038
8.828477e-01
## [3638,] -3.225280e-01 -0.4148530653  3.947933e-02  0.3902313697 -
1.070903e-01
## [3639,] -2.651378e-01 -0.3889839858  5.603566e-02  0.3681848040
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## [3640,] -9.052760e-01 -0.2800103631 -4.065453e-01  0.6069767664 -
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## [3641,]  5.446140e-01 -1.1674850460  1.318186e+00  0.2089845827
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## [3642,] -7.334525e-01  0.1436780908 -2.762799e-01 -0.2079379942
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## [3643,]  2.950548e-01 -0.4112800684 -2.800382e-01  0.6895703807 -
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## [3644,] -1.836378e-01  0.7477522850  2.229198e-01 -0.0704573737 -
4.838011e-01
## [3645,] -3.218802e-01  0.1269078943 -1.826027e-01  0.4545884253
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## [3646,]  2.430958e-01  0.7208755073 -6.934124e-02 -0.1423809604 -
9.457552e-01
## [3647,]  8.003638e-01  0.6375503372 -6.358343e-01  0.2010963131
3.096100e-01
## [3648,]  7.243401e-01 -0.3778104133  1.305946e+00 -0.0196386441
1.001130e+00
## [3649,] -8.382062e-01 -0.3056792548 -6.073729e-01  0.1889880110 -
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## [3650,]  1.017819e-02 -0.4023148106  1.182414e+00 -0.2620248385 -
2.578052e-01
## [3651,]  7.350872e-01 -0.4010579329  1.304224e+00 -0.0330966390
1.007582e+00
## [3652,]  1.131273e+00  0.1240327320 -7.908818e-01 -0.6999956428 -
5.381080e-01
## [3653,]  4.491923e-01  0.0323377512 -2.122225e-01  0.2253355213 -
8.903417e-01
## [3654,]  4.649253e-01  0.8211069398 -1.442879e-02  0.2700020017
2.031598e-03
## [3655,]  9.402263e-01  1.1059277908 -1.403502e+00  1.8602909539 -
6.524335e-01
## [3656,]  1.366908e-01  0.7488034235 -2.109014e+00  1.2111828345 -
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## [3657,] -7.728721e-01 -0.2310888097 -1.342525e-01  0.3926965473
1.663404e-01
## [3658,] -6.353616e-01 -0.6694886164 -2.153619e-01  0.0433610993 -
3.160143e-01
```

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## [3659,]  2.408879e-01 -0.5688175384 -5.667083e-01 -0.1883770774 -
1.116868e-01
## [3660,] -5.334591e-01 -0.5347721931 -5.503740e-02 -0.4846300403
2.085464e-01
## [3661,] -5.375660e-01  0.4131097447  4.489434e-01  0.2030397617 -
1.456010e+00
## [3662,]  1.207427e+00 -1.1591844119  5.355311e+00  0.9678792557
1.976954e+00
## [3663,]  2.370150e-01 -0.1439567989  1.636523e+00 -0.3046271277
1.037995e+00
## [3664,]  9.836679e-02 -0.3261265766  1.150591e+00 -0.3062549428
6.716645e-01
## [3665,]  7.969721e-01  0.7261835346  3.697673e-01  0.3677585903 -
2.867358e-01
## [3666,]  3.547828e-01  0.8724943645 -2.001257e+00  1.3255930608 -
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## [3667,]  9.464661e-01  1.0968813218 -1.455996e+00  1.8442412260 -
7.549595e-01
## [3668,]  8.983264e-01  0.8018368247 -6.280098e-01  0.1945739578
4.865282e-01
## [3669,] -5.228763e-01  0.3493680983  4.251358e-01  0.0802670208 -
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## [3670,]  2.991178e-01  0.0579251706  4.292533e-01  0.1250980688 -
3.459594e-01
## [3671,]  3.060972e-02 -0.2221416840 -5.093253e-01  0.0138343945 -
7.907092e-02
## [3672,]  7.283582e-01 -0.6600700954 -5.425237e-01 -1.1017659149
1.898976e-01
## [3673,] -4.511234e+00  1.0964364657  4.470735e-01 -1.0379964170
9.156878e-01
## [3674,] -4.630741e-02 -0.0358955012 -9.243905e-01  0.3836642580
3.041461e-01
## [3675,] -1.594959e-01 -0.0475287148 -8.445726e-01  0.4596103697
2.123263e-01
## [3676,]  6.346638e-01 -0.6420227375 -9.034877e-01 -1.2423974836
5.313409e-02
## [3677,]  9.966351e-01  1.1466233217 -1.010332e+00  1.9603744834 -
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## [3678,]  5.328223e-01  0.9484920725  7.552488e-02  0.0793228602
2.216147e-01
## [3679,] -1.503036e-01  1.3029636533 -5.990372e-01  1.1176755910
1.355929e+00
## [3680,]  1.527837e-01 -0.9622761435  1.195736e+00 -3.7264812496
2.597892e+00
## [3681,]  9.652023e-02 -0.4193422185  4.831723e-01  0.4388650731
3.179309e-01
## [3682,] -1.386152e-01 -0.0796535310 -8.992815e-01  0.5559044431
1.988814e-01
## [3683,] -1.607157e+00 -1.3430283494  6.736910e-01 -0.9350352989 -
1.297368e+00
```

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## [3684,]  3.457343e-01  0.8859502881 -1.721879e+00  1.1541324359 -
6.379915e-01
## [3685,]  6.424063e-01  0.2402638627  1.183256e-01 -0.1832103953
9.404288e-01
## [3686,]  2.395204e-01 -0.5297435397 -1.412991e-01 -0.4833520843 -
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## [3687,] -1.347878e-01 -0.0334025598 -8.925561e-01  0.5323949811
2.432167e-01
## [3688,] -1.188196e+00 -0.6306902578  6.047287e-01 -0.0480198000 -
6.837150e-02
## [3689,]  4.751231e-01 -1.2883761789  8.419323e-01  0.1237348218
5.793329e-01
## [3690,]  5.526922e-01 -1.2307568284  1.316485e+00  0.2120405243
8.268658e-01
## [3691,] -8.656303e-01 -1.6302388340 -2.758364e-01  0.3180791819
6.431503e-01
## [3692,]  1.086293e-01 -1.0376231839  3.253715e-01  0.3683889135 -
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## [3693,]  7.304603e-01  0.7640455873 -5.609921e-02  0.3564350270 -
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## [3694,]  9.344428e-01 -0.5791716815  1.833986e-01 -1.2262233189 -
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## [3695,]  6.701254e-01  1.9201471826 -1.178209e+00  1.4874809189 -
9.294162e-01
## [3696,]  3.043863e-01 -0.9418807740 -6.538382e-01  0.6429680045 -
3.661874e-01
## [3697,] -1.534733e+00 -1.2217183590  6.937383e-01 -0.8903033757 -
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## [3698,]  5.144253e-01 -0.0845586702 -6.697555e-01  0.4971289639 -
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## [3699,]  6.479681e-01 -0.6168181934 -8.712155e-01 -1.2721190373
1.114965e-01
## [3700,]  3.101065e-02 -0.1606799385 -2.633534e-01 -0.0198319690
2.851799e-01
## [3701,] -1.861451e-01  0.0190441884  1.992946e-01  0.1677710807 -
7.001816e-01
## [3702,] -2.904795e-01 -0.9940982650  3.361850e-01 -0.4944685516 -
1.362889e-01
## [3703,]  7.020330e-01  0.6808418730  1.699258e+00  0.3042256145 -
1.343238e+00
##                  PC16          PC17          PC18          PC19
PC20
##    [1,]  8.338266e-01  0.1272740805 -7.316206e-01  0.1126858521 -
0.4062459234
##    [2,]  1.826252e+00  0.1408790258  2.176831e-01  0.1604333508 -
0.0596025971
##    [3,]  5.101567e-01 -0.0112048443 -7.420517e-01  0.8138974543 -
0.4084296363
##    [4,] -2.649080e+00  1.0326307917 -7.492844e-01 -1.3840443406 -
0.0733296306
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##    [5,]  1.576303e+00 -0.2208111353 -9.411393e-01 -0.1973706037 -
0.3969319522
##    [6,] -3.093904e-01  0.1583603820  1.879664e-01 -0.1557543506
0.4581981896
##    [7,]  9.611623e-01 -1.8806433059 -5.620847e-01 -0.4590721250
0.5955297379
##    [8,] -1.074213e-01  0.0620743891  5.767178e-02 -0.3350927565
0.3822369554
##    [9,]  1.213553e+00  0.1125159058  2.598334e-01  1.1679204668
0.2231971594
##   [10,]  1.119391e+00  2.0325148930 -2.244656e-01 -0.3415463457 -
0.4879146340
##   [11,] -2.814676e+00  0.0410751628 -8.548008e-01 -0.0114248966
0.0103708387
##   [12,]  1.017692e+00  0.1955978910 -2.545771e-01  0.1271290002 -
0.0957473162
##   [13,]  5.397008e-01  0.0497011244 -4.725355e-01 -0.1429664721 -
1.2605398141
##   [14,]  8.992773e-01 -0.1036452885 -1.152206e+00  0.0559100441 -
0.7288222309
##   [15,]  1.569708e+00 -0.0012351096 -3.697586e-01  0.0137200559 -
0.3472510389
##   [16,]  6.641237e-01 -0.6485059675 -1.609272e-01  0.2523583426
0.0889094899
##   [17,]  2.357483e+00 -0.6971372063  1.856807e+00 -0.2538954746
1.1158244650
##   [18,] -3.027965e+00 -0.9435486266  5.491991e-01 -0.7501061597 -
0.2339824771
##   [19,]  7.321579e-01 -0.0030328643 -5.390655e-01  0.0060102532 -
1.0114722661
##   [20,]  6.391518e-01 -0.3666824875  7.343274e-02 -0.5933794468
0.2768050251
##   [21,]  1.036418e+00  0.0518979239 -1.069437e-01  0.5295449894 -
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##   [22,]  3.291505e-01 -1.1978018664 -4.320653e-01  0.9894240803
1.7260398472
##   [23,]  2.380309e-01  0.3002014051 -6.016574e-01 -0.4379865234 -
1.2232855992
##   [24,] -2.481263e+00  0.8316025423 -7.998519e-01 -0.0701772474
0.1742101159
##   [25,]  8.019551e-01  1.5737179158 -2.162165e-01 -1.8158735621 -
0.4824977911
##   [26,] -7.162519e-01  0.2779799278  1.333769e-01 -0.8431617465 -
0.3232049667
##   [27,]  6.671407e-01 -0.3922083023  7.898029e-02 -0.6805678230
0.2251450796
##   [28,]  2.451608e-01  0.3615987801 -8.534222e-01 -0.3902329921 -
0.7351414213
##   [29,]  1.133273e+00 -0.6050239865 -4.480071e-01  1.1036999590
0.9320779548
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##   [30,] -4.081379e-01  0.0738819844 -1.336632e+00 -1.2621918502
0.3720075080
##   [31,]  3.339232e-01  0.3706217048 -1.231568e+00  0.9171988179
0.2262213432
##   [32,]  3.614897e+00  1.6077962292  6.460070e+00 -2.4004795905
2.9791957354
##   [33,] -4.478396e-02 -2.5671779873 -2.103787e+00 -0.6087760839
1.0873975449
##   [34,]  2.112214e-01  0.0896603022 -1.438805e+00 -0.4012645475
0.0908065221
##   [35,]  6.322870e-01 -0.4282161060  1.102204e-01 -0.5004726828
0.2074277847
##   [36,]  6.763870e-01 -0.4323467042  8.375962e-02 -0.5343241950
0.2491544517
##   [37,] -9.525228e-01 -1.8419325421 -8.420140e-01 -0.8069772958
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##   [38,] -1.427512e+00  0.7731547046 -4.745945e-01  0.0458907199
0.5062053056
##   [39,]  6.268240e-01 -0.3616059921  8.947674e-02 -0.6370455283
0.2051632197
##   [40,] -2.526358e-02  0.4786828389  9.126839e-02  0.4752015829 -
0.6453681076
##   [41,]  1.713626e+00  1.7689751167 -6.510369e-01  0.1843887514
0.2153973349
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## [1387,] -1.882614e-01 -0.0357730556 -1.503417e+00 -1.3998716412
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## [1402,] -4.804037e-01 -1.2302707231  7.844544e-01 -0.5683667007
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## [1502,] -1.061062e-01 -0.1263761274  6.562086e-01  0.8406700850
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## [2086,]  1.173940e-01 -0.2329953932  7.397981e-01 -1.1251918580
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## [2172,]  1.250127e+00 -0.7211614623 -1.553118e+00 -0.3815256641 -
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## [2547,]  1.459779e+00  0.0792257429 -9.680473e-02  0.7690590824 -
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## [2559,]  1.289018e+00  0.0393334155 -6.400450e-01  2.2067228115
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## [2717,] -7.258420e-01 -0.3125171145 -1.188623e-01  1.1985881775
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## [2821,] -1.059992e-01  0.5236072366  1.278815e+00 -0.3257993038 -
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## [2823,] -3.972205e-01  0.1120252890 -5.064268e-01  1.0654136836
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## [3061,] -7.880271e-01  0.8553624019  5.901160e-01 -0.1046330324
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PC25
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2.267334e-02
##   [11,]  4.088026e-01  2.949580e-01 -3.737741e-01 -6.565550e-01 -
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##   [12,]  6.984339e-01  6.698813e-02  1.239100e-01  8.734483e-02 -
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##   [13,]  5.053608e-02 -1.661329e-01 -2.776111e-02  3.277687e-02
3.148265e-02
##   [14,]  5.292314e-02 -1.207985e-01 -5.400683e-02 -2.174851e-01
1.482800e-01
##   [15,]  3.376463e-01 -7.998820e-02  1.523034e-01  1.355686e-01 -
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##   [16,]  2.244934e+00 -2.488684e-01  2.032122e-01  1.847352e-01 -
1.587654e-01
##   [17,] -1.088560e-01  4.082772e-01  4.030278e-01 -6.232059e-02 -
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##   [18,]  9.459960e-01  7.633272e-02 -2.875031e-01 -6.635127e-01 -
2.438985e-01
##   [19,]  1.807309e-01 -2.078112e-01 -4.867029e-02  3.299564e-02 -
1.370811e-02
##   [20,]  5.739800e-01  1.774905e-02  1.275835e-01  1.070831e-01 -
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##   [21,]  3.040525e-01 -6.198353e-02  5.064205e-02  7.723483e-02 -
9.273070e-02
##   [22,] -3.692121e-01 -5.419733e-01  4.936899e-01  6.018596e-01
2.567955e+00
##   [23,]  2.170941e-01 -1.142895e-01 -9.018514e-03 -6.267446e-02
1.028678e-01
##   [24,]  2.096093e+00 -1.753857e+00 -1.435050e+00  1.988453e-02
2.920947e-01
##   [25,]  7.168009e-01 -3.801071e-01  1.009964e-01  4.374326e-01 -
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##   [27,]  6.259345e-01  1.418173e-03  1.411415e-01  1.088770e-01 -
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##   [28,]  2.628438e-01 -1.444792e-01  7.107491e-02  1.301915e-01
1.293231e-02
##   [29,]  3.277399e-01  1.359944e-01  2.024309e-01  9.307055e-02 -
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1.021901e-02
##   [31,]  6.725058e-01 -4.248989e-02  2.096397e-01  2.665072e-01 -
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##   [32,] -5.060304e-01  6.366450e-01  9.367443e-01 -4.298140e-01
1.468883e-01
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##   [34,]  2.006234e-01  1.685391e-02 -6.890346e-02 -2.018099e-01
3.189052e-02
##   [35,]  5.663368e-01 -3.916520e-03  1.896671e-01  2.215829e-01 -
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##   [36,]  6.109570e-01  6.247769e-03  1.545145e-01  1.472567e-01 -
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##   [37,]  5.627385e-03  1.406707e-01 -2.323869e-01 -4.621316e-01 -
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##   [38,] -5.581172e-01  3.889845e-01 -3.320864e-02 -2.337924e-01
1.483376e-01
##   [39,]  5.146092e-01  1.225818e-02  1.368322e-01  1.275509e-01 -
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##   [40,]  7.360764e-01  8.477175e-03 -1.595434e-01 -2.908428e-02 -
1.010647e-01
##   [41,] -1.315250e+00 -1.075820e-01  1.491163e-01  4.485050e-01 -
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##   [42,] -1.155779e+00 -8.537108e-02 -3.911448e-02  1.802658e-01 -
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##   [43,]  3.405162e-01 -1.414243e-01 -1.634443e-01 -3.900909e-01
1.150903e-01
##   [44,]  2.292436e-01 -7.140228e-02 -4.524996e-02 -1.254347e-02 -
1.249914e-01
##   [45,]  1.997576e-01  4.931713e-01 -1.276152e-01  3.013637e-01 -
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##   [46,] -1.833502e+00 -2.449458e-01  5.189796e-02  3.342219e-01 -
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##   [47,]  7.104206e-01  2.310837e-01 -4.462341e-02 -2.341286e-01
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##   [48,]  3.620186e-01 -1.114064e-02  1.105979e-01 -1.898045e-02 -
3.833087e-02
##   [49,]  4.476614e-01 -1.932004e+00 -9.737045e-01  6.416380e-01
4.274517e-02
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```

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##   [51,]  2.812971e-01 -1.279544e-01  8.661016e-02  2.480916e-01 -
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##   [53,]  1.552890e-01 -1.833864e+00 -9.729463e-01  6.823852e-01
5.562488e-02
##   [54,]  2.969441e-01  1.915253e-01  3.793217e-01  7.737490e-03
1.338818e-01
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##   [56,]  3.193974e-01 -6.767548e-02 -2.219908e-02  7.263789e-02 -
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##   [58,]  2.697758e+00 -2.015023e+00 -1.326706e+00  7.953303e-02
8.733380e-02
##   [59,]  1.045161e-01 -2.225791e-02  3.252245e-01  3.267843e-01
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##   [64,] -7.183573e-01  9.124908e-02  2.397284e-01  2.538521e-01 -
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##   [65,]  7.733240e-01 -4.071406e-02 -1.088301e-02  7.589313e-02 -
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##   [70,]  6.360234e-01 -4.344042e-02  2.755329e-01  1.399738e-01 -
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##   [74,] -7.526367e-01 -2.066494e-01 -1.719154e-01 -3.582656e-01 -
4.478813e-01
##   [75,]  1.996434e+00 -6.967114e-01  6.627407e-02 -1.590482e-01
3.148180e-02
```

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##   [76,]  3.282721e-01 -1.520012e-01  6.013290e-02  1.637158e-02 -
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##   [78,] -1.140684e-01  2.229393e-01  1.983628e-01 -1.597847e-01
9.244709e-02
##   [79,]  5.827584e-01 -1.846068e-02  1.437479e-01  1.476098e-01 -
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##   [80,]  3.541562e-01  6.743212e-02 -1.025971e-01 -2.320768e-01 -
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##   [82,]  6.398416e-01 -2.194593e-02  3.148445e-01  2.035848e-01 -
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##   [83,] -1.087173e+00  1.547405e-01 -2.840218e-01 -3.911524e-01 -
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##   [84,]  2.654266e-01  1.238653e-01  1.111025e-01  1.181337e-01 -
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##   [85,]  1.473845e-01 -2.782578e-03  4.665007e-02 -1.054117e-01 -
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##   [87,]  1.826182e-01  5.511740e-02 -2.175196e-02 -2.397107e-01 -
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##   [89,]  1.587553e+00 -5.508995e-01 -5.767880e-02 -3.289393e-02
7.217134e-02
##   [90,]  5.545681e-01  2.861528e-02 -1.348695e-02 -1.291433e-04 -
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8.943275e-02
##   [92,]  4.251646e-01  5.914129e-02  1.356452e-01  2.488845e-01 -
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##   [93,] -2.240313e+00 -6.317543e-01  3.428368e-01  6.526301e-01
2.454059e+00
##   [94,]  2.650616e-01 -1.887111e-01  3.510114e-02  1.188586e-01 -
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##   [95,]  1.531801e-01  5.360273e-02  2.310570e-01  3.237413e-01 -
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##   [96,]  9.893451e-01  2.764246e+00 -1.042122e+00  9.796422e-01
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##   [97,] -3.190572e-01 -8.784684e-02  1.485025e-01  1.514684e-01 -
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##   [98,]  1.973049e-01 -1.836751e+00 -9.980145e-01  6.314304e-01
6.345766e-02
##   [99,]  1.571029e-01 -1.751893e+00 -9.066557e-01  6.879635e-01
3.007495e-02
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```

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##  [101,]  2.218503e-01  4.834974e-02  1.707975e-01  1.489612e-01 -
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##  [103,]  7.481892e-01 -8.351289e-03  3.243125e-01  2.420433e-01 -
9.688076e-02
##  [104,]  3.768119e-01 -1.193446e-01 -2.973603e-02  1.066501e-01 -
1.988437e-01
##  [105,]  1.407678e-01  1.971301e-04  9.315038e-02  6.417853e-02
8.670490e-02
##  [106,]  1.063454e+00  5.336226e-01 -2.433883e+00  1.587275e+00
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##  [107,] -1.242968e-01  2.712505e-02  4.638398e-03  2.530697e-02 -
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##  [108,]  6.396286e-01 -4.514236e-02  2.872297e-01  1.785304e-01 -
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##  [109,] -4.165628e-02  1.131261e-01  9.987866e-02  1.144363e-02
8.024486e-02
##  [110,] -3.034573e-02  1.697352e-02  7.428693e-02  1.123938e-01 -
6.099976e-02
##  [111,]  1.151906e-01  1.397215e-01  1.808543e-01  2.505905e-01 -
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##  [112,] -1.298515e-01  8.251963e-02  1.874246e-01 -1.648568e-01
4.306270e-02
##  [113,] -9.027203e-01 -1.981329e-01 -1.195499e-01 -1.625787e-01 -
4.249061e-01
##  [114,] -1.157711e-01  3.878883e-01  2.376200e-01 -9.093487e-02 -
1.720266e-02
##  [115,] -2.829014e-01 -1.802480e-02  4.440890e-02  8.382708e-02 -
7.840635e-02
##  [116,] -8.232973e-01 -1.744424e-01 -2.032713e-01 -3.980537e-01 -
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##  [117,]  1.789125e-01 -1.296975e-01 -1.043669e-01 -8.350932e-02 -
2.608820e-02
##  [118,] -3.636325e-02  1.780032e-02  8.594479e-02  1.450165e-01 -
8.485602e-02
##  [119,] -1.895282e+00 -7.655409e-01  3.769472e-01  5.896649e-01
2.349612e+00
##  [120,]  2.474076e+00 -1.705552e+00  9.942101e-01 -7.493160e-01
2.410910e-01
##  [121,]  1.335362e-01 -1.688396e-02  1.643873e-03 -7.255652e-02
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##  [122,] -2.654159e-01  1.384225e-01  1.745681e-01 -2.334255e-01
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##  [125,]  4.372142e-01  2.488465e-01  2.227482e-01  1.331244e-01 -
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##  [128,]  9.236547e-01  5.610032e-01 -2.430552e+00  1.632001e+00
3.049213e-01
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6.438808e-03
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##  [136,] -2.310425e-01  2.280191e-02 -7.704163e-02 -2.822433e-01
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##  [139,]  6.082823e-01 -4.682390e-02  1.636803e-03  9.086430e-02 -
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##  [140,] -9.837812e-01 -2.498504e-01  1.112171e-01  2.939534e-01 -
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2.545904e-02
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6.149911e-02
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3.029451e-02
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2.590530e-01
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##  [649,]  7.798219e-01  6.702985e-01 -2.422972e+00  1.559918e+00
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## [1004,]  2.978489e-01  1.487302e-01 -5.425271e-02 -2.527111e-01 -
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## [1005,] -3.554975e-02  6.458087e-02  6.751174e-03  9.770698e-02 -
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## [1010,] -2.244330e-01  5.315464e-02 -8.935305e-02 -1.940685e-01
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## [1019,]  3.783146e-01 -4.763095e-02  3.129267e-04  3.237078e-02 -
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## [1020,]  4.479314e-01 -4.134147e-01  3.000473e-01  1.536499e-01 -
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## [1021,]  2.690108e-01 -3.937939e-02 -4.145579e-02 -1.794956e-02 -
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## [1023,]  7.144115e-02 -6.729503e-02 -1.696271e-02  2.253783e-02 -
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## [1024,]  7.978510e-01 -1.068254e-01  2.314009e-01  1.678032e-01 -
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## [1029,]  1.659373e-01 -4.209098e-02 -4.451155e-03  1.168981e-01 -
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## [1030,] -6.509739e-02 -1.266617e-01 -3.248354e-02 -6.140083e-02 -
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## [1032,]  4.650644e-01 -1.522591e+00 -9.573061e-01  5.764926e-01 -
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## [1033,] -9.218406e-02 -1.552211e-01  6.578830e-02  1.000559e-01 -
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## [1037,]  1.607161e-01 -4.575261e-02  8.799631e-02  8.298433e-02 -
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3.988082e-01
## [1041,] -5.134778e-01 -3.824342e-02 -1.634920e-02 -1.395843e-01
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## [1089,] -5.310143e-01  8.904044e-02 -3.063181e-02 -1.726803e-01
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## [1090,]  6.088603e-02  2.161500e-01 -7.108732e-02 -1.390576e-01 -
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## [1091,]  7.039942e-01  8.663151e-02 -1.511389e-01 -4.347857e-01 -
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## [1094,]  1.686278e+00  5.228635e-01 -2.588475e-02  4.234757e-01
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## [1095,] -4.918862e-01 -5.096538e-02  2.294686e-02  1.422083e-02
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## [1096,] -1.726760e-01 -7.075729e-02  7.081664e-03 -1.379394e-01
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## [1097,]  2.024555e-01  1.388112e-01  4.264940e-02  8.171978e-02 -
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## [1098,] -8.763159e-02 -1.676767e-01  4.896655e-02 -9.700999e-02
7.392714e-02
## [1099,] -1.521373e+00 -4.429408e-01  5.826802e-01  7.019090e-01
2.333262e+00
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## [1104,] -5.853677e-03  9.394358e-02  5.228738e-02  1.009597e-01 -
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## [1105,] -4.751089e-01  8.761999e-02 -4.533590e-02 -1.884077e-01
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## [1107,]  6.940484e-01  1.383421e-01  2.053096e-01  8.559166e-02 -
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## [1108,]  6.627802e-01 -5.729784e-02  3.943140e-02  1.167996e-01 -
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## [1109,] -2.000498e-01 -6.892987e-02 -2.758421e-02 -1.077355e-01
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## [1113,]  1.090128e-01 -5.580724e-01  1.247401e-02 -7.736966e-02
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## [1114,]  2.314842e-01 -2.549054e-02 -1.148352e-01 -2.021990e-01 -
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## [1120,] -7.725094e-03 -9.384559e-02 -1.609237e-02 -2.300746e-01
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## [1124,]  5.051882e-01 -1.461403e+00 -1.048236e+00  4.591358e-01 -
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## [1128,]  4.534681e-01 -1.592868e+00 -1.070634e+00  4.938376e-01 -
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## [1129,]  3.400911e-01  2.996244e-01  2.223443e-01  4.301335e-02 -
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## [1133,] -1.707028e-01 -5.727660e-02 -8.406070e-02 -1.151669e-01 -
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## [1134,]  6.028582e-01  1.706152e-01  3.771069e-02  8.641738e-02 -
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## [1145,]  9.451063e-02 -8.236380e-02 -3.326986e-01 -3.208012e-01 -
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## [1148,] -3.701525e-01 -2.186884e-01 -1.621095e-01 -3.305255e-01
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## [1158,] -2.597200e-01 -2.420832e-01  2.450560e-02 -1.496984e-03
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## [1164,] -9.114629e-01  4.520422e-03  2.468031e-01  5.216743e-01 -
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## [1174,]  7.542202e-01  3.476349e-01 -4.522199e-02 -4.408282e-01 -
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1.998874e-02
## [1179,]  6.791109e-01  1.649487e-02 -5.434120e-02  6.583180e-02 -
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## [1180,]  4.914758e-01  3.470609e-03  8.017338e-02  1.083593e-01 -
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## [1184,]  4.124902e-01 -7.814503e-02  9.706325e-02  1.509182e-01 -
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## [1186,] -9.787749e-01 -6.615719e-02  2.449385e-01  9.539834e-02
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## [1190,]  8.260492e-01  1.565490e-02 -5.802831e-02  1.288817e-01 -
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## [1192,] -1.381218e+00 -4.949151e-02 -2.027856e-02 -2.299714e-01
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## [1194,]  1.196951e-01 -2.090340e-01  6.549565e-02  3.016315e-01 -
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## [1195,]  4.299891e-01  7.297691e-02  1.625451e-02 -1.062558e-01 -
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## [1196,] -9.771240e-02  2.631266e+00 -1.076339e+00  1.095735e+00
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3.013302e-01
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## [1210,] -9.682708e-01 -1.921121e-01 -1.542532e-01 -2.602860e-01 -
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## [1395,]  4.248919e-01  2.243325e-02 -1.451054e-02 -2.326685e-01 -
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## [1397,]  3.599054e-01  1.232267e-02  7.828747e-02 -4.962858e-02
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## [1398,] -3.161089e-01  4.245276e-01  1.098779e-01 -9.992724e-02 -
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## [1399,]  1.517977e-01  8.640887e-02  3.112143e-02 -1.148383e-01 -
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## [1403,] -4.896438e-01  1.005518e-01 -4.951828e-02 -8.636234e-02
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## [1404,]  1.380717e-01  1.086103e-01  5.188620e-02  1.006437e-01 -
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## [1405,]  6.207263e-01  3.612891e-01  2.559815e-01  2.319373e-03 -
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## [1414,]  2.777602e-01  1.613939e-01  1.012758e-01  1.326193e-01 -
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## [1416,] -6.413212e-01 -2.278623e-01 -1.028555e-01 -1.308699e-01
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## [1417,]  1.677823e-01  6.468176e-01 -1.785691e-01  2.346666e-01
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## [1418,] -3.675892e-01  1.133173e-01  4.884362e-02 -1.065095e-02
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## [1419,]  7.163089e-01  1.921954e-01 -2.322544e-01 -2.217780e-01 -
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## [1420,]  1.369773e-01 -2.291435e-02  3.098024e-02  1.690758e-01 -
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## [1421,]  3.765825e-05  9.587778e-03 -7.753384e-02 -3.630842e-01 -
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## [1422,] -1.096546e+00  2.919119e-01  6.129930e-02 -2.957854e-02 -
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## [1423,]  1.724764e-01 -6.077576e-02  5.072250e-02  4.297055e-02 -
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## [1424,] -1.174529e-01  2.078329e-01  9.487878e-02 -7.818030e-03
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## [1428,]  1.377750e-01  2.840707e-03 -3.849124e-02 -1.129120e-01 -
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## [1444,]  1.778369e-01  1.171990e-01  1.198303e-01  1.293813e-01 -
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## [1445,]  7.033186e-01 -3.469845e-02 -1.251414e-01 -3.722514e-01
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## [1448,] -1.305969e-01  1.750812e-01  7.660141e-02 -1.820841e-02
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## [1449,]  7.072856e-01 -4.730680e-02 -1.249175e-01 -3.631695e-01
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## [1458,]  4.228481e-02 -1.142248e-02 -4.994082e-03 -4.447432e-02
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## [1459,]  5.470986e-03 -2.103028e-01  1.279007e-02  6.806105e-02
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## [1460,]  1.094199e-01 -7.849376e-02  1.420183e-01  1.074552e-01 -
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## [1463,] -4.691444e-01 -5.081741e-01  1.588784e-01  2.007169e-02 -
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## [1464,] -1.465896e+00 -2.804782e-01  2.239907e-02 -1.305194e-01
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## [1469,]  7.258809e-02 -5.047590e-02  8.725307e-02  1.421156e-01 -
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## [1472,]  4.325410e-01 -1.883477e+00 -9.823318e-01  6.361174e-01
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## [1478,]  2.332247e-01 -5.299669e-02 -2.175982e-02  2.673848e-02 -
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## [1479,] -5.015634e-02 -2.148956e-01  6.167715e-03 -3.987711e-02
5.169668e-02
## [1480,] -1.834489e-02  4.155272e-02 -1.302054e-02 -1.064517e-01 -
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## [1481,] -3.686118e-01  2.217355e-01  3.652275e-01  2.894806e-01 -
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## [1482,] -1.586598e-01 -5.222334e-02  3.526994e-02  7.522186e-02 -
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## [1483,]  3.122696e-01  2.626658e-01  1.243705e-01  9.683863e-02 -
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## [1484,] -1.270028e-01  1.012192e-01  4.646370e-02  4.687580e-03 -
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## [1485,] -1.272142e+00  1.534925e-01 -5.795828e-02 -5.029269e-03 -
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## [1486,]  7.452485e-01  7.289737e-02 -1.656889e-01 -4.712925e-01 -
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## [1489,]  1.492883e-01  6.949426e-01 -1.743887e-01  2.323506e-01
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## [1493,]  8.548888e-01  3.271109e-01  4.552707e-02 -3.877993e-01 -
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## [1494,] -2.179970e+00 -5.295658e-01  5.431125e-01  9.418472e-01
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## [1495,] -1.809322e-01  1.730636e-02  8.851967e-02 -6.677995e-02
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## [1504,] -1.575304e-01 -1.543341e-01  3.896733e-02 -9.030425e-02
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## [1510,] -9.579484e-02 -5.801489e-02  9.889690e-02  1.752406e-01 -
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## [1514,]  6.429200e-01  7.930401e-02 -1.652504e-01 -4.370039e-01 -
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## [1544,]  2.045786e-01  5.342694e-02  5.229348e-02  8.823111e-03 -
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## [1545,] -3.239596e-01  3.358474e-02  1.881741e-01  8.861968e-02
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## [1547,]  4.246315e-01  2.596970e-02 -1.745686e-01 -1.277076e-01 -
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## [1548,]  1.015179e+00  6.182639e-01 -2.966493e-02 -2.148520e-02 -
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## [1549,] -5.040318e-01  5.144408e-01  1.494594e-01 -1.334963e-01 -
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2.106352e-02
## [1553,]  2.392542e-01  3.009200e-01  2.764968e-01  4.006549e-02 -
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## [1554,]  6.881754e-02 -8.700439e-02 -3.317999e-01 -3.068732e-01 -
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## [1556,] -9.085877e-01 -2.299112e-01 -1.671449e-01 -2.778296e-01 -
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## [1557,] -5.925662e-01 -1.850855e-01 -2.701157e-02 -7.777930e-02
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## [1559,]  2.423960e-01 -2.366209e+00 -1.145311e+00  9.098176e-01 -
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## [1562,]  5.353189e-01  9.393167e-02 -1.252612e-02 -4.782175e-02 -
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## [1563,] -4.064444e-02  2.765564e-01  4.740237e-02 -4.190305e-02
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## [1564,]  6.189739e-01  3.011922e-01 -6.043007e-02 -2.544618e-01 -
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## [1565,] -3.488198e-01 -4.711773e-02  1.352961e-01  1.192005e-01
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## [1569,] -9.819819e-01 -5.212569e-02  2.508339e-01  4.414065e-01 -
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## [1570,]  4.835206e-01  4.755640e-02 -3.039670e-02 -3.200632e-01 -
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## [1572,] -5.634190e-01  3.025002e-02  2.182953e-03 -1.888889e-01
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## [1574,]  1.535494e-01  1.398564e-01  3.310118e-02  7.950623e-02 -
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## [1578,]  3.215547e-01  2.229412e-01  2.997234e-01  1.844933e-01 -
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## [1579,]  1.468520e-01  3.942754e-03  5.953566e-02 -1.908474e-02 -
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## [1580,]  7.205610e-01 -8.321881e-02 -3.180044e-01 -5.886267e-01
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## [1581,] -1.167290e-01  4.377319e-02 -3.894551e-03 -1.860993e-01 -
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## [1582,] -1.080550e-01 -6.452051e-02  3.168690e-02  8.081410e-02 -
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## [1583,]  1.706411e-01  1.245515e-01  5.965907e-02  4.730792e-02 -
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## [1584,] -2.227377e-01  3.217333e-01  7.404583e-02 -6.156727e-02
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## [1585,] -2.223187e-01  1.135470e-01 -2.446972e-02 -4.670830e-02 -
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## [1589,] -8.841115e-01  1.360691e-01  6.810327e-02  6.414373e-02 -
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## [1598,] -1.483741e+00 -4.584867e-01  6.038022e-01  7.517581e-01
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## [1599,] -2.889641e-02  4.911625e-01  1.560073e-01 -1.384671e-01
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## [1607,]  4.572916e-01  6.186275e-03 -8.097808e-02  5.335823e-02 -
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## [1608,]  1.490925e-01  1.987058e-01  8.447831e-02  1.193192e-02 -
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## [1609,]  4.675236e-01  1.778107e-01  1.135102e-01  5.954002e-02 -
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## [1616,] -4.469011e-01 -1.401715e-01  6.202983e-03 -7.077270e-02
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## [1623,] -5.885882e-02  1.007404e-01  3.477464e-02  2.218018e-02 -
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## [1624,]  4.622921e-01  8.362511e-02  6.964973e-02  7.834515e-02 -
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8.099355e-04
## [1628,] -9.564135e-01 -2.203820e-01 -1.456588e-01 -2.342727e-01 -
4.761467e-01
## [1629,] -1.537066e+00 -4.598616e-01  6.395823e-01  8.089900e-01
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## [1633,]  4.607217e-01  1.452896e-01  1.786764e-01  1.262609e-01 -
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## [1634,] -2.388744e+00  3.733845e-01 -1.734032e-01 -3.467363e-01
3.507154e-01
## [1635,]  4.473438e-01  4.372725e-03  2.163345e-02 -1.709089e-01 -
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## [1636,] -9.227247e-02 -7.059396e-02  8.098263e-02  6.801776e-03 -
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## [1638,]  9.006750e-01  2.908886e-01 -2.181303e-02 -4.729314e-01 -
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## [1645,]  8.070515e-01  6.840458e-01 -1.247207e-01  1.469022e-01
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## [1648,] -2.308752e-01  8.939726e-02  1.850159e-02  2.057258e-02 -
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## [1649,] -5.805842e-01 -1.677110e-01  8.482859e-03 -2.676247e-02
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7.307624e-02
## [1698,] -1.447711e-01 -5.785688e-03  5.561485e-02 -7.225032e-03 -
7.595871e-02
## [1699,] -4.956460e-02 -8.575426e-02  1.189892e-01  6.987394e-02 -
6.244948e-02
## [1700,] -4.004590e-01  4.193628e-02  1.270460e-01  3.082383e-03
1.146741e-01
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## [1701,]  4.254425e-01 -1.657369e+00 -1.295557e+00  5.425448e-01
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## [1702,] -1.113696e-01 -1.221257e-01 -1.491167e-01 -3.641052e-01 -
1.148379e-01
## [1703,]  1.749430e-01  1.071550e-01  8.853208e-02 -1.563200e-01
8.748149e-02
## [1704,]  2.726787e-01  6.281833e-02  6.852325e-02 -1.271289e-01
6.707674e-02
## [1705,]  1.983602e+00 -1.585208e-01  2.050058e-01  1.125948e-01 -
1.503743e-01
## [1706,]  7.405441e-01  1.035553e-01  1.757391e-01  4.053142e-02 -
1.616737e-01
## [1707,] -2.565423e-01 -5.809161e-02 -6.381730e-03  3.683003e-02 -
6.606810e-02
## [1708,] -4.179595e-01 -1.677486e-01  9.668225e-02  5.774116e-02
1.216624e-01
## [1709,] -3.972760e-01  1.098570e-01  5.594887e-02  1.499656e-01
6.722833e-03
## [1710,] -3.066517e-01  3.626137e-02  1.596469e-01  4.736147e-02
7.751643e-02
## [1711,] -4.937668e-01  4.458637e-01  1.519680e-01 -4.298415e-02 -
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## [1712,] -4.485632e-01  2.564938e-03  3.889658e-02 -5.958006e-02 -
6.356688e-02
## [1713,]  2.373853e-01 -2.153574e-01 -1.349633e-03  1.210558e-01 -
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## [1714,] -3.005104e-01  1.993399e-02  1.103832e-01 -4.668894e-02
1.358222e-01
## [1715,] -4.111609e-01  2.297476e-01 -3.762043e-01 -4.057340e-01
4.154805e-02
## [1716,] -8.321636e-02 -6.531799e-02 -4.953587e-02 -1.605239e-02 -
9.602866e-02
## [1717,]  8.282412e-01  8.048563e-02 -2.189601e-03  4.128401e-03
7.613355e-03
## [1718,]  1.148576e-01 -9.378658e-02  1.853043e-03  1.002732e-01 -
1.473917e-01
## [1719,]  1.100754e+00 -1.683336e+00 -8.826705e-01  8.657825e-01 -
9.337783e-02
## [1720,]  2.226397e-01 -5.406753e-02  7.780366e-02  1.010770e-01
7.085596e-02
## [1721,] -1.350048e-01 -1.497877e-01 -4.438584e-03  7.826795e-02 -
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## [1722,] -6.161352e-01 -5.218936e-02  6.869530e-02  3.857148e-02 -
3.912188e-02
## [1723,]  1.086072e+00 -1.746018e+00 -9.909187e-01  8.036472e-01 -
1.153635e-01
## [1724,]  3.469072e-01  1.896613e-02 -8.735110e-02 -1.258312e-01 -
4.299724e-02
## [1725,] -2.372016e+00 -6.180080e-01  2.063892e-01  4.387656e-01
2.556886e+00
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## [1726,]  3.009563e-01 -5.915686e-02  1.084207e-01  2.155477e-01 -
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## [1727,]  4.359475e-01 -3.412009e-02 -1.077189e-01 -6.385162e-02 -
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## [1728,]  3.498971e-01 -4.663252e-02  6.691392e-02  1.910610e-02 -
6.273319e-03
## [1729,]  6.302173e-01  8.810592e-02 -1.535321e-01 -4.551400e-02 -
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## [1730,] -9.806282e-02  6.731063e-02  1.219751e-01 -1.171766e-01
2.310146e-02
## [1731,]  1.039951e-01 -9.877686e-02 -1.463241e-02  7.957888e-02 -
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## [1732,] -1.293251e-01 -4.520025e-02  1.361748e-02 -4.946608e-02
1.219977e-01
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## [1734,]  5.067924e-01  2.763241e-02  1.519882e-01  2.196510e-01 -
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## [1735,]  1.243762e-01  6.272506e-02 -2.037387e-02  3.652048e-02 -
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## [1736,] -2.623404e+00  1.739949e-01 -2.608962e-01 -3.890099e-01 -
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## [1737,] -4.753783e-01  1.843627e-02  2.700759e-02 -1.318055e-01
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## [1738,]  6.926462e-01  1.001852e-01  1.333043e-01  1.245050e-01 -
1.532224e-01
## [1739,] -3.623721e-01  6.942429e-01  1.858935e-02 -5.169138e-01
5.938260e-02
## [1740,] -3.830475e-01 -2.157059e-01  3.179336e-02  1.196816e-01 -
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## [1741,]  3.404226e-01  1.788662e-02 -4.362281e-02  6.718570e-02 -
2.241008e-01
## [1742,]  6.651773e-02 -1.014784e-01  1.298496e-01  1.038041e-01 -
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## [1743,]  9.253599e-01 -1.893685e+00  8.908308e-01 -9.982274e-01
2.623960e-01
## [1744,]  6.033124e-01 -5.431062e-02  1.082271e-01  2.531512e-01 -
1.345042e-01
## [1745,]  1.337510e+00  5.871526e-02  1.441996e-01  2.881317e-01
6.509904e-02
## [1746,]  6.505333e-01 -1.587475e+00 -1.006542e+00  5.335596e-01
1.044393e-02
## [1747,] -3.921195e-01  3.680309e-02  9.875058e-02 -9.798228e-02
5.432801e-02
## [1748,]  2.180169e-01  6.237355e-02 -1.230080e-01 -1.995334e-01
3.884570e-02
## [1749,]  6.153351e-01  3.846421e-01  3.221497e-01 -1.507096e-01
3.372304e-02
## [1750,]  4.430781e-01 -1.079284e-01  1.319951e-01  3.279460e-01 -
2.915867e-01
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7.760728e-02
## [1752,] -2.902896e-01  1.833007e-01 -4.583912e-02 -1.556461e-01
5.214756e-02
## [1753,] -5.735566e-01  1.867004e-01  1.311675e-02 -2.259266e-01
1.631522e-01
## [1754,]  3.717477e-01 -2.507762e-02  8.820993e-03 -9.970292e-02 -
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## [1755,]  3.499195e-01  1.327920e-01  1.443118e-01  1.097275e-01 -
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## [1756,]  2.745886e-01 -1.246211e-01 -4.329099e-02  6.313228e-04 -
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## [1757,] -5.261201e-01  1.083124e-01  3.285570e-03 -1.306140e-01
1.555241e-01
## [1758,] -1.352306e-02 -1.066644e-01  2.230568e-02  1.089616e-01 -
2.917006e-02
## [1759,] -5.056640e-01  2.139634e-01  1.936507e-01  1.319856e-01
6.887185e-02
## [1760,] -1.638562e-01 -2.137699e-01  4.051982e-02  2.359332e-01 -
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## [1761,] -8.539267e-01  4.247837e-01  1.483535e-02  5.404328e-02
1.815950e-03
## [1762,]  4.076457e-01  3.110236e-01  2.161554e-01  1.285895e-01 -
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## [1763,]  8.329433e-02  1.467729e-02  8.128712e-02  2.276295e-02 -
3.914965e-02
## [1764,]  1.901667e-01  8.082977e-02  2.627192e-02 -1.235604e-01 -
1.411198e-01
## [1765,] -1.073056e-02  1.574725e-01  7.349691e-02  6.069370e-02 -
1.327664e-01
## [1766,]  1.620029e+00  2.542964e+00 -1.103755e+00  1.146263e+00
8.741633e-02
## [1767,]  4.411539e-01 -7.192002e-02 -3.091625e-01 -5.752804e-01 -
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## [1768,] -3.632021e-01  2.447326e-01  1.301959e-01 -1.722677e-01
4.074447e-02
## [1769,] -7.852915e-02 -1.690804e-06 -1.088086e-02 -5.292852e-02 -
1.280738e-01
## [1770,]  3.855678e-01 -1.706596e+00  8.759582e-01 -1.083549e+00
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## [1771,]  8.572617e-01 -1.621947e+00 -8.585310e-01  8.363198e-01 -
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## [1772,]  7.646064e-02 -4.142600e-02 -8.308158e-05  1.893346e-02 -
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## [1773,] -4.367961e-01  1.624028e-01  2.423967e-01  2.069289e-01
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## [1774,]  1.563320e-01 -6.293159e-02  1.674778e-02  4.031535e-02 -
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## [1775,]  9.103582e-01  8.513840e-01 -1.998974e-01  2.154813e-02
6.857071e-01
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## [1777,]  1.557245e-01 -9.453643e-02 -9.703355e-02 -1.176803e-01 -
3.516268e-02
## [1778,] -2.172799e-02 -5.240763e-02 -7.135953e-02  1.882090e-02 -
1.192635e-01
## [1779,] -2.926279e-01 -9.081985e-02  1.828588e-02 -1.215905e-02
6.126826e-02
## [1780,]  4.096664e-01  1.316142e-01 -1.187402e-01 -3.993439e-02 -
2.025893e-01
## [1781,] -1.745226e+00 -8.669140e-01  2.290597e-01  3.255798e-01
2.412467e+00
## [1782,] -3.578969e-01  1.605331e-01 -3.727004e-02 -1.140870e-01
5.163588e-02
## [1783,]  4.148717e-02 -1.903391e-01  9.925005e-02  1.303894e-01 -
2.240786e-04
## [1784,] -1.688695e-01  2.518041e-01  4.524154e-01  2.112674e-01
1.379868e-02
## [1785,] -9.511275e-02  1.002848e-02 -7.261233e-02 -1.310455e-01 -
1.223059e-01
## [1786,]  3.675774e-01  2.441826e-01  1.529483e-01  1.529704e-01 -
1.817893e-01
## [1787,]  6.022246e-01  2.358386e-01 -5.291280e-03 -6.514426e-02
1.546305e-02
## [1788,]  7.940933e-01  6.794916e-01 -5.771021e-02  2.589775e-01
6.105079e-01
## [1789,] -5.633226e-01  6.531337e-02  5.176023e-03 -2.401472e-01
1.113729e-01
## [1790,] -1.482052e+00  2.456799e-01 -1.272401e-02 -2.067298e-02 -
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## [1791,]  3.118489e-01 -1.131844e-01 -1.483994e-02 -8.324658e-02 -
1.284416e-01
## [1792,]  8.013108e-02  9.837697e-02 -1.298252e-02  2.627688e-02 -
2.147767e-01
## [1793,]  4.646458e-01 -5.034936e-02  8.183845e-02 -3.523467e-02 -
7.927201e-02
## [1794,] -3.749163e-01  2.045567e-01  1.130236e-01  1.479590e-02
1.499761e-01
## [1795,] -6.151496e-01  1.232709e-02  2.200113e-02 -1.439045e-01
1.629071e-01
## [1796,] -2.290133e-02  6.283353e-02 -2.035023e-02  1.398313e-02 -
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## [1797,]  8.540539e-02  1.211034e-01 -3.560826e-02 -7.302344e-02 -
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## [1798,] -2.659684e-01  2.851256e-02  2.371372e-01  1.094585e-01
2.716477e-02
## [1799,]  1.344700e-01 -3.797849e-02 -1.740594e-02  4.506837e-02 -
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## [1800,]  6.905429e-02 -9.611205e-02  1.002921e-01  2.014787e-01
4.650290e-02
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## [1801,] -5.582893e-02 -1.020493e-01  8.702700e-02  8.148305e-02 -
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## [1802,]  6.340395e-01  1.336144e-01  4.465171e-01  3.750452e-01 -
1.993044e-01
## [1803,] -1.774473e-02  4.695508e-02  3.468409e-02 -1.842397e-02 -
1.146941e-01
## [1804,]  5.433963e-03  1.135221e-01  6.003779e-03  2.570079e-02 -
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## [1805,]  6.523014e-01  5.515033e-02  3.607605e-01  3.412449e-01 -
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## [1806,]  1.568694e-01  1.813150e-01 -6.655937e-02 -2.146807e-01
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## [1807,]  2.236505e-01  8.377594e-02 -1.450191e-01 -9.057909e-02 -
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## [1808,]  6.352441e-01 -5.165311e-02 -1.018261e-01 -3.155154e-01
6.331299e-03
## [1809,] -7.117028e-02  3.391667e-02  7.239717e-02  2.988861e-02 -
6.812212e-02
## [1810,]  1.594905e-01  1.046171e-01 -3.429995e-03  2.898096e-02 -
2.286215e-01
## [1811,] -4.994360e-01  1.681688e-01  2.945854e-02 -7.850228e-02
1.542201e-01
## [1812,] -6.171483e-01  5.434141e-02 -9.168435e-03 -1.534950e-01
5.090055e-02
## [1813,]  1.991665e-01  9.713026e-02  1.611687e-01  2.200685e-01 -
1.534421e-01
## [1814,]  1.909868e-01 -1.932491e+00 -9.600911e-01  6.808529e-01
7.233657e-02
## [1815,]  3.467481e-01  1.909455e-02  1.865504e-01  1.915080e-01 -
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## [1816,] -1.340208e-01 -7.242412e-02 -1.347606e-01 -1.490165e-01 -
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## [1817,] -1.075439e-01 -4.085054e-05  9.926150e-03 -1.017578e-01
1.093468e-01
## [1818,]  6.432642e-01 -1.574291e+00 -1.011609e+00  7.053479e-01 -
6.465621e-02
## [1819,] -6.593563e-01  1.916889e-01  1.593800e-01 -1.484510e-02 -
4.002698e-02
## [1820,]  1.593955e-01  1.757085e-01  5.524834e-02  4.488035e-02 -
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## [1821,]  2.740726e-01 -1.937831e+00 -9.511579e-01  6.837977e-01
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## [1822,]  3.219800e-01 -1.073521e-01  8.372652e-03 -1.048178e-01 -
1.477296e-01
## [1823,] -4.273381e-01  2.111789e-01  1.257079e-01  5.065104e-02
1.422954e-01
## [1824,]  1.494471e-01  6.437187e-01 -1.740229e-01  2.401784e-01
3.496600e-01
## [1825,]  1.438118e-01 -1.513240e-01 -4.010534e-03  1.340552e-01 -
1.041366e-01
```

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## [1826,]  1.056143e+00  3.315020e-01  2.293455e+00 -1.322482e+00
1.401672e-01
## [1827,]  6.701380e-01  2.989392e-01  2.393168e-01  8.329125e-02 -
7.060620e-02
## [1828,]  1.372089e+00 -1.377553e+00 -6.777113e-01  7.333641e-01 -
6.893993e-02
## [1829,] -6.624525e-01 -4.590701e-02  1.965551e-02 -1.455180e-01
1.487794e-01
## [1830,]  2.434394e-01 -7.649079e-03  7.532485e-03  6.654283e-02 -
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## [1831,] -8.394462e-01 -7.363956e-02  1.871736e-01  4.557787e-02
2.454836e-01
## [1832,]  2.576514e-01 -7.235052e-02 -6.786822e-03  8.342431e-02 -
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## [1833,]  1.711683e-01  1.810724e-01  2.658232e-02 -7.507519e-02 -
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## [1835,] -3.970793e-01  1.318210e-01  6.078101e-02  9.027233e-03
2.285209e-02
## [1836,] -3.776588e-01 -3.193580e-02  5.817724e-02 -4.276346e-03
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## [1837,] -1.860046e-01  8.995898e-02  5.805261e-02  6.789893e-02 -
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## [1839,]  1.040318e-01 -6.918836e-02  1.284115e-01  1.024292e-01
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## [1840,] -3.000783e-01  7.943866e-02  3.377989e-01  1.850006e-01
2.215166e-03
## [1841,] -6.811891e-01  1.128348e-01  6.991040e-02 -1.708528e-01
5.288180e-02
## [1842,] -1.209101e+00  3.151182e-01  9.229160e-02  4.963553e-02 -
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## [1843,]  8.182064e-01 -2.240042e-01 -7.439772e-03 -1.014495e-01 -
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## [1844,] -1.869144e-01  1.792741e-02  1.172935e-01  5.721690e-02
9.680030e-02
## [1845,] -4.544335e-01  7.829922e-02  5.258989e-02 -1.552011e-01
4.165198e-02
## [1846,]  5.119792e-01  4.024009e-01  1.807528e-02 -2.202406e-01 -
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## [1847,]  4.179838e-01 -7.679437e-02  1.694432e-01 -3.514399e-02
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## [1848,] -5.509433e-02 -7.774421e-02  1.219029e-02  1.015533e-01 -
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## [1849,] -2.035071e-01  1.139816e-01  3.261038e-01  1.346625e-01 -
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## [1850,] -3.670115e-01  4.104766e-02 -2.585996e-02 -1.316413e-01
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## [1853,]  2.085798e-01 -9.159696e-02 -6.311570e-02 -1.480980e-01 -
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## [1854,]  2.987044e-01  4.096109e-02  3.263640e-04  7.979259e-02 -
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## [1855,]  3.782495e-01 -5.709664e-02  9.934547e-03 -9.418446e-02 -
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## [1856,] -1.799766e+00 -8.517113e-01  2.455795e-01  3.607872e-01
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## [1857,] -3.943833e-01 -4.846404e-01  5.745663e-01  7.062482e-01
2.473776e+00
## [1858,] -6.384688e-01 -9.255561e-03  2.884144e-02 -1.467511e-01
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## [1859,] -6.293938e-01  5.986399e-02  1.767761e-02 -1.535901e-01
1.565484e-01
## [1860,] -2.341331e-01  1.673835e-02  3.897121e-02  8.059159e-03 -
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## [1861,]  2.384330e-01 -1.697758e+00 -1.239499e+00  6.173137e-01
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## [1862,] -5.891522e-02  9.965339e-02 -4.600290e-02 -9.300129e-02 -
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## [1863,]  3.402978e-01 -1.527839e-01 -2.579467e-02  3.577202e-02 -
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## [1864,] -1.492128e+00  2.546853e-01  3.302154e-03 -7.037460e-03 -
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## [1865,]  6.535580e-01 -4.144315e-02 -9.987299e-02 -3.312935e-01
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## [1866,] -5.917503e-01  6.707120e-02 -3.739651e-02 -2.765992e-02
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## [1867,] -5.264168e-01 -1.516698e-03  2.713006e-03 -1.390675e-01
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## [1868,] -3.558988e-01  3.724038e-02  1.401259e-01  2.332493e-02
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## [1869,] -6.627215e-01  4.352912e-01  2.989629e-01 -3.416304e-01
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## [1870,]  8.178693e-01 -1.627470e+00 -1.025823e+00  7.899973e-01 -
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## [1871,]  9.208553e-02 -6.557092e-02 -8.420885e-02 -3.390727e-01 -
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## [1872,] -3.725228e-02  1.540305e-01 -8.812930e-02 -2.536215e-01
6.017867e-02
## [1873,]  2.921280e-01  2.129064e-01  1.570233e-01  1.309190e-01 -
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## [1874,]  1.115667e-01  8.775421e-02  1.229832e-01  1.632821e-01 -
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## [1875,]  3.014207e-01  1.102186e-01  1.027540e-01  1.322138e-01 -
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## [1876,] -5.410618e-02 -1.053237e-01  1.805942e-02  1.131768e-01 -
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## [1877,]  1.023454e+00  6.749394e-01  7.560219e-02 -3.673593e-02 -
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## [1878,]  1.677462e-01  6.773668e-01 -1.728808e-01  2.354403e-01
3.483266e-01
## [1879,] -2.349468e-01 -1.104374e-01 -1.897162e-01 -1.505088e-01
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## [1880,]  6.446367e-02 -1.735170e-01 -8.817403e-02  3.224802e-02 -
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## [1881,]  9.438552e-02 -2.501668e-02 -4.312134e-02 -1.280518e-02 -
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## [1882,]  1.841591e+00 -3.703100e-01  2.149946e-01  3.000691e-01
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## [1883,] -5.429742e-01 -1.058566e-01  4.790769e-03  7.217536e-02 -
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## [1884,]  3.640340e-01  4.345507e-01  3.652395e-01  5.863683e-03 -
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## [1885,]  1.902198e-01  6.740058e-02 -6.732631e-02 -1.820276e-01 -
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## [1886,] -6.428892e-01  4.725322e-01  1.662806e-01 -3.599352e-01
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## [1887,] -7.882427e-02  7.177257e-03 -3.765444e-02 -8.221567e-02 -
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## [1888,] -3.913812e-01 -1.736084e-02  8.107686e-02 -2.356966e-02 -
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## [1889,] -4.953887e-01  1.264657e-01  8.597906e-02 -1.450329e-02
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## [1890,] -3.086168e-01  4.008002e-01  8.462768e-02 -1.285475e-01 -
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## [1891,] -3.936883e-01  2.285949e-02 -1.549964e-02 -9.271777e-03 -
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## [1892,]  2.405098e-01 -5.254117e-02  4.846183e-02 -5.921112e-02 -
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## [1893,]  1.514879e-01  4.823761e-02  3.238323e-02 -1.072669e-02 -
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## [1894,]  9.789189e-01  6.500482e-01  7.780363e-02 -1.611358e-02 -
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## [1895,] -1.484213e+00  2.590647e-01 -2.099851e-02 -4.783023e-02 -
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## [1896,] -1.329394e+00  3.150766e-04 -2.010192e-02  2.558598e-01 -
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## [1897,] -1.480393e-01  2.295602e-01  3.735333e-01  8.243474e-02
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## [1898,]  4.277609e-02 -3.108771e-02 -3.900372e-01 -4.736621e-01 -
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## [1899,]  5.633942e-01  2.721302e-01  2.488981e-01  2.081013e-01 -
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## [1902,]  2.968398e-01  4.341753e-01 -2.275494e-02 -8.739008e-02 -
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## [1903,]  7.766577e-01  3.486357e-01 -1.610475e-01 -2.527304e-02 -
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## [1904,] -7.040413e-01  2.609534e-02  3.070163e-02  6.032911e-02
4.051835e-02
## [1905,]  4.741326e-01 -2.905864e-02  6.186254e-02 -8.558987e-02 -
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## [1906,]  2.672515e-01  3.367090e-01  3.326230e-01  1.923909e-01 -
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## [1907,]  5.181164e-01  3.799645e-01 -4.555206e-02 -3.161087e-01 -
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## [1908,]  2.602460e-01  8.143619e-02  2.249790e+00 -1.356330e+00
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## [1909,] -3.198411e-03 -4.606404e-02  2.802558e-02  5.180130e-02
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## [1910,]  3.153466e-01 -1.227724e-01  1.390327e-03 -1.147774e-01 -
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## [1911,] -2.206150e-01 -3.968451e-02 -1.770427e-02  8.164177e-03 -
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## [1912,]  4.083201e-01 -1.568868e+00 -1.202452e+00  5.679585e-01 -
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## [1913,]  2.893313e-01 -1.362293e-01 -1.135886e-02  1.638807e-01 -
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## [1914,]  2.755341e-01  1.407948e-01 -1.329207e-01 -1.941647e-02 -
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## [1915,] -9.739289e-02 -5.329487e-02  1.483741e-01  4.442231e-02
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## [1916,] -3.033509e-01  1.903324e-01  3.309236e-01  1.033523e-01
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## [1918,]  5.464361e-01  1.568987e-01  2.675760e-02 -3.577970e-02
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## [1919,] -6.727191e-01  2.747831e-02  1.231920e-03  1.263333e-02
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## [1920,]  4.760361e-01  8.079525e-02  1.396983e-01  1.098761e-01 -
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## [1921,] -3.389579e-01 -5.775912e-02  7.824877e-02  2.780078e-02
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## [1923,]  1.117057e-01  5.408431e-02 -2.570319e-02 -9.560299e-02 -
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## [1924,]  6.565642e-01  4.601679e-02  3.963288e-01  3.952668e-01 -
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## [1928,] -4.571526e-01  5.176189e-01  2.167301e-01 -4.406183e-02 -
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## [1929,] -1.331910e+00  4.588227e-02 -2.232809e-02  1.740300e-01 -
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## [1930,]  2.584119e-01  7.032384e-02 -6.655288e-02 -5.760932e-02 -
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## [1931,] -9.471935e-01 -7.421112e-02 -1.167945e-01 -1.976887e-01
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## [1932,] -1.597234e-01 -6.667581e-02  5.143283e-03  3.823155e-02 -
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## [1937,]  5.451202e-01  3.915974e-01 -2.024772e-02 -2.714430e-01 -
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## [1939,] -4.190339e-01  2.746296e-02  9.045077e-02 -8.585490e-03 -
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## [1940,]  4.237564e-01  2.039828e-01  2.698305e-01  1.856000e-01 -
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## [1942,]  2.894211e-01  1.899175e-01  2.671767e-02 -6.383107e-02 -
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## [1943,]  1.405276e-01  5.557073e-02 -3.265426e-02  1.166202e-02 -
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## [1944,]  8.993655e-02 -9.984684e-02 -1.150820e-01 -3.950115e-01 -
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## [1945,]  2.784879e-01  1.960746e-01 -1.599807e-01 -1.318927e-01 -
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## [1946,]  1.852843e-01 -3.252566e-02  1.901905e-02 -2.644681e-02 -
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## [1947,]  3.111236e-01  1.724085e-01 -1.205886e-01 -7.654827e-02 -
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## [1963,]  2.454167e-01 -1.069561e-01  7.280918e-03 -6.933129e-02 -
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## [2006,]  9.776001e-02 -6.837523e-02  6.553125e-02  1.240172e-01 -
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## [2007,]  3.493132e-01  2.977447e-01  6.595013e-02 -3.018665e-02 -
1.035971e-01
## [2008,] -4.574379e-02  2.111140e-02  3.628746e-02  1.223961e-01 -
2.657797e-01
## [2009,] -1.365834e-01  4.624364e-02  8.576784e-03  7.800302e-02 -
1.580301e-01
## [2010,] -2.004614e-01  5.410469e-02  2.164729e-01  4.719389e-02
4.448037e-02
## [2011,]  7.216181e-01  2.889879e-01  1.955219e-02 -4.310248e-01 -
8.967797e-02
## [2012,]  5.854228e-01  2.890142e-01  2.339031e-01  1.939631e-01 -
4.648506e-02
## [2013,] -1.865833e-01  7.022439e-02 -5.934065e-02 -5.082851e-02 -
9.860021e-02
## [2014,] -2.240990e-01  2.992158e-01  3.722789e-01  9.467931e-02 -
1.410787e-02
## [2015,]  1.715597e-01  6.877345e-02  2.449605e-02  8.349630e-02 -
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## [2016,] -1.016462e-01  1.383339e-01  3.700972e-01  1.918185e-01
4.008902e-03
## [2017,]  3.334578e-01 -1.153477e-01 -3.969115e-02 -1.177318e-01 -
1.361225e-01
## [2018,] -5.963974e-02 -2.444688e-01 -1.878908e-02  1.288332e-01 -
6.626535e-02
## [2019,] -2.858162e-02 -8.511037e-02 -7.345361e-02 -2.052011e-01 -
1.841568e-01
## [2020,]  4.028627e-01 -1.567289e+00 -1.283644e+00  4.659456e-01
9.989720e-03
## [2021,] -5.650738e-02 -2.541960e-01  7.529353e-02  9.110706e-02
9.633575e-03
## [2022,] -1.010539e+00 -3.176882e-02  2.462466e-01  4.480396e-01 -
3.309731e-01
## [2023,]  8.395033e-02  1.334879e-01  6.537610e-03  3.077648e-02 -
1.348072e-01
## [2024,]  1.968719e-01  3.680828e-02 -4.641831e-02 -4.565414e-02 -
1.313415e-01
## [2025,]  1.916663e-02  2.331167e-01 -2.065180e-02 -3.643859e-02 -
1.053476e-01
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## [2026,]  2.553446e-01  7.071502e-02  1.685871e-02  6.364653e-02 -
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## [2027,] -3.861251e-02 -2.479588e-01  3.191822e-02  1.021119e-02
3.469397e-02
## [2028,]  4.465557e-01 -4.967036e-02  1.175677e-01  1.704836e-02 -
8.010442e-02
## [2029,] -2.305396e-01  4.626838e-02 -6.656756e-02 -1.934497e-02 -
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## [2030,] -1.679210e-02  3.352403e-01 -2.315563e-02 -1.382195e-01
4.986080e-02
## [2031,] -7.315019e-02  3.106141e-01  3.551033e-01  7.145921e-02
1.973317e-02
## [2032,]  3.453115e-01 -1.268316e-01 -6.192408e-02 -2.750304e-02 -
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## [2033,]  3.205716e-01 -1.727230e+00 -1.284384e+00  5.505042e-01
1.987003e-02
## [2034,]  2.585782e-01  1.358439e-01  1.684608e-01  1.410263e-01 -
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## [2035,] -1.268139e-01  7.942527e-02  2.008503e-01 -1.934913e-02
6.289543e-02
## [2036,]  2.163027e-01  7.506959e-02  1.050542e-01 -5.605139e-02
5.281441e-02
## [2037,] -4.905133e-01  2.129458e-01  3.767139e-02  5.131280e-02
1.858029e-02
## [2038,] -5.345650e-01  5.134192e-02  1.851629e-01 -8.411571e-02
1.178947e-01
## [2039,] -5.686727e-02 -6.360083e-02 -9.212331e-02 -1.059781e-01
2.216720e-02
## [2040,]  4.177618e-01 -1.794765e-02 -7.558056e-02  6.453220e-03 -
3.662850e-02
## [2041,]  1.491794e-01 -2.698453e-02 -1.952923e-01 -2.700967e-01 -
1.114183e-02
## [2042,]  1.802248e+00 -3.991691e-01  1.406732e-01  2.093231e-01 -
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## [2043,]  6.308930e-01 -1.425900e-02  5.415534e-04  3.078974e-02 -
9.946464e-02
## [2044,] -4.492217e-01 -1.839714e+00  1.175945e+00 -3.733610e-01 -
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## [2045,]  4.368096e-01  1.165557e-01  1.002850e-01  1.686933e-02 -
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## [2046,] -1.628450e+00 -1.444383e-02  8.013341e-02  1.710138e-01 -
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## [2047,]  2.206020e-01  2.775200e-01  1.337292e-01  9.008221e-02 -
2.778070e-01
## [2048,]  1.039936e+00  4.495689e-02 -3.294471e-01 -3.240781e-01
1.011504e-01
## [2049,]  5.225589e-01 -5.210139e-01  2.507325e-01  1.032050e-01 -
3.222487e-02
## [2050,]  9.766824e-02 -1.419683e-01 -1.086261e-02  4.866949e-02 -
4.954632e-02
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## [2051,] -4.394999e-02  6.178978e-01  3.416976e-01 -8.249706e-02 -
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## [2052,] -4.808540e-01 -1.029728e+00  6.037473e-01  7.301729e-01
2.587628e+00
## [2053,] -4.743697e-01  9.438810e-02  2.502079e-01  6.009384e-05
1.036869e-01
## [2054,] -2.582067e-01  9.209186e-03  7.824932e-02 -9.638326e-02
3.886309e-02
## [2055,] -1.453020e+00  8.905570e-03  6.338904e-02 -3.082710e-01
4.148892e-01
## [2056,]  1.769235e+00  2.290989e-01  2.389040e-01  4.277638e-01 -
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## [2057,]  2.951858e-01 -6.297302e-02 -1.085693e-02  7.040700e-02 -
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## [2058,] -6.967406e-01  8.623319e-03 -1.053988e-02 -2.055779e-01
1.682947e-01
## [2059,] -6.794409e-01  4.724172e-01  1.367303e-01 -1.590439e-01 -
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## [2060,] -6.645292e-01  1.008675e-01 -5.207854e-02 -6.170407e-02
1.146012e-01
## [2061,] -1.055408e+00 -4.584779e-02  2.637998e-01  4.773787e-01 -
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## [2062,]  8.527279e-01 -2.028591e-01  2.117489e-02 -3.204213e-02 -
4.198097e-01
## [2063,] -1.634720e-02  1.953833e-02 -9.654311e-03  5.552110e-02 -
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## [2064,]  5.710598e-01 -7.819346e-02 -3.542562e-01 -6.211222e-01
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## [2065,] -1.554304e-01 -6.715292e-02  1.332032e-01  5.096449e-02
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## [2066,]  1.325695e-01  9.509168e-02 -8.522006e-02 -5.212656e-02 -
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## [2067,]  4.436784e-01 -1.409803e-02  7.727737e-02 -7.084190e-02 -
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## [2068,]  1.800165e-02  3.907923e-02  4.478788e-02 -1.575429e-02 -
1.117191e-01
## [2069,]  1.572168e-01  1.207313e-01  9.070216e-02  1.009934e-01 -
1.040295e-01
## [2070,] -1.725350e-02 -1.834250e-01  2.565203e-02  2.785213e-02
3.491021e-02
## [2071,] -2.287175e-01  2.331710e-01  3.698015e-01  1.712592e-01 -
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## [2072,] -3.291153e-01  3.075584e-01  1.311551e-01  5.271884e-02
9.132932e-02
## [2073,] -1.633776e+00  1.944303e-01 -4.462386e-01 -3.972529e-01 -
3.085283e-01
## [2074,] -9.314191e-02 -5.746394e-03  8.565242e-02  8.079199e-03
8.478121e-02
## [2075,] -1.363703e+00 -1.408431e-02 -3.432993e-02  1.296627e-01 -
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## [2076,]  2.159249e-01 -4.874780e-02  2.645311e-02  2.292341e-01 -
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## [2077,]  4.492428e-01  8.823843e-02  1.524624e-01  1.355898e-01 -
4.908137e-02
## [2078,]  5.247674e-02  1.228902e-01 -6.655250e-03 -1.607327e-02 -
1.209675e-01
## [2079,] -1.854126e+00 -8.418246e-01  2.634965e-01  4.013365e-01
2.408201e+00
## [2080,] -1.518215e-01  7.366481e-02  2.902993e-02  9.405231e-02 -
1.506863e-01
## [2081,]  3.849866e-01  2.203088e-01  1.290363e-03 -7.460418e-02 -
8.089530e-02
## [2082,] -1.653310e-01 -4.429282e-02  1.583503e-01  7.491233e-02
2.609761e-02
## [2083,] -2.141717e-01  5.349909e-03  6.015387e-02 -5.343087e-03 -
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## [2084,] -3.161563e-01  1.475132e-01  3.736745e-01  1.765656e-01 -
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## [2085,]  1.723811e-01 -9.473197e-02  5.509568e-02  1.334582e-01 -
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## [2086,] -2.449704e-01  2.322141e-01  3.680265e-01  1.907456e-01 -
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## [2087,]  1.341840e+00 -2.983389e-01  2.429439e-02  7.095889e-02 -
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## [2088,] -7.277150e-01  6.651213e-03  1.717250e-01  3.530124e-02
2.366122e-01
## [2089,] -2.024381e+00 -8.595447e-01  2.607564e-01  3.798693e-01
2.380886e+00
## [2090,]  1.303929e-02  7.870226e-02  1.348503e-02 -7.229803e-03 -
1.232934e-01
## [2091,] -3.160655e-01  3.346242e-01  1.232937e-01  1.791944e-02
1.090018e-01
## [2092,]  2.533330e-01  2.376500e-01  2.442588e-01  1.946543e-01 -
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## [2093,] -2.330924e-01  7.827362e-02  3.137642e-02 -6.274907e-02
8.735358e-02
## [2094,]  2.339805e-01 -8.404499e-02  3.206560e-02 -7.189999e-02 -
8.304566e-02
## [2095,] -2.554478e-02 -1.808465e+00 -1.203050e+00  5.756844e-01
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## [2096,] -4.937577e-02 -8.666092e-02 -8.578761e-02 -1.585303e-02 -
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## [2097,] -4.351555e-01  2.827542e-01  1.009454e-01 -1.966471e-01
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## [2098,]  1.627058e-01 -4.624065e-02  2.492925e-02 -7.713228e-02 -
7.982499e-02
## [2099,]  2.324699e-01  7.328160e-02 -1.224576e-01 -1.389473e-01 -
1.042951e-01
## [2100,]  2.122093e-01  4.364959e-02 -6.629786e-02 -7.551212e-02 -
1.354073e-01
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## [2101,]  5.844741e-02  1.204679e-01  3.547026e-02  7.479904e-02 -
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## [2102,] -1.544978e+00  2.609158e-01 -1.311207e-02 -6.847236e-03 -
5.437286e-01
## [2103,]  1.771161e+00 -3.229158e-01  1.227508e-01  1.003753e-01 -
8.824169e-02
## [2104,]  2.463436e-01 -1.950454e+00 -9.216957e-01  7.325873e-01
4.890132e-02
## [2105,] -3.092671e-01  3.715274e-02  5.032505e-02 -9.280918e-02
6.237419e-02
## [2106,] -3.926893e-01  2.663751e-01  1.440899e-01 -1.453439e-01
2.921847e-02
## [2107,] -4.524520e-01 -3.411593e-02  9.947806e-02  1.453562e-02 -
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## [2108,]  6.846508e-01 -8.178246e-02 -5.937489e-03 -1.489893e-01 -
4.052555e-01
## [2109,] -1.857375e-01 -6.854267e-02  1.571370e-01  7.870536e-02
2.396087e-02
## [2110,]  1.765074e-01  2.809491e-02 -3.691424e-02 -1.598144e-02 -
1.421845e-01
## [2111,]  5.412795e-01  3.590051e-01  2.733498e-01  5.329261e-02 -
1.797345e-01
## [2112,]  6.362209e-01  4.592759e-01  2.333707e+00 -1.325088e+00
1.617140e-01
## [2113,]  8.082067e-01  6.638150e-01 -1.732910e-01  9.444073e-02
6.505752e-01
## [2114,] -1.827752e+00 -8.355526e-01  2.317347e-01  3.383941e-01
2.426404e+00
## [2115,]  1.621090e-01 -6.998508e-02  6.116333e-02  2.164299e-01 -
1.823278e-01
## [2116,]  4.300602e-01 -9.632371e-02 -1.526462e-01 -3.169992e-01 -
1.149072e-01
## [2117,] -6.860333e-01  6.476751e-02 -6.831638e-02 -9.004114e-02
1.372501e-01
## [2118,]  8.015290e-01  1.937070e-02 -9.479917e-03  1.638306e-01 -
1.328051e-01
## [2119,]  6.598824e-01 -1.679990e+00 -1.057466e+00  7.421871e-01 -
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## [2120,]  2.175084e-01  1.319022e-01 -8.786145e-02 -6.870559e-02 -
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## [2121,]  4.316225e-01 -1.321470e-02  5.069304e-02 -1.096511e-01 -
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## [2122,] -7.348109e-02 -2.468523e-01  7.467644e-02  7.428860e-02
2.261983e-02
## [2123,] -2.915113e-02  7.980421e-04  8.007134e-02 -2.643421e-02 -
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## [2124,] -1.624959e-01  3.529736e-03  1.164296e-01 -1.939505e-02
7.178936e-02
## [2125,] -8.759288e-01 -2.517138e-04  2.435498e-01  4.627590e-01 -
3.615470e-01
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## [2126,]  1.989963e-01  1.090382e-01 -1.511830e-01 -1.932218e-01 -
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## [2127,]  7.477053e-01  6.913412e-01 -1.115298e-01  2.037088e-01
6.217195e-01
## [2128,]  3.316285e-02  6.860757e-02  4.531338e-02  9.754627e-02 -
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## [2129,]  1.214734e-01  2.600802e-01  4.126661e-02  6.807159e-02 -
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## [2130,]  1.319267e-01  5.933505e-02 -3.031223e-02  3.643867e-03 -
2.221979e-01
## [2131,]  9.609667e-02 -4.893759e-02  1.984090e-02  6.554263e-02 -
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## [2132,]  6.166210e-01 -4.975879e-01  1.102005e-01 -3.380782e-02 -
8.713126e-02
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## [2134,]  3.699361e-01 -4.421270e-02  1.125483e-01  4.408127e-02 -
9.329708e-02
## [2135,]  1.342886e-01 -8.700092e-02  2.692386e-02  6.781480e-02 -
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## [2136,] -6.213839e-01  2.224985e-01  7.438780e-02  1.029303e-01 -
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## [2137,]  7.881923e-01 -1.561186e+00 -9.931481e-01  7.608102e-01 -
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## [2138,]  5.398132e-02  8.897039e-02 -1.152923e-02  5.489620e-02 -
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## [2139,]  3.814965e-01  1.137834e-01  1.955804e-01  2.260350e-01 -
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## [2140,] -1.532208e-01  1.007955e-02  2.329228e-03  5.858094e-02 -
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## [2141,] -5.709769e-01  1.645234e-01  5.762991e-02 -1.096690e-01
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## [2142,]  1.963511e-01 -9.368498e-02 -1.485826e-01 -3.408255e-01 -
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## [2143,]  4.441259e-02 -3.769999e-02  7.086232e-02  9.426030e-04
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## [2144,]  3.632749e-01  1.082233e-02  1.540237e-01  1.659760e-01 -
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## [2145,] -3.243174e-01  4.932971e-01  1.504254e-01 -1.336253e-01 -
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## [2146,] -1.562861e-01 -1.358607e-02 -1.272839e-02 -2.199750e-02 -
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## [2147,] -3.623352e-02  2.791359e-02  1.000340e-01  1.413427e-01 -
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## [2148,]  2.404017e-01 -1.712682e+00 -1.325800e+00  5.004696e-01
3.716036e-02
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## [2152,]  3.601002e-01  1.822781e-01 -9.800850e-02 -2.648326e-02 -
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## [2153,]  4.032386e-01  2.260209e-01  2.627516e-01  1.683464e-01 -
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## [2154,]  7.663884e-01  6.725987e-01 -1.244507e-01  1.673454e-01
6.396238e-01
## [2155,] -6.406977e-01  7.462790e-02 -5.310292e-03  1.704667e-02
8.868313e-02
## [2156,] -5.283727e-02  6.896315e-02  1.033714e-01  1.266931e-01 -
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## [2157,] -5.015961e-01 -1.732522e+00  1.137154e+00 -5.187373e-01 -
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## [2158,] -2.172799e-02  6.193469e-02  1.389129e-01  7.482586e-03
5.672281e-02
## [2159,]  4.239392e-01  2.255538e-01  2.122109e-01  1.469332e-01 -
1.014675e-03
## [2160,] -2.426908e-01  2.048071e-01  3.816166e-01  2.090746e-01 -
2.786493e-02
## [2161,]  3.101179e-01  4.325859e-02 -1.071201e-02 -5.291584e-02 -
7.817875e-02
## [2162,]  3.256136e-01  2.984595e-01  1.132581e-01  5.781004e-02 -
1.362148e-01
## [2163,] -2.419053e-01 -5.022500e-02  1.141375e-01  3.163068e-02
3.599188e-02
## [2164,] -8.299738e-02  2.386014e-01 -1.921775e-02 -2.338623e-02 -
8.752297e-02
## [2165,]  1.810933e+00 -3.396815e-01  1.326034e-01  1.128717e-01 -
1.022356e-01
## [2166,]  4.003730e-01  1.580355e-02  1.203318e-02 -1.705742e-01 -
4.200898e-01
## [2167,] -1.498719e-01  5.616255e-03 -7.875209e-02 -1.461074e-01 -
9.715078e-02
## [2168,]  4.683151e-01 -1.667033e-02  2.886706e-02 -1.498934e-01 -
4.393685e-01
## [2169,]  4.343958e-01  2.995473e-01  7.794279e-02  6.550045e-02 -
1.758624e-01
## [2170,] -6.757240e-01 -6.072601e-02  4.494171e-02 -3.003160e-02
1.616523e-01
## [2171,] -1.070429e-01  7.282657e-04  2.456977e-02  9.372039e-02 -
1.129650e-01
## [2172,] -2.160473e-01 -1.117805e-01  5.896136e-02  7.355635e-02 -
6.613583e-02
## [2173,] -1.741671e-01  6.002800e-02  2.229904e-01  4.564977e-02
2.562223e-01
## [2174,] -1.005069e-01  1.310927e-01 -5.289912e-01 -8.425614e-01
2.406668e-01
## [2175,]  4.711018e-01 -5.923497e-03 -5.592158e-02  2.401111e-02 -
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2.830449e-01
## [2177,]  2.773342e-02  2.442510e-01  9.790246e-02 -1.838877e-01
2.121447e-02
## [2178,] -8.345299e-01 -3.441233e-02  1.872739e-03 -1.827325e-01
2.902000e-01
## [2179,] -1.224379e+00  5.067268e-01 -1.912189e-01 -6.324375e-01 -
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## [2180,]  2.437763e-01  1.235317e-01  7.120849e-02  1.254605e-03 -
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## [2181,] -7.126103e-01  6.436635e-03  5.097580e-02 -1.196218e-01
1.535285e-01
## [2182,] -1.771595e-01  2.073950e-02  6.285498e-02 -1.510381e-02
9.327363e-02
## [2183,]  4.004245e-01  3.142837e-01  1.153910e-01  1.222598e-01 -
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## [2184,] -5.740549e-01  2.818769e-01 -5.972869e-01 -1.010784e+00
3.174719e-01
## [2185,]  3.445720e-01 -1.951783e+00 -9.690071e-01  7.849257e-01
2.738679e-02
## [2186,]  5.075099e-01  3.815280e-01 -6.458516e-02 -3.407054e-01 -
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## [2187,]  1.850442e-01 -1.936391e+00 -9.447897e-01  7.190014e-01
5.000157e-02
## [2188,]  4.239859e-01  2.894702e-01  1.076476e-01  1.246734e-01 -
1.961849e-01
## [2189,]  1.168556e-02  1.500743e-01  3.093952e-02  2.771835e-02 -
1.107628e-01
## [2190,] -1.606665e-01  8.256629e-02  8.566463e-02  2.008303e-03
5.597403e-02
## [2191,]  7.544951e-01 -6.574627e-02 -3.451345e-01 -5.719872e-01 -
1.499055e-03
## [2192,] -6.595559e-01 -1.783408e+00  1.117525e+00 -5.377621e-01 -
5.223914e-02
## [2193,] -1.836548e+00 -8.447867e-01  2.286064e-01  3.453345e-01
2.418657e+00
## [2194,] -2.392554e-01  9.966889e-02  1.752123e-01 -2.595901e-02
7.258943e-02
## [2195,]  3.150024e-01  7.424594e-02 -4.696011e-03 -3.405758e-02 -
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## [2196,]  9.761234e-01 -1.570336e+00 -9.109101e-01  7.516442e-01 -
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## [2197,] -2.436405e-01  2.355379e-01  3.807118e-01  2.115223e-01 -
3.385665e-02
## [2198,] -4.125927e-01  1.855209e-01  1.798021e-01  1.525923e-01
9.900981e-02
## [2199,]  7.186408e-01  2.584416e-01  1.304701e-02 -4.231684e-01 -
9.918707e-02
## [2200,] -1.439630e-01  1.515642e-01  2.572486e-02 -1.772222e-01
7.942424e-02
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## [2201,]  4.018052e-01 -1.831206e-02 -1.455090e-01 -1.522287e-01 -
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## [2202,]  1.337175e-01 -9.158485e-02 -3.546838e-02 -6.096676e-02
4.014312e-03
## [2203,] -1.660031e+00 -2.665498e-02  1.386294e-01  2.207681e-01 -
3.878497e-01
## [2204,] -3.793205e-01 -4.739529e-01  6.253786e-01  7.072935e-01
2.535060e+00
## [2205,]  3.393210e-01  3.007422e-01  8.285057e-02  8.205958e-02 -
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## [2206,]  3.043332e-01  1.376396e-01  1.094154e-01 -1.568257e-01
4.804497e-02
## [2207,] -4.415698e-01  5.509856e-02 -2.734821e-02 -9.333918e-03 -
5.013633e-02
## [2208,] -2.981046e-02 -1.025462e-01 -1.226154e-01 -2.953378e-01 -
1.552987e-01
## [2209,]  6.416543e-01 -1.595135e+00 -9.685547e-01  7.868296e-01 -
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## [2210,]  8.017181e-02 -5.821853e-02  8.689349e-02  2.553504e-02
5.286864e-02
## [2211,] -7.229401e-02  1.116593e-01 -7.663637e-02 -3.522367e-02 -
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## [2212,] -2.000889e-01  3.843970e-01  6.195933e-02 -3.622276e-02
8.635817e-02
## [2213,]  3.659073e-01 -1.078890e-01 -1.296834e-01 -2.617390e-01 -
1.153084e-01
## [2214,] -6.539669e-01  3.456841e-02 -2.524754e-02 -1.792474e-01
1.524920e-01
## [2215,] -6.270088e-02  1.374798e-01  1.722935e-01  9.576340e-02 -
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## [2216,] -1.566274e-01  6.739749e-02  1.821993e-01 -1.868348e-02
5.702989e-02
## [2217,] -1.307831e-02  1.007235e-01  1.095989e-01  1.706252e-01 -
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## [2218,]  4.686998e-01 -1.943483e-02  1.044889e-02 -1.777907e-01 -
4.326861e-01
## [2219,]  1.514522e+00 -1.676131e-01  2.272354e-01  2.750280e-01
4.164642e-02
## [2220,] -7.547569e-01  2.493734e-01  1.452318e-01 -1.319908e-01
5.420947e-02
## [2221,] -5.821441e-01  1.580630e-01  2.846586e-02 -3.456753e-02
1.319866e-01
## [2222,] -2.287456e-01 -1.445375e-01  1.652617e-02  1.083645e-01
5.347852e-03
## [2223,]  3.261989e-01  2.736233e-01  1.048112e-01  2.860106e-02 -
1.084839e-01
## [2224,] -3.070673e-01 -1.145195e-01  1.863078e-02 -7.760885e-02
1.038050e-01
## [2225,]  2.162042e-01  1.503403e-01  5.930874e-02 -1.602602e-01
7.654889e-02
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## [2226,]  2.111083e-01 -9.823597e-02 -4.851554e-02  4.893671e-02 -
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## [2227,]  4.491557e-01  2.036091e-01  2.373729e-01  2.130239e-01 -
3.921352e-02
## [2228,] -1.652367e-01  7.061636e-02  1.461175e-02 -1.062663e-01
8.862900e-02
## [2229,] -2.478374e-01 -1.397300e-01 -1.449684e-01 -2.297637e-01
9.420031e-02
## [2230,] -5.038663e-01  4.973356e-01  1.222672e-01 -1.621851e-01 -
5.125997e-02
## [2231,]  4.913652e-01  9.806685e-02  1.758783e-01  1.700830e-01 -
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## [2232,]  2.530051e-01 -9.460178e-02 -1.196112e-01 -2.233883e-01 -
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## [2233,] -2.595250e-01  1.393416e-02  4.138759e-02 -3.792919e-02 -
2.017072e-02
## [2234,]  2.076227e-01  1.031301e-01 -1.387751e-01 -1.783797e-01 -
7.991863e-02
## [2235,]  1.671533e-01 -8.678458e-02  3.213922e-02  1.780040e-01 -
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## [2236,]  3.380704e-01  1.185878e-01  1.200242e-01  7.330290e-02 -
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## [2237,] -3.961731e-02  4.424832e-01  1.204455e-01  4.326695e-02
5.046126e-02
## [2238,]  5.494867e-02  3.824345e-02  5.568625e-02 -2.688212e-02 -
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## [2239,]  1.736232e+00 -3.259179e-01  1.641199e-01  1.638756e-01 -
1.018314e-01
## [2240,] -2.090775e-01 -2.821653e-02  1.156127e-01 -5.946978e-05
6.421619e-02
## [2241,] -1.492394e-01  5.663797e-02 -4.867635e-02 -1.050603e-02 -
1.372777e-01
## [2242,]  1.162917e-02  2.916098e-01  6.440802e-03  3.408836e-02 -
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## [2243,] -1.427144e-02  2.807332e-03  1.374442e-01  3.738672e-02 -
2.865625e-02
## [2244,] -1.499163e-01  2.712526e+00 -1.050226e+00  8.876921e-01
4.706808e-01
## [2245,]  2.525875e-01  1.763704e-01 -1.189180e-01 -3.868483e-02 -
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## [2246,]  5.931007e-02  6.533554e-01 -1.464938e-01  3.132365e-01
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## [2247,] -1.289147e-01  2.959926e-01  5.444566e-02 -3.199053e-02
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## [2248,] -4.664997e-01  1.912970e-01  6.644707e-02 -1.435892e-01
5.436038e-02
## [2249,]  2.527705e-01 -1.077512e-01 -1.053610e-02 -1.092982e-01 -
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## [2250,]  1.107163e-01  1.757680e-02 -8.699327e-02 -8.863097e-02 -
1.075598e-01
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## [2251,]  4.603937e-01  3.937539e-02 -5.475506e-03 -1.441154e-01 -
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## [2253,]  1.448212e+00 -1.936915e-01 -3.639629e-02 -2.500709e-02
1.550507e-02
## [2254,]  6.555553e-02 -1.283428e-01  7.034663e-03  1.280604e-01 -
1.157155e-01
## [2255,]  5.050135e-01  1.013575e-01  2.982317e-02 -1.811925e-01 -
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## [2256,]  2.794983e-01  6.558251e-02  1.441613e-01 -1.594499e-03
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## [2257,] -1.436839e+00 -2.319562e-02 -1.043473e-02  1.768093e-01 -
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## [2258,]  1.733415e-01 -1.305167e-01  3.358937e-02  2.652711e-02 -
8.572426e-02
## [2259,] -1.965146e-01 -1.343349e-01  3.479490e-02  1.471996e-01 -
2.031747e-02
## [2260,]  1.034142e+00  6.252269e-01  2.859480e-02 -9.433131e-02 -
9.831794e-02
## [2261,]  1.236631e-01  2.196549e-01  2.174378e-01  3.463061e-02 -
1.675980e-02
## [2262,]  6.885854e-01 -1.680772e+00 -1.079947e+00  7.080838e-01 -
7.222272e-02
## [2263,]  4.015353e-01  1.108781e-01  3.490036e-03 -2.221572e-01 -
3.066944e-02
## [2264,] -1.420284e-01  1.826937e-03  1.223797e-01  5.972612e-02
8.482546e-02
## [2265,]  5.472359e-02  1.801746e-01  2.971508e-01  4.428448e-02 -
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## [2266,]  5.843302e-02  6.456451e-01 -1.331696e-01  3.180123e-01
3.392736e-01
## [2267,] -9.671618e-01  1.288873e-01  4.348112e-02  9.518573e-02 -
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## [2268,] -8.146607e-01  1.334154e-01  1.616677e-01 -5.276213e-02
1.132303e-01
## [2269,] -7.632961e-01  3.014542e-01 -3.627210e-01 -4.542303e-01
6.345973e-02
## [2270,]  3.532467e-01 -8.528768e-02 -3.282478e-01 -5.742962e-01 -
6.321464e-02
## [2271,] -2.203818e-01  1.012567e-01  4.482424e-02 -4.702727e-02
7.504946e-02
## [2272,]  7.022996e-01  2.118217e-01 -4.450132e-02 -1.367955e-01
1.412544e-02
## [2273,]  1.294561e+00 -2.871717e-01  3.947123e-02  1.047298e-01 -
1.402461e-02
## [2274,] -1.010392e+00 -1.687045e-01  2.734004e-01  1.995684e-01
4.518321e-03
## [2275,]  1.737721e+00 -3.167493e-01  1.793820e-01  2.006075e-01 -
1.090250e-01
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## [2276,] -3.337454e-01  3.297686e-01  3.320091e-02 -1.170269e-01
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## [2277,]  3.164345e-01 -1.159222e-01  3.640437e-02 -5.109245e-02 -
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## [2278,]  7.123901e-01 -1.570856e+00 -9.940194e-01  7.628781e-01 -
8.488351e-02
## [2279,] -4.261057e-01  3.895734e-02 -2.836216e-02 -2.782886e-03 -
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## [2280,]  2.121562e-01 -1.204708e-02  2.310624e-02  7.874455e-02 -
4.433711e-02
## [2281,] -1.445396e-01 -1.553439e-01 -4.173907e-02  1.956430e-02
3.233260e-03
## [2282,] -1.313716e+00  1.480857e-02 -1.505898e-02  1.953328e-01 -
3.784260e-01
## [2283,] -1.579433e-01  7.682060e-02  1.713777e-01 -3.657361e-02
6.257557e-02
## [2284,] -1.692167e+00  1.308614e+00  2.020001e-01 -2.607412e-01
2.584490e-01
## [2285,]  3.781890e-01  2.886866e-01  1.689871e-01  1.347487e-01 -
1.463250e-01
## [2286,] -1.386882e-01  1.007767e-01  5.210980e-02  7.812775e-02 -
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## [2287,]  8.276651e-02  9.980491e-02 -7.184366e-02 -9.897136e-02 -
8.422774e-02
## [2288,] -3.954012e-01 -1.698048e-01  9.315875e-02  1.409472e-01 -
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## [2289,]  4.748501e-01  3.805685e-01  7.185082e-04 -2.338333e-01 -
1.054831e-01
## [2290,] -6.964723e-01 -3.297350e-01  6.142656e-01  7.275059e-01
2.465465e+00
## [2291,] -1.288183e+00  3.360813e-01 -1.894962e-01 -2.871439e-01 -
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## [2292,] -4.238480e-01  3.361386e-02  1.432437e-03  4.630406e-02 -
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## [2293,] -5.975678e-02 -1.652287e-02  1.593161e-01  9.471403e-02 -
3.987439e-02
## [2294,] -5.740713e-01 -9.703803e-02  9.742041e-02  2.003182e-02 -
4.619480e-02
## [2295,] -5.046062e-02  6.385368e-02  5.850331e-02  3.668143e-02 -
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## [2296,]  2.733774e-01  7.657759e-03  1.825400e-03  3.419870e-02 -
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## [2297,] -8.845263e-01  1.413532e-01  7.717149e-02  4.516512e-02 -
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## [2298,] -7.520720e-01 -1.778973e+00  1.164894e+00 -4.607695e-01 -
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## [2299,] -1.518525e-01 -1.716952e-02 -2.504817e-02 -5.199797e-02 -
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8.748289e-02
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## [2302,]  3.464859e-01  3.349705e-02  8.570481e-03  1.038230e-01 -
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## [2303,]  3.395836e-01 -2.498086e-01  1.617369e-01  4.472259e-01 -
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## [2304,]  5.177332e-02 -5.468362e-02 -3.847466e-01 -4.543766e-01 -
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## [2305,] -2.810726e-01 -1.160886e-03  8.543140e-02  3.542054e-02 -
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## [2309,]  7.736097e-01 -1.757654e-01  6.648745e-02  9.534056e-02 -
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## [2310,] -1.176630e+00 -1.860008e-01  2.578919e-02  1.411425e-01 -
5.951715e-01
## [2311,]  1.355447e+00 -1.912095e+00  1.204502e+00 -5.252632e-01
1.258459e-01
## [2312,]  2.962571e-01 -1.504360e-01 -1.099382e-02  1.396945e-01 -
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## [2313,] -8.556395e-01 -8.025990e-02 -7.911200e-02 -1.853715e-01
2.431336e-01
## [2314,]  6.606646e-01 -1.752722e+00  1.096837e+00 -8.754258e-01
3.280924e-01
## [2315,] -4.401449e-01 -1.060037e-01 -5.262345e-02 -6.635652e-02
1.126500e-01
## [2316,]  2.726008e-01  1.339036e-01  2.033791e-01  9.562540e-02 -
8.864039e-02
## [2317,]  5.588788e-02 -1.602605e-01  7.295655e-02  1.165058e-01
5.955439e-02
## [2318,]  1.396879e+00  3.009972e-01  1.219976e-01 -2.998618e-02
1.710275e-01
## [2319,]  7.758264e-02  7.793881e-02  2.485847e-01  1.172965e-01 -
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## [2320,]  1.437919e+00  2.116306e-01  7.479358e-02  3.769511e-01 -
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## [2321,]  1.427663e+00  2.015236e-01 -1.468209e-01 -1.944875e-01
1.015242e-01
## [2322,] -1.381126e+00  2.039823e-01  8.509846e-02 -2.320515e-01
1.513870e-01
## [2323,]  1.993319e-01  2.422726e-02 -4.009229e-02  1.031871e-02 -
2.245024e-01
## [2324,]  4.324758e-01 -7.134291e-02 -5.752430e-02 -1.699646e-01 -
8.346950e-02
## [2325,]  4.563436e-01  9.194871e-02 -2.874015e-02 -8.106983e-02 -
8.706044e-02
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1.230131e-01
## [2328,]  1.744786e-01  1.331892e-01 -4.202748e-02 -9.229432e-03 -
3.338485e-02
## [2329,] -1.926551e-01  5.360243e-01 -4.307714e-03 -5.143529e-01 -
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## [2331,]  4.248520e-01  1.061439e-01 -2.790796e-02 -2.682044e-01 -
3.068650e-02
## [2332,]  4.611443e-01 -2.069748e-01  4.262875e-02  1.383193e-01 -
2.030475e-01
## [2333,]  6.251727e-01  1.426034e-01  3.245857e-02  1.783515e-01 -
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## [2334,]  2.314681e-01 -1.126583e-01 -8.470761e-03 -1.048765e-01 -
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## [2335,] -5.474902e-02  5.284062e-02  7.184111e-02  7.545442e-02 -
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## [2336,]  1.369291e+00  3.942767e-01 -2.643136e-01 -1.689178e-02 -
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## [2337,]  4.363214e-01 -2.280847e-02  1.259582e-01  1.790646e-02 -
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## [2338,] -4.076072e-01  1.478191e-01  1.887857e-02 -5.188001e-02
3.180342e-02
## [2339,] -5.364796e-01  3.774265e-02  7.750561e-03 -2.314962e-01
1.028117e-01
## [2340,]  4.116910e-01  8.811707e-02  1.441423e-01  1.481986e-01 -
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## [2341,]  2.790737e-01  2.691967e-01  1.903279e-01  2.487569e-02 -
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## [2342,] -9.799893e-01  1.745876e-01  8.616883e-02  7.866534e-02 -
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## [2343,] -4.691379e-01  2.172431e-01 -9.478882e-02 -1.094296e-01
7.012527e-02
## [2344,]  1.592797e-01 -1.660573e-02  8.364563e-02  5.655711e-02
2.205884e-02
## [2345,]  4.215132e-01  9.549110e-02  1.657647e-01  1.785497e-01 -
5.974956e-02
## [2346,]  1.871911e-01 -6.506003e-02  4.623673e-02  2.042934e-01 -
1.494232e-01
## [2347,] -5.816626e-01 -1.739426e+00  1.135915e+00 -4.969599e-01 -
5.609028e-02
## [2348,]  3.574115e-01  2.631380e-01  1.227947e-01  7.453899e-02 -
1.362679e-01
## [2349,]  4.191014e-01 -5.015783e-02  7.603727e-02 -3.825131e-02 -
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2.784919e-02
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## [2352,]  9.913896e-01  6.658634e-01  6.811806e-02 -3.226097e-02 -
9.987221e-02
## [2353,]  1.129132e-02  1.552273e-01  1.064462e-02  2.860341e-02 -
1.332799e-01
## [2354,] -2.766290e-01  8.567149e-02  1.416252e-04  2.520045e-02 -
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## [2355,] -1.118834e+00 -1.738628e-01  6.431098e-03  1.565659e-02 -
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## [2356,]  3.039170e-01 -1.632386e+00  1.122118e+00 -8.930749e-01
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## [2357,] -9.144158e-01  1.431765e-01  1.063252e-01  9.864339e-02 -
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## [2358,] -6.697534e-01  4.487795e-02 -6.985030e-02 -9.181576e-02
1.410716e-01
## [2359,] -1.101910e-01 -3.404414e-02 -2.776867e-03  4.422770e-02 -
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## [2360,] -7.873698e-03 -1.596148e-01  1.021383e-01  1.454714e-01 -
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## [2361,] -3.115085e-01  7.628561e-02  3.440215e-02 -1.419555e-01 -
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## [2362,] -1.412393e-01 -1.527999e-02 -7.906236e-02 -1.148147e-01 -
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## [2363,]  3.200735e-01  5.063270e-02  2.106300e-01  2.400294e-01 -
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## [2364,]  2.219598e-01  7.782564e-02  1.166178e-01 -2.141010e-02
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## [2365,]  2.520125e-02  1.449307e-01 -1.260632e-03  1.469017e-02 -
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## [2366,] -1.892926e+00 -8.441475e-01  2.794146e-01  4.408003e-01
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## [2367,] -1.613023e-01  1.544977e-02  4.068664e-02  1.182211e-01 -
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## [2368,]  2.567697e-01 -1.162417e-01  2.080900e-02 -6.244322e-02 -
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## [2369,]  2.474441e-01 -2.251672e-02 -1.324653e-01 -2.220688e-01 -
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## [2370,]  1.516736e-01 -1.765408e+00 -8.376172e-01  7.233342e-01
2.264129e-01
## [2371,] -8.184926e-02 -5.683101e-02  1.458734e-02 -7.985832e-03 -
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## [2372,] -4.572079e-02  3.103977e-02 -9.284784e-02 -1.128129e-04 -
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## [2373,]  2.318276e-01 -1.686295e+00 -1.248141e+00  6.220252e-01
9.911104e-03
## [2374,]  3.465950e-01  2.726109e-01  1.460050e-01  1.108960e-01 -
1.476105e-01
## [2375,] -5.576227e-01  8.267356e-02 -6.903664e-03 -1.291159e-01
1.599970e-01
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## [2376,] -1.450359e+00 -6.092740e-03 -5.441726e-03  1.974698e-01 -
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## [2377,] -5.356335e-01 -1.738974e+00  1.162489e+00 -4.586220e-01 -
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## [2378,]  8.821033e-01 -1.565717e+00 -8.321945e-01  8.995769e-01 -
1.117749e-01
## [2379,]  6.524710e-01 -7.625922e-02 -1.457280e-02 -1.527176e-01 -
4.019406e-01
## [2380,]  3.139556e-01 -5.108508e-02 -1.001059e-01 -2.172680e-01 -
9.040888e-02
## [2381,]  1.136359e-01  6.780146e-02 -5.771384e-02 -2.171232e-02 -
2.172638e-01
## [2382,] -1.223395e-01  1.125937e-01  5.173664e-03 -7.502003e-03 -
9.938158e-02
## [2383,] -4.388207e-01  1.713260e-01  6.508644e-02 -1.444166e-01
6.064531e-02
## [2384,]  5.716048e-01  2.547906e-02 -6.273070e-04  1.301999e-01 -
1.744250e-01
## [2385,]  4.466632e-01 -6.509727e-03 -7.555185e-02 -1.691252e-01 -
1.223552e-01
## [2386,]  5.274766e-01  2.107092e-01  4.830064e-03 -2.768066e-01 -
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## [2387,] -8.084506e-01  4.373481e-02 -1.837196e-02 -4.730670e-03
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## [2388,] -1.842558e+00 -8.565954e-01  2.442833e-01  3.780848e-01
2.407095e+00
## [2389,]  3.055118e-01 -1.193288e-01 -3.772869e-02 -1.061010e-01 -
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## [2390,]  3.145043e-01 -2.264229e-01  7.705132e-02  1.623138e-01 -
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## [2391,] -1.355138e-01  3.642658e-02 -5.922807e-02 -2.133026e-02 -
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## [2392,]  1.708538e+00 -3.267752e-01  1.323271e-01  1.234886e-01 -
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## [2393,] -3.109309e-01  1.443962e-01  9.553815e-03 -2.332782e-02
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## [2394,]  4.131315e-01  7.338794e-02  1.838142e-01  2.106421e-01 -
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## [2395,]  1.345940e+00 -2.458170e-01  1.453199e-03  2.499569e-02
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## [2396,]  3.630734e-02 -1.920783e-01  1.688399e-02 -1.488824e-02
4.176013e-02
## [2397,] -2.341403e-01  2.791447e+00 -1.085956e+00  8.976851e-01
5.088243e-01
## [2398,] -8.935767e-01 -9.232914e-02 -1.264886e-01 -2.469136e-01
2.311571e-01
## [2399,] -5.867522e-01 -8.487070e-02  9.293510e-02  9.248740e-03 -
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## [2400,]  1.346639e+00 -3.043045e-01  8.613565e-02  1.741174e-01 -
4.799668e-02
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## [2401,] -6.018211e-01  2.776554e-02  2.701078e-02 -1.344037e-01
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## [2402,] -2.876584e-01  3.160202e-02  1.318411e-01  9.797082e-02 -
4.330524e-02
## [2403,] -6.198379e-03 -2.191683e-01  2.838829e-02  3.961513e-02
2.016485e-02
## [2404,]  9.496502e-02 -5.980226e-02  6.001235e-02  1.317604e-01 -
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## [2405,]  3.603995e-01  6.187376e-02  3.178673e-02  9.591975e-02 -
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## [2406,]  6.085411e-02 -6.435327e-02  6.618691e-02  1.444388e-01 -
2.163733e-01
## [2407,] -6.487776e-01 -1.743200e+00  1.125638e+00 -4.963548e-01 -
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## [2408,]  5.054409e-01  2.843451e-01  2.190158e-01  2.028797e-01 -
4.319349e-02
## [2409,]  5.362994e-01 -1.976306e-01  7.448317e-02  1.707778e-01 -
2.216650e-01
## [2410,] -1.554476e-01  7.735940e-02  1.782331e-02  4.242970e-02 -
1.185567e-01
## [2411,] -2.108856e+00  2.399281e-01  1.410010e-01  1.824682e-01 -
3.352687e-01
## [2412,]  1.018288e+00  2.592637e+00 -1.168397e+00  1.017638e+00
2.454734e-01
## [2413,] -1.427459e-01 -6.813195e-02 -2.747087e-02  1.161670e-02 -
2.961468e-03
## [2414,] -2.175225e-01  1.780767e-01  8.270086e-01  8.520393e-01
3.213810e-01
## [2415,]  5.057593e-02 -7.603634e-02  7.889046e-02  3.438668e-02
4.761173e-02
## [2416,]  2.139278e-01  6.356460e-02 -6.713696e-02  3.926824e-02 -
1.889245e-01
## [2417,] -9.363811e-01  1.327708e-01  4.149238e-02  1.657787e-02 -
6.259319e-01
## [2418,] -6.713006e-01 -1.790686e+00  1.125342e+00 -5.228667e-01 -
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## [2419,]  9.433649e-01  6.755436e-01  8.680100e-02  6.785681e-03 -
1.156631e-01
## [2420,] -8.121149e-01  8.805176e-03 -1.216266e-02 -7.779291e-02
1.290480e-01
## [2421,] -1.706371e-01  5.894470e-02  6.134812e-02  8.481001e-02 -
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## [2422,] -1.604597e+00 -1.572167e-01 -2.412549e-01 -2.055346e-01 -
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## [2423,]  2.322243e-01  7.288395e-02  9.044400e-02 -6.910970e-02
5.135977e-02
## [2424,]  1.357616e-01  8.180718e-02  2.833732e-02  9.522336e-02 -
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## [2426,]  1.421819e+00 -1.849378e-01 -8.721953e-03  2.662019e-02
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## [2427,] -9.360166e-01  1.434546e-01  3.833994e-02  2.932510e-03 -
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## [2428,]  2.324569e-01 -2.882821e-02 -5.999873e-02 -9.973178e-02
2.462861e-02
## [2429,] -1.929367e-02 -4.023976e-02 -3.170115e-01 -6.241718e-01
1.633551e-01
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## [2431,]  4.485642e-01 -1.775376e-01  9.830128e-03  8.758630e-02 -
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## [2432,]  2.439014e-01  4.120856e-02  1.259507e-01 -1.904185e-02
3.700004e-02
## [2433,]  1.109894e-01  2.485566e-02 -8.018836e-02 -5.839141e-02 -
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## [2434,]  3.245905e-01  1.436084e-01 -5.532583e-03 -3.020116e-02 -
9.771587e-02
## [2435,]  4.971487e-01  1.613161e-01  2.320943e+00 -1.277015e+00
1.193677e-01
## [2436,] -1.092854e-01 -1.695582e+00 -8.396065e-01  6.299803e-01
2.408337e-01
## [2437,]  3.491360e-01 -8.797174e-02 -1.789736e-01 -3.448555e-01 -
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## [2438,] -2.439620e-01  3.215502e-02 -6.775337e-02 -1.349915e-01
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## [2440,]  6.199660e-01 -7.305116e-02  2.802791e-02 -7.755126e-02 -
4.179027e-01
## [2441,] -5.347826e-01  4.568963e-02  9.512042e-03  7.031092e-02 -
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## [2443,] -5.219089e-02  2.732632e-02  4.398109e-02  2.112357e-02 -
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## [2444,]  2.697160e-01 -1.620437e+00  1.138178e+00 -8.677393e-01
3.306664e-01
## [2445,]  1.937050e-01  2.028614e-03  4.713945e-02  8.952839e-02 -
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## [2446,]  8.480324e-02  2.882884e-02 -2.937108e-02  2.577285e-02 -
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## [2447,]  7.614815e-02 -1.329030e-01  7.297753e-02 -8.024012e-03 -
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## [2451,]  3.056979e-01 -9.378282e-02 -1.635973e-01 -3.017950e-01 -
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## [2456,]  2.047155e-01 -9.441956e-02 -1.264337e-03  1.343790e-01 -
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## [2460,]  3.542489e-01 -1.631159e-02 -8.525257e-02 -1.656212e-01 -
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## [2461,] -7.113694e-03  1.521131e-03 -2.353595e-01 -5.870668e-01
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## [2462,] -6.681635e-01 -1.453102e-01  7.037258e-02  1.007715e-01 -
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## [2463,] -2.998683e-01 -2.332719e-01 -8.322235e-02 -6.043231e-02
9.671275e-02
## [2464,]  6.404470e-01 -9.058618e-02  6.158440e-02 -2.365783e-02 -
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## [2465,] -6.893187e-01 -2.276736e-02  5.577713e-02 -5.891801e-02
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## [2466,]  2.782192e-01 -3.055068e-02 -2.740165e-02 -1.168100e-01 -
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## [2467,] -4.483138e-01 -1.615211e-01  4.545581e-02  7.132112e-02 -
1.875905e-01
## [2468,] -1.976969e-02 -1.723298e+00 -8.352475e-01  7.507335e-01
2.254699e-01
## [2469,] -9.128959e-01 -9.850532e-03 -7.693961e-02 -2.568856e-01
2.299734e-01
## [2470,] -2.443733e-01  2.025082e-02  1.454705e-01  1.330018e-01 -
7.339680e-02
## [2471,] -1.183152e-01  6.465405e-02  7.247471e-02  9.616921e-02 -
1.495271e-01
## [2472,] -1.078763e-01  5.681100e-02 -2.583327e-02  1.540736e-02 -
1.529185e-01
## [2473,] -1.675896e+00  1.862521e-01 -4.515295e-01 -3.822027e-01 -
3.163028e-01
## [2474,] -3.105210e-01  7.505793e-02 -3.018045e-02 -3.977670e-02 -
1.435933e-01
## [2475,]  4.678060e-01  3.248893e-01  1.562470e-01 -1.198696e-01 -
9.964183e-02
```

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## [2476,]  1.453258e+00  5.069074e-01 -6.182407e-02  4.344908e-01
3.819222e-01
## [2477,]  2.512584e-01  3.672453e-02 -1.297657e-01 -2.559444e-01 -
8.061694e-02
## [2478,]  2.189916e-01 -3.631514e-02 -1.072041e-01  5.878776e-02 -
2.018904e-01
## [2479,]  1.316928e+00 -2.266430e-01  2.631486e-01  3.344959e-01
5.471273e-02
## [2480,]  2.042846e-01  3.220817e-02 -2.699299e-02  9.123907e-02 -
2.620909e-01
## [2481,]  2.965756e-01 -8.743390e-02 -5.162805e-02 -1.432519e-01 -
1.006534e-01
## [2482,] -7.063301e-01  6.727677e-02  5.004033e-03 -3.914832e-02
1.018950e-01
## [2483,]  1.133906e-01  3.406156e-02 -1.324647e-02  2.787320e-02 -
2.636720e-01
## [2484,]  2.668520e-01  2.101241e-01 -1.011910e-01 -3.044632e-02 -
1.829005e-01
## [2485,]  3.134031e-01  1.119956e-01 -1.921775e-01 -1.067281e-01 -
1.885985e-01
## [2486,] -1.630695e-01 -1.754275e+00 -8.556104e-01  7.140708e-01
2.466614e-01
## [2487,]  2.162166e-01 -1.510600e-01 -4.963918e-02 -9.266061e-02 -
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## [2488,]  2.566455e-01  7.701313e-02 -1.116387e-01 -1.162081e-01 -
1.218546e-01
## [2489,]  3.415401e-01 -1.959786e-02  5.428750e-02  3.597784e-02 -
1.123379e-01
## [2490,]  4.899977e-02  5.608241e-02  1.269872e-01  2.030963e-01 -
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## [2491,]  6.772671e-02  1.250859e-01  1.383563e-02  7.559153e-03 -
1.280702e-01
## [2492,]  3.966310e-04 -8.551090e-01  1.874976e-01  2.260781e-02 -
2.785609e-01
## [2493,]  1.343433e-01  3.352873e-01  3.828324e-02  1.688742e-02 -
1.596311e-02
## [2494,]  2.992517e-01  1.494250e-03  1.584208e-01  1.018002e-01 -
5.476122e-02
## [2495,]  4.444595e-01  1.536829e-02 -1.083652e-01 -1.792516e-01 -
1.548567e-01
## [2496,]  1.473657e+00 -1.786810e-01  2.192211e-01  2.673650e-01
4.917105e-02
## [2497,]  3.308789e-01  8.604830e-02  5.143577e-02  3.460886e-02 -
1.085486e-01
## [2498,] -6.402958e-01  4.429995e-02 -1.272644e-02 -1.518972e-01
4.313648e-02
## [2499,] -1.352618e+00  4.571711e-02 -3.216913e-02  1.721998e-01 -
3.716022e-01
## [2500,] -4.798478e-01  1.391854e-01 -1.952441e-02 -1.226843e-01
1.430025e-01
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## [2501,]  9.593566e-02  8.249573e-02  9.079899e-03  4.180985e-02 -
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## [2502,]  1.737686e+00 -3.566239e-01  1.876909e-01  2.159588e-01 -
1.168456e-01
## [2503,]  1.424882e-01 -1.275407e-01  3.642676e-02  5.455692e-02 -
9.137795e-02
## [2504,]  4.739499e-01  4.969550e-02 -7.704618e-02 -8.624944e-02 -
1.289538e-01
## [2505,] -1.788350e-01 -2.335607e-01  7.745175e-02  1.057547e-01
3.090817e-02
## [2506,]  3.978614e-01  8.005009e-02  1.958823e-01  2.570880e-01 -
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## [2507,]  5.404662e-01  2.013211e-01 -3.729215e-02 -8.170185e-02
2.126095e-02
## [2508,] -2.691767e-01 -1.179658e-02 -4.256483e-02 -7.575699e-02 -
2.088244e-03
## [2509,] -1.797661e-01  5.811118e-02  1.542703e-01  8.514734e-02 -
4.218237e-02
## [2510,] -3.713133e-01  3.032092e-01 -5.819187e-01 -9.683753e-01
2.653154e-01
## [2511,]  2.580590e-01 -2.487772e-02 -1.192232e-01 -1.811113e-01 -
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## [2512,] -1.846910e+00  2.963083e-01  1.012398e-01 -1.623612e-01
1.743195e-01
## [2513,]  3.173886e-01 -2.269792e-02  8.525009e-02  9.820025e-02 -
1.293364e-01
## [2514,] -3.623759e-01 -1.767768e-01 -3.076137e-02 -5.168205e-02 -
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## [2515,] -1.016201e+00  1.636119e-01  1.806938e-02 -3.226796e-03 -
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## [2516,] -4.840033e-02  5.983351e-02  6.366684e-03 -4.764961e-02 -
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## [2517,] -7.126617e-01  3.995539e-02 -9.058018e-02 -1.808996e-01
1.485818e-01
## [2518,] -2.648197e+00  2.257066e-01 -6.896404e-02 -4.251104e-02 -
5.607886e-01
## [2519,] -6.512189e-01 -2.778809e-02  1.455498e-01  8.955581e-02 -
1.028819e-01
## [2520,]  4.215937e-01  1.137765e-01 -8.777997e-03 -2.168150e-01 -
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## [2521,]  9.158165e-01 -1.653242e+00 -9.314606e-01  8.589545e-01 -
1.171260e-01
## [2522,] -3.828541e-01 -2.479814e-01 -1.074759e-01 -1.980547e-01
1.984714e-01
## [2523,]  1.487941e+00  9.940627e-02  2.626282e+00  4.365477e+00 -
1.147516e+00
## [2524,] -1.052013e+00 -1.202478e-01 -5.349827e-01 -3.495747e-01
1.192950e-01
## [2525,]  1.591411e+00 -3.862363e-01 -2.989209e-02 -1.505820e-02 -
4.613490e-02
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## [2526,]  2.820778e-01 -1.366142e-01 -1.254562e-01 -1.090020e-01 -
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## [2527,] -1.383859e+00 -1.546145e-02  1.020341e-01  4.133942e-01 -
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## [2528,] -3.344691e-01 -1.717736e-01 -9.635049e-02 -1.725919e-01
1.217037e-01
## [2529,]  6.639864e-02  1.387462e-01  4.593465e-02 -1.156981e-01 -
9.945954e-02
## [2530,]  2.008005e-01 -4.030270e-02 -1.219268e-02  4.680614e-02 -
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## [2531,]  4.541640e-01  4.646520e-02  9.646896e-02  4.625301e-02 -
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## [2532,]  3.490156e-01 -6.134370e-02 -1.701028e-02  5.215573e-02 -
1.877200e-01
## [2533,]  7.898336e-01 -9.651388e-03 -5.933164e-02  1.245863e-01
1.275121e-01
## [2534,] -1.081506e+00 -2.860844e-01 -5.496053e-02 -5.626980e-02
2.157864e-01
## [2535,]  8.341914e-02 -7.419001e-02  1.015047e-01  3.123800e-02
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## [2536,]  1.772214e+00 -3.740783e-01  6.913421e-02  1.399959e-01 -
1.990981e-02
## [2537,]  1.178227e-01 -2.450928e-01 -5.293168e-02  6.230227e-02 -
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## [2538,]  4.190259e-01  1.801979e-01 -2.108326e-01 -5.612252e-01 -
1.859179e-02
## [2539,]  1.226841e-03 -1.132962e-01 -1.309001e-01 -1.166176e-01 -
5.646823e-02
## [2540,] -7.692841e-01  1.399115e-01 -5.318996e-01 -4.151420e-01 -
7.175742e-02
## [2541,]  7.595610e-02 -5.246313e-03  5.624054e-02 -4.852753e-02 -
5.304596e-02
## [2542,]  4.685013e-01 -3.444103e-02 -5.353465e-02  6.011819e-02 -
1.522222e-01
## [2543,] -8.781736e-01  1.408167e-01  1.518615e-02 -4.548580e-02 -
4.801700e-01
## [2544,]  2.152628e-01  6.356171e-02  1.401097e-02  1.473255e-01 -
1.085071e-01
## [2545,]  2.096932e+00 -2.006656e-02 -4.105230e-02 -5.559963e-02 -
2.752081e-02
## [2546,]  3.312878e-01 -1.619996e-02  1.168154e-01  4.447737e-02
5.656035e-02
## [2547,]  1.547261e-01 -1.273047e-01  8.196123e-03  2.040414e-01 -
2.267795e-01
## [2548,]  1.047248e-01  4.319810e-01  2.616162e-01 -1.641466e-01 -
3.812448e-02
## [2549,]  1.358386e-01 -8.499083e-02 -1.346468e-02  4.656555e-02 -
7.873384e-02
## [2550,]  2.858936e-01 -6.998346e-02 -1.150163e-01 -5.511993e-02 -
1.349572e-01
```

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## [2551,] -1.053071e+00 -1.842630e-01 -2.045095e-01 -1.785580e-01 -
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## [2552,]  7.937906e-01  2.063843e-01 -2.367777e-01 -2.991681e-01 -
1.205380e-01
## [2553,] -1.074004e+00  1.910686e-01 -6.536968e-02 -2.273786e-01 -
5.079699e-02
## [2554,]  1.596305e-01 -6.428432e-02 -1.824669e-01 -2.024756e-01
4.710562e-02
## [2555,]  3.398744e-01 -5.601297e-01 -6.150740e-01 -1.230390e+00
3.009453e-01
## [2556,]  3.090050e-01 -6.100593e-02  1.335832e-01  9.454431e-02
6.449197e-02
## [2557,]  1.931560e-01 -3.408089e-02 -4.083107e-01 -8.410276e-01
2.859897e-01
## [2558,] -1.226862e+00  4.259442e-02 -1.628727e-01  4.581005e-02 -
2.084578e-01
## [2559,]  7.272941e-01 -1.778537e+00 -1.160002e+00  6.200167e-01 -
2.353822e-01
## [2560,]  3.084545e-01  5.425027e-02 -3.187538e-02  1.299358e-02 -
1.027685e-01
## [2561,]  2.055220e+00 -2.856833e-01  1.914106e-01  1.687641e-01 -
1.090730e-01
## [2562,]  4.375068e-01  6.234246e-02  1.189454e-01  1.526584e-02 -
1.057902e-01
## [2563,]  3.970240e-01 -3.446580e-01 -3.102336e-01 -3.343752e-01 -
9.706596e-03
## [2564,]  2.405887e-01 -2.132139e-01 -4.362061e-02  6.890622e-02 -
3.894167e-02
## [2565,] -9.057199e-01 -6.192976e-01  4.165299e-01  4.365031e-01
2.856443e+00
## [2566,]  4.688225e-01  1.302108e-01  1.359343e-01  1.990558e-01 -
2.124188e-01
## [2567,]  1.122724e-02 -1.113072e-01  6.057044e-02  3.490055e-02
5.778086e-02
## [2568,]  4.659940e-01  4.794402e-02  4.584201e-02  4.890714e-02 -
8.182422e-02
## [2569,]  4.291069e-01 -1.850295e+00 -1.278515e+00  2.898446e-01
9.772236e-02
## [2570,] -7.628469e-01 -1.330168e-01  2.109964e-02 -3.431087e-02
1.015186e-01
## [2571,]  7.194385e-01  5.464632e-02  7.722023e-02  1.677895e-01 -
2.121055e-01
## [2572,]  7.192466e-01 -5.563132e-01 -1.762528e-01 -3.252414e-01
3.709556e-01
## [2573,]  8.554405e-02 -8.286109e-02 -5.699589e-02  5.496243e-02 -
1.355704e-01
## [2574,] -8.686426e-02 -6.903755e-02 -5.473078e-02 -4.686814e-02
1.468380e-02
## [2575,]  3.572114e-01  4.094030e-02 -2.201771e-01 -3.679043e-01 -
3.884214e-02
```

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## [2576,]  3.716724e-01 -1.690816e+00 -1.035932e+00  5.673489e-01 -
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## [2577,]  1.586174e+00 -1.684519e+00  1.057393e+00 -7.494774e-01
1.002288e-01
## [2578,]  3.620922e-01 -6.563528e-02  1.968407e-01  2.348410e-01 -
7.950823e-02
## [2579,] -2.595302e-01 -1.959002e-01  5.472897e-02  1.391561e-01
1.554456e-02
## [2580,]  4.746892e-01 -6.446064e-03 -2.795389e-01 -4.555215e-01 -
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## [2581,]  5.207206e-01  9.997794e-02  1.720709e-01  1.586676e-01 -
1.550851e-01
## [2582,]  4.926843e-02 -6.638619e-02 -6.866306e-02 -3.908097e-02
3.798510e-02
## [2583,] -5.679381e-01  2.631615e-01  3.353977e-01 -2.300355e-02 -
6.608137e-03
## [2584,] -3.317181e+00  7.836741e-02  2.264498e-02 -1.478054e-01
4.090420e-05
## [2585,] -6.449113e-02 -1.674152e-01  5.208442e-02  5.826250e-02
5.605740e-02
## [2586,] -4.895656e-01  1.530404e-01  1.288792e-02 -1.793736e-01 -
7.665819e-02
## [2587,]  4.846600e-01 -2.882910e-02 -2.956799e-01 -3.878888e-01
3.386414e-01
## [2588,]  9.094177e-01  7.180653e-01 -2.215540e+00  1.582302e+00
3.782436e-01
## [2589,] -4.833385e-01  3.882563e-01 -1.769878e-01 -5.151284e-01
1.420124e-02
## [2590,]  1.789550e-01  1.179438e-01  2.158998e-01  9.404887e-02 -
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## [2591,] -2.616229e-02 -2.283214e-01 -1.597966e-01  1.379336e-02 -
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## [2592,]  2.476516e-01 -3.861935e-02 -2.814866e-01 -4.568284e-01
4.504932e-02
## [2593,]  4.359972e-03  1.480788e-01  1.138900e-01 -1.316712e-01
1.315392e-02
## [2594,] -2.716512e-01  7.534660e-01 -2.330350e-01  5.969132e-02 -
3.341067e-01
## [2595,]  1.316166e-02  1.491596e-01 -1.562872e-02 -1.289519e-01 -
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## [2596,] -1.241420e+00  7.454922e-02  4.437079e-02  5.321579e-02 -
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## [2597,] -1.234179e-01  1.163431e-01  1.182678e-01 -1.656103e-01
3.802837e-02
## [2598,]  2.651601e-01 -7.093644e-02  1.894338e-01  5.045068e-01 -
2.187940e-01
## [2599,] -3.922478e-01  7.511342e-02  2.042135e-01  2.834834e-02 -
6.912642e-03
## [2600,] -8.264684e-01  7.276186e-01 -1.054700e+00 -2.080700e+00
2.890476e-01
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## [2601,] -1.453655e+00  1.789270e-01  2.331065e-02  3.134026e-02 -
3.147073e-01
## [2602,] -5.073045e-02  3.303275e-02  2.051747e-01  4.421864e-01 -
4.377754e-01
## [2603,]  3.121795e-01  9.495108e-02  3.618445e-02  4.891848e-02 -
1.106912e-01
## [2604,] -4.245996e-02  3.535905e-01  1.123502e-01 -1.928907e-01 -
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## [2605,]  1.288983e+00  8.668216e-01  4.353242e-02 -4.305636e-01 -
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## [2606,]  3.078414e-01 -2.892733e-01 -2.866917e-02 -4.656296e-01 -
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## [2607,]  4.525188e-01 -1.564033e+00 -1.231452e+00  2.822761e-02 -
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## [2608,]  1.062783e-01  8.282310e-02  1.276773e-02  6.145772e-02 -
9.097913e-02
## [2609,]  1.165087e-01  5.177019e-02  1.456799e-01  6.848958e-02 -
2.092940e-01
## [2610,] -9.431043e-03 -3.453049e-02 -4.763417e-02 -1.270721e-02
1.480930e-01
## [2611,]  1.461771e+00  2.261620e-01  1.342884e-02  2.716156e-02
1.545985e-01
## [2612,]  5.251594e-01  1.596864e-01 -6.601629e-03 -6.857444e-02
1.791721e-02
## [2613,]  1.672872e-01  1.470438e-01  1.356786e-01  9.840804e-03 -
3.500291e-02
## [2614,]  5.187247e-01  4.029343e-01 -2.723157e-01 -4.265528e-01 -
8.622559e-02
## [2615,] -9.053562e-01 -5.667483e-02 -1.147544e-01 -2.211064e-01
2.181679e-01
## [2616,]  1.625675e-01  1.051205e-01 -1.485633e-01 -1.613643e-01 -
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## [2617,]  3.363684e-01  9.650310e-02 -3.897731e-02 -1.275967e-02 -
1.523576e-01
## [2618,] -1.833548e+00 -8.637518e-01  2.652073e-01  4.075564e-01
2.400570e+00
## [2619,]  4.104088e-01 -3.326703e-01 -1.909056e-01 -4.086651e-01
4.008803e-01
## [2620,]  4.424686e-01  6.667700e-02  1.349861e-01  1.489194e-01 -
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## [2621,]  7.902834e-01 -1.605461e+00 -8.882989e-01  8.053327e-01 -
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## [2622,] -1.492144e-01 -1.981146e-02 -7.025345e-02 -1.134276e-01 -
1.201465e-01
## [2623,]  3.936446e-01  1.373448e-01  1.641445e-01  9.609552e-03 -
1.490096e-01
## [2624,] -4.617175e-01  5.129828e-02  3.810273e-02  9.940272e-02 -
7.994411e-02
## [2625,]  5.276057e-01  4.419015e-01 -2.077850e-01 -1.310876e-01 -
1.161828e-01
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## [2627,]  1.825185e-01  1.008690e-01 -1.305576e-01 -1.289918e-01 -
1.111691e-01
## [2628,]  2.166391e-01  7.615881e-02 -1.129697e-01 -1.020806e-01 -
1.256129e-01
## [2629,] -1.815432e-01  3.299279e-02 -1.259618e-02  5.430281e-02 -
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## [2630,]  2.964429e-01 -4.608878e-02  8.444365e-02  1.021658e-01 -
1.324640e-01
## [2631,] -1.581985e+00  1.597076e-01 -2.363770e-01 -1.290492e-01 -
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## [2632,] -4.924025e-02  2.377349e-02  1.224905e-01  1.883980e-01 -
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## [2633,] -2.381344e-01 -1.166935e-01  9.041087e-02  7.467729e-02
5.851903e-02
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2.390935e+00
## [2635,]  3.672292e-01  1.188221e-02 -1.198796e-01 -1.927747e-02 -
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## [2637,]  2.598199e-01 -1.926633e-01  7.585785e-03  6.226685e-02 -
8.956113e-02
## [2638,] -6.034604e-02  9.393752e-02 -2.388856e-01 -3.435618e-01
6.904445e-02
## [2639,]  3.053300e-02  2.805808e-01  1.651681e-01 -2.606506e-02 -
6.108139e-02
## [2640,]  4.663152e-01  1.667743e-01 -1.734382e-02 -5.479530e-02
8.097230e-03
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## [2642,]  9.435186e-02 -1.323019e-01 -2.367783e-02  6.623239e-02 -
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## [2643,]  3.790669e-01  1.799963e-02  7.591783e-02  1.417107e-03 -
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## [2644,]  2.297464e-01 -2.205376e-03 -9.854180e-02 -1.736457e-01 -
1.239169e-01
## [2645,]  8.612211e-02 -4.324874e-02 -1.032589e-01 -1.322206e-02 -
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## [2646,] -7.475016e-01 -1.796423e+00  1.143156e+00 -4.918511e-01 -
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## [2647,] -5.873103e-01  1.005010e-01 -1.490797e-02 -1.252977e-01
1.574295e-01
## [2648,]  2.996715e-01 -2.490911e-01 -3.279066e-01 -4.467188e-01 -
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## [2649,] -2.509789e-01 -3.709854e-02 -8.968229e-02  1.226154e-02 -
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## [2653,]  4.581480e-01  7.917514e-02  1.878764e-01  2.015793e-01 -
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## [2654,]  4.119337e-01 -6.981301e-02  1.120248e-01  1.198262e-02 -
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## [2655,]  4.137798e-01  1.267267e-01  9.233821e-02 -1.179410e-01 -
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## [2657,]  4.035895e-01  1.033370e-01  3.930273e-02 -1.321519e-01 -
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## [2658,]  1.992014e-01  2.770638e-01  2.171158e-01  8.144615e-02 -
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## [2659,]  3.852544e-01  6.510302e-02  2.862687e-02  7.472496e-02 -
1.804796e-01
## [2660,] -1.881408e+00 -8.455490e-01  2.663879e-01  4.158205e-01
2.406881e+00
## [2661,] -8.980469e-01  2.509953e-01  6.367831e-02  1.709873e-01
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## [2664,]  4.450563e-01  1.183678e-01  1.937914e-01  3.243715e-02 -
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## [2667,] -7.059526e-01  6.601990e-02 -2.221428e-02 -4.982730e-02
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## [2669,] -4.478665e-01  1.835293e-01  7.724764e-02 -1.114721e-01
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## [2672,]  5.213943e-01  1.587020e-01 -9.092491e-02 -3.331634e-02 -
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## [2673,] -5.788544e-02  3.705150e-02  1.310264e-01  1.890570e-01 -
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## [2674,]  1.737733e-01 -2.767639e-01 -3.352554e-01 -4.601129e-01
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4.858417e-01
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## [2676,] -1.661831e-01  9.548646e-02  2.192187e-02  4.962929e-02 -
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## [2678,]  3.198873e-02 -3.484747e-02 -3.668022e-02 -1.230024e-01 -
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## [2679,]  2.268993e-01 -1.690035e+00 -1.295243e+00  1.857394e-01
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## [2682,] -2.469172e-01  1.203072e-01 -9.261966e-02 -1.401460e-01
7.440930e-02
## [2683,]  3.316793e-01 -5.141263e-01 -5.895821e-01 -1.284643e+00
2.728663e-01
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## [2685,]  2.502476e-01 -9.657723e-02 -1.225801e-01 -2.083200e-01 -
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## [2686,] -4.283142e-01  2.873947e+00 -1.037590e+00  8.595218e-01
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## [2692,] -3.917811e-01 -1.800454e-01  8.222939e-02  1.312474e-01 -
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## [2693,] -6.308215e-03 -2.064343e-01  3.631272e-02  1.659502e-01
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## [2694,]  1.612369e-01 -4.161840e-02  6.159924e-02  2.286981e-01 -
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## [2695,]  3.125966e-01 -1.139865e-02 -1.041373e-01  2.244320e-03 -
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7.115669e-03
## [2703,] -1.740877e-02  6.595423e-02 -1.773673e-01 -2.719384e-01
5.261604e-02
## [2704,] -6.315141e-02  1.217717e-01 -1.777614e-01 -2.824259e-01 -
4.441729e-02
## [2705,] -1.632133e+00  1.517749e-01 -2.027916e-01 -8.020107e-02 -
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## [2706,]  1.372713e+00 -2.014134e-01  2.249731e-01  2.684007e-01
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## [2707,] -3.049050e-01  7.130120e-02 -1.469549e-01 -1.284840e-01 -
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## [2709,] -1.230757e-01 -2.564634e-01  3.310035e-02  7.116137e-02 -
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## [2710,]  2.245125e-02  2.268124e-01 -5.187732e-02 -7.772575e-02 -
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## [2711,] -4.420057e-02  2.827282e-01 -1.749871e-01 -1.064581e-01 -
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## [2713,]  9.140853e-02 -9.765616e-02  1.440739e-02  1.320327e-01 -
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## [2714,]  7.220844e-02 -5.915339e-02  9.516835e-02  6.051560e-02
3.430126e-02
## [2715,]  3.852541e-01 -6.240433e-02  1.170924e-01  5.532586e-02 -
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## [2716,]  3.699208e-01 -2.163133e-03 -9.281543e-02 -1.949067e-01 -
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## [2717,]  3.455603e-01 -9.333942e-02 -1.828632e-01 -3.444740e-01 -
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## [2718,]  9.919941e-02  2.303097e-01  2.116041e-01  7.027536e-02 -
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## [2719,] -7.068543e-01  2.300765e-01  2.229833e-01 -7.940684e-02
1.029389e-01
## [2720,] -4.016907e-02 -5.490794e-02 -5.561096e-02 -1.433435e-01 -
1.687001e-02
## [2721,] -5.556633e-01 -8.779438e-02 -1.461831e-01 -2.139021e-01
1.311745e-01
## [2722,] -2.153457e-01  1.269789e-01 -5.284093e-02 -7.268727e-02
4.672685e-02
## [2723,] -2.174544e-01  7.587440e-02  1.870161e-01  1.192286e-01 -
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## [2724,]  2.751044e-01 -1.168821e-01 -7.685132e-05 -9.458831e-02 -
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## [2725,] -1.389635e+00  4.795850e-02 -2.828978e-02  1.753733e-01 -
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## [2726,]  3.724304e-01 -1.271996e-02 -8.704330e-02 -1.769279e-01 -
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## [2728,]  3.730948e-01  3.107573e-02 -8.619533e-02 -1.183347e-01 -
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## [2729,] -1.502818e+00  2.037988e-01 -2.202675e-01 -1.061514e-01 -
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## [2734,]  3.038314e-01 -8.694618e-02 -1.475652e-01 -2.818861e-01 -
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## [2735,] -4.136892e-01  8.495917e-02 -4.621037e-02 -1.164148e-03 -
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## [2736,] -2.000570e-01  4.044132e-02 -3.166271e-02  2.187186e-02 -
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## [2738,] -5.062370e-01  2.542563e-01 -4.737494e-01 -8.071061e-01
2.412585e-01
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## [2742,]  2.138837e-01 -4.503168e-02 -1.676668e-02 -7.164350e-02 -
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## [2743,] -2.393244e-01  2.760888e+00 -1.113700e+00  8.489089e-01
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## [2744,] -2.027091e-01  1.116890e-01 -9.308060e-03 -2.686353e-02
4.440780e-02
## [2745,]  7.891516e-01 -1.733513e+00 -8.954685e-01  8.939450e-01 -
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## [2747,]  9.607599e-01  6.651663e-01  1.050103e-01  5.147087e-02 -
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## [2758,]  9.372886e-02  2.594663e-01  2.103579e-01  4.838211e-02 -
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## [2760,]  3.983564e-01 -5.449922e-01 -6.458064e-01 -1.354181e+00
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## [2761,] -9.207456e-01  3.131622e-01 -9.390691e-02 -1.011285e-01
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## [2762,]  2.341722e-01  1.484721e-01  1.818529e-01  2.296045e-01 -
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## [2763,] -2.800769e-01  1.134641e-01 -1.027745e-01 -1.467868e-01
8.241318e-02
## [2764,]  3.445592e-01  2.924138e-01  1.540428e-01  1.118102e-01 -
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## [2765,] -1.676226e+00 -1.787734e-01 -2.442510e-01 -2.019590e-01 -
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## [2767,] -2.314771e-01  1.516447e-01  2.398071e-01  1.308056e-01 -
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## [2768,] -1.614732e-01  3.617302e-02  1.444793e-02  8.138319e-02 -
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## [2769,]  3.653954e-01  2.140135e-01  1.976666e-01  2.088819e-01 -
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## [2772,]  2.250083e-03  2.372639e-01 -7.580644e-02 -1.129603e-01 -
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## [2773,]  3.450235e-01  5.749654e-02 -1.920722e-02 -6.936046e-02 -
8.148235e-02
## [2774,] -2.789742e-01  4.856544e-02 -1.635911e-02  3.913883e-02 -
1.831508e-01
## [2775,] -3.023001e-01 -4.756479e-02  1.525829e-02  8.693789e-02
3.815489e-02
```

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## [2776,] -1.279846e-01  1.225092e-01  1.757518e-02  1.067495e-01 -
1.327661e-01
## [2777,]  2.336524e-01 -1.491041e-01 -2.830017e-02 -5.374957e-03 -
6.465816e-02
## [2778,] -1.545429e-01  1.561604e-01  1.417805e-01 -2.023318e-01 -
3.954630e-03
## [2779,] -1.206729e-01  1.144190e-01  3.560183e-02  1.642369e-01 -
1.717941e-01
## [2780,] -2.656469e-01  4.376032e-02  5.727316e-02 -2.414997e-02 -
8.694312e-03
## [2781,]  3.390715e-01  1.243021e-01  1.126863e-02  1.272797e-02 -
1.038835e-01
## [2782,] -9.213754e-01 -6.045148e-03 -6.560969e-02 -2.295517e-01
2.093546e-01
## [2783,]  2.019162e-01 -2.304914e-01 -1.354127e-01 -5.647816e-01
7.331411e-03
## [2784,] -6.449580e-01  1.880718e-01 -5.307997e-01 -9.050229e-01
2.828591e-01
## [2785,] -3.877961e-01  5.282979e-01  1.113881e-01 -2.442579e-01 -
2.399219e-03
## [2786,]  9.448181e-01  6.635158e-01  1.296046e-01  7.082776e-02 -
1.248519e-01
## [2787,]  2.307662e-02 -5.166466e-02 -3.051734e-02 -9.233568e-02 -
6.319909e-02
## [2788,]  6.576736e-02  1.058335e-01  1.103216e-01  7.625525e-03
7.383643e-02
## [2789,]  3.423831e-01  1.317265e-01  8.419752e-02 -1.082225e-01 -
1.123851e-01
## [2790,] -4.718344e-01 -1.739951e-01  3.049306e-02  5.438030e-02 -
1.720498e-01
## [2791,]  3.174667e-01 -2.252075e-01  7.619453e-02  1.718634e-01 -
1.916442e-01
## [2792,]  4.613854e-01 -1.660159e+00 -1.169063e+00  5.625502e-01 -
2.215905e-01
## [2793,]  2.061691e-01 -7.061782e-04 -2.978938e-02  2.145511e-02 -
1.336499e-01
## [2794,]  1.292617e-01  1.941144e-01  1.689961e-01  2.252544e-01 -
1.465065e-01
## [2795,] -5.150361e-01  3.303314e-01  8.154486e-01  7.830405e-01
3.439656e-01
## [2796,] -4.966868e-01  3.164694e-02  1.594694e-03  6.528496e-02 -
6.441372e-02
## [2797,] -3.378300e-01  2.298549e-02  5.494336e-02  8.871195e-04 -
1.663479e-02
## [2798,] -6.465311e-01 -1.759052e+00  1.151583e+00 -4.524355e-01 -
6.717094e-02
## [2799,]  1.151655e+00  6.845330e-01  7.244228e-02  3.658083e-03 -
1.526992e-01
## [2800,] -5.799587e-01  6.720914e-02  1.585717e-02 -2.468970e-02 -
1.182302e-01
```

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## [2801,] -3.578228e-01 -1.218833e-01 -8.149548e-02 -3.804684e-02 -
4.025802e-02
## [2802,] -4.929291e-01 -6.179126e-01  4.252412e-01  6.288523e-01
2.499108e+00
## [2803,]  1.945120e-01 -8.887872e-02 -2.804055e-02 -7.028524e-02 -
1.273639e-01
## [2804,]  4.581237e-01  1.563516e-02 -2.300605e-01 -4.460325e-01 -
1.203476e-01
## [2805,]  4.460589e-01  9.397667e-02  2.095513e-01  2.489863e-01 -
9.547813e-02
## [2806,] -1.525567e+00  2.446181e-01 -2.151345e-01 -9.101691e-02 -
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## [2807,]  2.971220e-01 -1.659031e+00  1.102533e+00 -9.144902e-01
3.387555e-01
## [2808,] -3.443728e-01 -1.030608e-01 -1.220876e-02  4.300821e-03
6.840649e-02
## [2809,]  4.802686e-01 -7.143627e-02  2.353569e-01  2.133307e-01 -
1.611266e-01
## [2810,]  3.961323e-01  4.645717e-02 -4.067974e-02 -1.935911e-02 -
1.332464e-01
## [2811,]  9.685583e-01  6.658341e-01  4.792272e-02 -5.348156e-02 -
1.119835e-01
## [2812,]  2.956007e-01  1.480969e-01  1.922079e-01  1.670902e-03
2.147035e-02
## [2813,]  1.171696e-01  2.517541e-01 -1.040479e-01 -1.447013e-02 -
1.007850e-01
## [2814,]  6.297954e-01 -8.226808e-02  1.982920e-02 -8.506818e-02 -
4.219405e-01
## [2815,]  8.244708e-01 -1.711644e+00 -9.319268e-01  8.411362e-01 -
1.011929e-01
## [2816,] -5.753929e-01  2.759077e-01 -5.664963e-01 -9.504298e-01
2.876282e-01
## [2817,]  5.113526e-01  3.817813e-01 -2.131860e-01 -3.144687e-01 -
1.090098e-01
## [2818,]  1.870106e-01 -9.596461e-02  1.033346e-02 -6.278967e-02 -
7.527270e-02
## [2819,]  2.499901e-01 -3.992736e-01 -2.048270e-01 -4.363065e-01
4.309302e-01
## [2820,] -6.348102e-01 -1.742916e+00  1.136134e+00 -4.710370e-01 -
6.640881e-02
## [2821,] -4.959602e-01  1.003470e-01  5.731918e-02 -1.216553e-01
6.430228e-02
## [2822,] -1.354560e+00  1.617714e-02 -2.744653e-02  1.796908e-01 -
3.752675e-01
## [2823,]  5.122177e-02  2.132811e-01 -2.311423e-02 -6.935903e-02 -
7.963728e-02
## [2824,] -3.696055e+00  2.961720e-01 -1.315786e-01 -3.231928e-01
1.642453e-01
## [2825,] -3.496370e-01  8.867614e-02  5.188028e-02  1.054702e-01 -
2.655382e-02
```

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## [2826,]  3.065497e-01 -7.247880e-02 -3.771055e-01 -8.759028e-01
2.126275e-01
## [2827,]  1.304115e+00 -1.633260e+00  1.066187e+00 -8.064585e-01
1.045459e-01
## [2828,] -5.579127e-01  4.648912e-02 -3.239449e-02  1.328879e-02 -
4.813128e-02
## [2829,] -6.798057e-01 -3.245347e-01  6.427466e-01  6.905134e-01
2.539703e+00
## [2830,] -2.236231e-01  1.014248e-01 -2.485641e-02 -3.647891e-02
4.508570e-02
## [2831,] -1.377086e-01  1.601753e-01  2.404189e-01  1.481911e-01 -
7.182174e-02
## [2832,]  4.775182e-01  1.360858e-01  3.149549e-02  2.577902e-02 -
1.099103e-02
## [2833,] -6.487266e-02  2.119846e-01 -8.296509e-02 -2.335503e-01 -
7.862733e-02
## [2834,] -6.895936e-01  7.351662e-02 -6.498555e-02 -3.432766e-01 -
1.524389e-01
## [2835,] -5.797111e-01  5.131038e-02  5.371117e-03 -2.512006e-02 -
9.903830e-02
## [2836,]  2.062614e-01 -1.651250e+00  1.067163e+00 -9.593866e-01
3.631298e-01
## [2837,]  2.714760e-01  5.616764e-02 -1.158931e-01 -2.782853e-01 -
1.368820e-01
## [2838,] -7.541389e-01  7.468387e-02 -8.292161e-02 -3.579772e-01 -
1.470190e-01
## [2839,]  1.866783e-01 -1.227428e-01 -6.990080e-02 -1.296461e-01 -
1.073700e-01
## [2840,]  1.575023e+00 -3.067281e-01  1.662285e-02  9.726234e-02 -
9.846649e-03
## [2841,]  4.011204e-02 -4.671546e-02  2.070053e-02  8.825674e-02 -
2.083403e-01
## [2842,]  1.243004e+00  3.717719e-01  1.560043e-01 -1.974744e-02
1.438580e-01
## [2843,] -4.497248e-01 -1.741951e-01  4.625434e-02  6.244579e-02 -
1.667158e-01
## [2844,] -2.234539e-01  1.383391e-01  1.799055e-01  1.930259e-02 -
2.886868e-02
## [2845,] -2.611347e-01  8.472038e-02  4.136280e-02 -5.236219e-02
7.781692e-02
## [2846,] -6.994616e-02  1.718776e-01 -1.985046e-01 -4.007168e-01 -
9.334685e-03
## [2847,]  3.915334e-01  2.623394e-01 -1.162705e-01 -1.500028e-01 -
8.195663e-02
## [2848,] -5.760940e-02  1.382454e-01 -2.087148e-01 -3.353267e-01 -
3.685130e-02
## [2849,]  3.891934e-01 -1.782393e+00 -1.142668e+00  6.836339e-01 -
2.393874e-01
## [2850,] -1.274654e-01  9.235229e-02 -2.096390e-01 -3.471868e-01 -
3.266468e-02
```

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## [2851,] -7.288851e-02  1.584391e-02  1.057069e-01  1.723254e-01 -
5.292558e-02
## [2852,] -4.819866e-01  4.555342e-02 -2.869831e-02  4.868834e-02 -
1.106620e-01
## [2853,] -3.137121e-01 -1.395407e-01  5.674378e-02  1.089487e-01 -
2.187905e-01
## [2854,] -5.383514e-01 -4.551316e-02  1.840355e-02  3.276320e-02
4.094262e-02
## [2855,]  4.083976e-01 -1.393223e-02 -1.999765e-02 -9.394802e-02 -
1.182128e-01
## [2856,]  4.231494e-01  2.057325e-01  1.675117e-01  1.759864e-01 -
2.530238e-01
## [2857,]  5.494620e-02 -1.485734e+00 -9.957813e-01  5.785368e-01 -
2.341810e-02
## [2858,]  3.850636e-01  2.845953e-02 -1.494461e-02  4.221321e-02 -
1.615639e-01
## [2859,]  2.125491e-01 -4.294354e-03 -7.179194e-02 -5.150811e-02 -
1.091554e-01
## [2860,] -9.175281e-02  6.722472e-02 -2.177225e-02 -1.263435e-02 -
1.227210e-01
## [2861,] -5.221144e-01 -1.340440e-01 -3.620406e-02  4.755261e-02 -
4.247437e-02
## [2862,] -4.014834e-01  7.967938e-02  2.883061e-01  5.520766e-02
1.068616e-01
## [2863,] -9.246923e-02  1.120341e-01  5.016496e-02  1.486037e-01 -
1.471649e-01
## [2864,]  1.125846e-01  1.267152e-01  1.936762e-01  2.438216e-01 -
1.534220e-01
## [2865,]  1.099267e+00 -4.403980e-02  2.545275e-01  5.335744e-01 -
1.211770e-01
## [2866,] -4.660990e-01  1.703669e-01 -4.571019e-03 -1.334115e-01 -
8.972715e-02
## [2867,]  1.729182e+00 -3.164481e-01  1.873640e-01  2.228272e-01 -
1.264467e-01
## [2868,]  1.123600e+00 -1.762217e+00  1.238553e+00 -5.375060e-01
1.232926e-01
## [2869,]  2.973515e-01 -3.243181e-02  3.239582e-02  1.118044e-01 -
6.025793e-02
## [2870,]  2.122237e-01  5.305438e-02  1.665868e-01  5.670427e-02 -
9.388532e-02
## [2871,] -4.851170e-01  1.443460e-01  9.087934e-03 -7.326496e-02
1.239637e-01
## [2872,]  3.906717e-01 -5.121251e-01 -6.203483e-01 -1.332658e+00
2.674548e-01
## [2873,]  3.780595e-01  1.535025e-01  9.152677e-02  1.326777e-01 -
2.041365e-01
## [2874,]  3.011352e-01 -1.183075e-01 -1.141914e-01 -2.091795e-01 -
1.234919e-01
## [2875,] -2.168621e-01  3.372288e-02 -1.753377e-02 -4.311550e-02 -
3.509815e-02
```

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## [2876,]  1.360171e+00  5.820265e-01 -1.058892e-01  2.901886e-01
3.848082e-01
## [2877,]  1.413289e-01  7.620208e-02  2.157454e-01  1.560909e-01
2.971656e-02
## [2878,] -8.684621e-01  2.377015e-02 -7.982844e-02 -1.533627e-01
1.440392e-01
## [2879,] -5.438459e-01 -1.014458e-01 -9.476899e-03 -1.548305e-02 -
1.932552e-01
## [2880,]  3.681523e-01 -5.301089e-01 -6.074131e-01 -1.283480e+00
2.380290e-01
## [2881,] -4.791486e-01  8.117725e-03 -2.267566e-02  3.630098e-02 -
6.805353e-02
## [2882,]  1.848674e+00 -1.307934e-01  2.078202e-01  1.360838e-01 -
1.151037e-01
## [2883,] -6.591659e-01  1.013940e-01  3.953968e-02 -1.902995e-02
1.261057e-01
## [2884,]  1.713701e-01 -2.500558e-01 -1.486715e-01 -5.769508e-02 -
2.959485e-02
## [2885,]  5.062479e-02 -1.032757e-01 -2.388362e-02  2.010605e-02 -
2.430327e-02
## [2886,]  3.784099e-01 -1.150074e-01  4.393985e-02  1.217671e-01 -
1.012431e-01
## [2887,] -3.696673e-01 -1.273097e-01 -9.529330e-02 -6.311922e-02
1.821397e-02
## [2888,]  3.157021e-01 -2.052976e-01 -1.599038e-01 -1.704655e-01
3.190222e-02
## [2889,]  5.458503e-02 -1.557865e-01  4.586928e-04  1.235213e-01 -
1.851866e-02
## [2890,] -2.713690e-02 -3.252159e-02  9.600364e-02  9.803972e-02 -
5.843667e-02
## [2891,]  2.682629e+00  2.423620e+00  9.957113e-01 -6.598456e-01
6.687025e-01
## [2892,] -3.072035e-02 -1.467849e-01 -9.933428e-02 -5.786628e-02 -
5.395574e-02
## [2893,]  6.872187e-01  1.631379e-01 -5.359351e-01 -8.772812e-01 -
6.639734e-03
## [2894,] -4.629206e-01 -1.140881e-01 -3.418793e-04 -6.083826e-02
5.077177e-02
## [2895,]  1.879696e+00  5.596046e-01 -8.496953e-02  1.404373e-01 -
3.673464e-02
## [2896,]  4.852954e-02  3.303056e-01  3.328062e-02 -1.589345e-01 -
2.096587e-02
## [2897,] -1.168851e-01 -1.417875e-01 -4.391205e-02  1.913984e-02 -
1.560000e-02
## [2898,]  9.731347e-01 -1.598394e+00 -9.074662e-01  7.566341e-01 -
8.741918e-02
## [2899,]  1.714517e+00 -3.456082e-01  1.395726e-01  1.460312e-01 -
9.881649e-02
## [2900,] -7.637856e-01 -1.794594e+00  1.137824e+00 -4.934160e-01 -
3.597220e-02
```

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## [2901,]  2.522689e-01  1.384953e-01  1.680586e-01  1.766296e-01 -
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## [2902,]  4.827649e-02 -1.648686e+00 -8.600583e-01  6.315238e-01
2.108546e-01
## [2903,]  3.642528e-01  1.158186e-01  5.015644e-02  1.475201e-01 -
1.923929e-01
## [2904,] -1.064438e+00 -6.234570e-02  7.225842e-03 -1.274619e-01
1.996772e-01
## [2905,]  5.143662e-02  2.703618e-01  6.722541e-03  5.936356e-02 -
1.475050e-01
## [2906,]  1.357035e+00  5.985074e-01 -7.111581e-02  3.534416e-01
3.641632e-01
## [2907,]  1.270654e+00 -2.241614e-01  2.600202e-01  3.438749e-01
5.566078e-02
## [2908,] -4.862294e-03 -7.348623e-02 -9.843307e-03 -5.201101e-02 -
5.986044e-02
## [2909,]  3.763211e-01  9.234202e-02  1.244462e-01 -3.259611e-02 -
1.448362e-01
## [2910,]  2.766494e-01 -1.824965e-01 -4.125016e-02  1.199318e-02 -
1.089321e-01
## [2911,]  1.937726e-01 -9.784228e-02  5.813932e-02  4.476523e-02 -
1.025356e-01
## [2912,] -7.938460e-01  3.627126e-02 -2.276363e-03 -3.912546e-02 -
1.125190e-01
## [2913,] -1.198404e-01  2.427627e-01  1.614828e-02  5.588882e-02 -
1.105235e-01
## [2914,] -1.707915e+00  2.902333e-01 -2.121778e-02 -3.461202e-01
2.623163e-01
## [2915,] -4.151955e-01 -1.653546e-01  5.524004e-03  1.413394e-02 -
1.767063e-01
## [2916,]  1.637774e-01 -6.045230e-02 -1.751970e-01 -2.734001e-01
4.421891e-02
## [2917,] -1.231071e+00  3.916839e-02  8.162154e-02  3.173843e-01 -
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## [2918,]  1.705993e+00 -3.168361e-01  1.432030e-01  1.585299e-01 -
1.039141e-01
## [2919,]  2.889903e-01  1.706114e-01  1.877725e-01 -2.027705e-02
4.052190e-02
## [2920,] -2.886227e-01 -1.004965e-02  1.558864e-01  1.550412e-01 -
6.480663e-02
## [2921,] -3.996284e-01 -7.663494e-02  5.061735e-02  7.568217e-02 -
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## [2922,] -8.703471e-02 -4.700042e-02  1.889204e-02  9.099192e-02 -
3.633135e-02
## [2923,]  2.183363e-01 -2.964130e-02  1.264491e-02 -7.592557e-04 -
8.282316e-02
## [2924,] -1.148222e-01  1.728145e-01 -5.221752e-02 -7.964426e-02 -
5.915501e-02
## [2925,]  4.254103e-02 -1.274294e-01 -6.503824e-02  5.085633e-02 -
8.427497e-02
```

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## [2926,]  2.913971e-01 -7.132582e-02  5.699122e-02  9.825361e-02 -
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## [2927,] -9.783959e-02  1.177019e-01  5.836777e-02  1.742015e-01 -
1.557710e-01
## [2928,]  5.562670e-01 -1.702385e+00 -1.225857e+00  5.495974e-01 -
2.249982e-01
## [2929,] -8.512840e-02  5.225404e-02  1.273881e-01  7.048273e-02 -
9.393006e-02
## [2930,] -2.162212e-01  1.853845e-03  1.333585e-02 -3.935778e-03 -
3.779350e-02
## [2931,] -3.187114e-02 -8.495088e-02  3.533826e-02  1.221938e-01 -
6.033303e-02
## [2932,] -6.519890e-01 -1.747357e+00  1.132226e+00 -4.648177e-01 -
7.242377e-02
## [2933,]  4.131844e-01 -5.050436e-01 -5.421422e-01 -1.208583e+00
2.165416e-01
## [2934,] -1.745537e-01  1.590419e-01 -8.535483e-02 -3.822785e-02 -
5.372421e-02
## [2935,] -3.198296e-01 -1.435878e-01 -2.212212e-02 -6.475487e-03 -
1.767141e-01
## [2936,] -4.242748e-01  2.855369e+00 -1.013020e+00  9.182315e-01
4.487024e-01
## [2937,] -2.510587e-02 -4.746128e-02  3.163886e-02 -1.244698e-02 -
5.338804e-02
## [2938,] -3.947463e-02 -6.375531e-02 -2.380620e-02  1.080757e-02 -
3.256448e-02
## [2939,]  6.229906e-02  1.393932e-01  1.181979e-01  8.740575e-02 -
8.127671e-02
## [2940,]  1.347199e+00 -1.639704e+00  1.128727e+00 -7.008013e-01
6.185895e-02
## [2941,]  3.113787e-02 -7.133260e-02 -2.655387e-02 -1.052762e-01 -
4.870067e-02
## [2942,]  3.876055e-01  3.667960e-02 -1.125425e-01 -1.669423e-01 -
1.593454e-01
## [2943,]  1.022752e-03  1.543284e-02  1.463655e-01  5.107241e-02
7.487296e-02
## [2944,]  5.870209e-01  1.021186e-01  1.844757e-01  1.017977e-01 -
2.078098e-01
## [2945,]  4.586879e-02 -1.816723e+00 -1.337015e+00  2.399665e-01
1.386622e-01
## [2946,]  2.295588e-01 -2.401409e-01 -3.153858e-01 -4.091365e-01 -
1.338831e-02
## [2947,]  4.812348e-01  1.140233e-01  3.005405e-02  1.156139e-01 -
2.133796e-01
## [2948,] -1.701877e-02 -6.542612e-02 -4.954897e-02 -1.260583e-01 -
3.709568e-02
## [2949,]  7.281936e-01  1.055063e+00 -2.409958e-03 -5.497631e-01 -
5.710710e-03
## [2950,]  1.219427e+00 -1.892573e+00  1.103863e+00 -5.634971e-01
6.770664e-03
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## [2951,]  2.802702e-01  2.155216e-01  1.230107e-01  1.346227e-01 -
2.251752e-01
## [2952,] -7.034021e-01 -3.610272e-01  6.092903e-01  6.539245e-01
2.542305e+00
## [2953,]  3.867603e-01 -1.617354e+00  1.083012e+00 -9.377023e-01
3.333781e-01
## [2954,]  1.483912e-01 -5.951396e-02 -1.167147e-02 -1.173625e-01 -
3.253353e-02
## [2955,]  1.529646e-01  1.224008e-01  2.088770e-01  1.733205e-01 -
7.613744e-03
## [2956,] -8.656083e-01  7.645495e-01 -1.001834e+00 -2.056148e+00
2.847301e-01
## [2957,]  3.965440e-01  7.791630e-02  2.064853e-01  1.220821e-01 -
1.860931e-01
## [2958,] -1.375576e-01  1.166623e-01  4.179651e-02  1.510478e-01 -
1.471808e-01
## [2959,] -6.930735e-02  1.801859e-02 -8.207582e-02 -5.180506e-02 -
1.287487e-01
## [2960,]  3.457326e-01  1.017671e-01  5.767594e-03 -1.748724e-01 -
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## [2961,] -1.402710e-01  1.996533e-01 -1.020026e-02  2.667163e-02 -
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## [2962,] -1.457300e+00 -6.940228e-02 -2.898516e-02 -5.226775e-02
2.338929e-01
## [2963,] -8.033708e-02  3.263113e-01  1.248342e-01 -2.016161e-01 -
1.205140e-01
## [2964,]  3.216441e-01 -5.163355e-01 -5.583652e-01 -1.234402e+00
2.619536e-01
## [2965,] -5.852238e-02 -4.687615e-04 -2.855060e-01 -6.359848e-01
1.158568e-01
## [2966,] -4.185817e-01  2.054309e-01  2.185675e-01  1.098721e-02
2.372724e-01
## [2967,] -3.651915e-02 -1.715560e+00 -8.602671e-01  7.359556e-01
2.134389e-01
## [2968,] -5.359475e-01 -7.563565e-02  4.015848e-03  5.745803e-04 -
3.253578e-02
## [2969,] -1.108018e+00  5.915937e-02 -1.933837e-02 -1.341496e-01
1.402407e-01
## [2970,]  2.611524e+00  2.582939e+00  9.625445e-01 -7.585825e-01
7.260873e-01
## [2971,]  3.933378e-01  9.573512e-02 -7.862779e-03  8.023955e-02 -
1.945697e-01
## [2972,] -8.731856e-02  1.301446e-02 -1.022450e-01 -1.117281e-01
6.861373e-02
## [2973,]  2.648155e-01 -6.385395e-02 -1.955638e-01 -1.406463e-01 -
1.644646e-01
## [2974,] -8.736967e-01 -6.109174e-01  4.561703e-01  4.098277e-01
2.807141e+00
## [2975,]  1.699066e+00 -3.723888e-01  1.593517e-01  1.890301e-01 -
1.077894e-01
```

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## [2976,]  1.259832e-01  1.463948e-01 -9.180439e-02 -4.252137e-02 -
1.191126e-01
## [2977,]  3.397342e-01  1.024972e-01  3.101191e-02  4.738107e-02 -
1.068738e-01
## [2978,]  3.197230e-01 -4.129319e-01 -1.364440e-01 -3.241951e-01
3.818477e-01
## [2979,]  2.571848e-01  1.807873e-01  2.171552e-01  2.552527e-01 -
2.634695e-01
## [2980,]  1.834934e-01 -7.381792e-02  4.627479e-02  2.102854e-01 -
1.539126e-01
## [2981,]  3.118084e-01  2.175100e-01 -1.031682e-01 -1.355268e-01 -
8.396941e-02
## [2982,] -3.046033e-01  8.076973e-02 -8.275300e-02 -1.741517e-01
5.922571e-02
## [2983,] -2.497024e-02  2.759258e-01  4.678442e-03  5.446165e-02 -
1.234671e-01
## [2984,] -9.754023e-01  1.305005e-01  6.528723e-02  7.215681e-02 -
6.413698e-01
## [2985,]  1.410361e-01 -1.755062e-01 -6.310330e-02  2.265544e-02 -
2.101524e-02
## [2986,] -5.597419e-01 -2.674164e-03 -6.693997e-02 -8.147936e-02
4.086913e-03
## [2987,]  5.876084e-02  1.445568e-01  2.480423e-01  3.460966e-01 -
1.796770e-01
## [2988,]  6.078135e-01 -7.626519e-02  3.377003e-02 -5.632169e-02 -
4.281399e-01
## [2989,] -1.648569e+00  3.436504e-01  8.839711e-02 -2.648558e-01
2.104340e-01
## [2990,]  3.436534e-01 -4.369096e-02 -3.516846e-01 -8.480275e-01
2.063826e-01
## [2991,] -4.008995e-02  2.556079e-01 -6.296335e-03  5.811727e-02 -
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## [2992,]  1.699339e+00 -3.441132e-01  1.594855e-01  1.821371e-01 -
1.083455e-01
## [2993,] -2.899968e-01  2.870005e+00 -1.019966e+00  9.101727e-01
4.919016e-01
## [2994,] -2.648851e-01  1.640208e-02 -4.478854e-03 -2.305711e-02 -
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## [2995,]  9.731398e-01 -4.399308e-01  1.464026e-02 -5.536874e-02
1.785778e-01
## [2996,]  5.047415e-01  4.816063e-02  5.919886e-03  5.892746e-02 -
6.995057e-02
## [2997,]  2.818185e-01 -1.237509e-01  2.752057e-02 -3.977411e-02 -
9.781987e-02
## [2998,]  1.282160e+00  6.099181e-01 -1.119284e-01  2.919700e-01
3.986758e-01
## [2999,] -2.627790e-01  8.294937e-02  8.638296e-02  2.091150e-01 -
1.511425e-01
## [3000,] -2.062293e-01  1.101345e-01 -1.230336e-01 -2.047331e-01
6.185747e-02
```

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## [3001,]  1.862354e-01  1.750863e-01  1.661575e-01 -7.482665e-03
3.055154e-02
## [3002,]  2.210423e-01 -2.219071e-02  6.371716e-02  9.784725e-02 -
1.346993e-01
## [3003,] -5.501811e-02 -1.626409e+00 -8.107983e-01  7.222451e-01
1.992065e-01
## [3004,] -4.771804e-01 -8.287999e-02 -5.086961e-03 -5.802811e-03
3.773141e-02
## [3005,]  2.742080e-01 -4.811420e-02  1.701113e-01  1.589794e-01 -
1.195802e-01
## [3006,]  5.881087e-01 -8.280324e-02  8.090029e-02  2.418952e-02 -
4.473495e-01
## [3007,]  2.372565e-01 -4.557480e-02  1.054119e-02  1.878489e-02 -
1.109333e-01
## [3008,]  1.455559e+00 -1.589912e-01  2.066855e-01  2.647972e-01
4.413084e-02
## [3009,] -1.462656e-01  1.325150e-01 -1.466300e-01 -1.216056e-01 -
5.344778e-02
## [3010,]  2.186784e-01 -1.781924e+00 -1.372946e+00  1.864452e-01
1.254442e-01
## [3011,] -7.399527e-02  4.410478e-02  1.631871e-01  1.357740e-01 -
1.218464e-01
## [3012,] -3.981995e-02  2.234080e-01 -4.956577e-02  4.176114e-02 -
8.858304e-02
## [3013,] -1.551347e-02  1.861109e-01 -1.105163e-01 -5.179906e-02 -
8.568302e-02
## [3014,] -7.922278e-01  8.239514e-02 -7.535132e-03 -2.537028e-01 -
1.442110e-01
## [3015,]  1.292671e+00  2.556673e-01  2.470226e-01  4.121922e-01 -
3.859026e-02
## [3016,]  1.114887e+00 -1.770594e+00  1.166204e+00 -6.344051e-01
1.337117e-01
## [3017,]  3.463569e-01 -1.652010e+00  1.145656e+00 -8.811559e-01
3.374894e-01
## [3018,] -6.369545e-01 -1.753032e-01  5.145241e-02  8.002573e-02 -
2.203999e-01
## [3019,]  2.440789e-01  8.184531e-02  2.358603e+00 -1.324954e+00
1.966127e-01
## [3020,]  5.174628e-03  1.773432e-01  1.343579e-01 -4.859552e-02
8.530895e-02
## [3021,]  2.435980e-01  1.528041e-01  5.078091e-02  4.241815e-03 -
3.475473e-02
## [3022,]  8.850388e-02 -2.129216e-01 -6.586697e-02  1.852747e-02 -
1.877065e-01
## [3023,] -1.284264e-01  2.151475e-01  2.493339e-01  6.426464e-02 -
1.155400e-02
## [3024,] -1.448694e+00 -4.591333e-03  6.893360e-03  2.189631e-01 -
3.795271e-01
## [3025,]  1.541932e-01 -2.470666e-01  2.370289e-02  1.586877e-01 -
1.689142e-02
```

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## [3026,]  4.342991e-01  1.506285e-01 -3.683427e-02  5.690423e-02 -
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## [3027,]  5.372234e-02  2.389877e-03  2.087508e-01  1.699894e-01
7.931943e-03
## [3028,]  4.062986e-01  2.318872e-01  3.301733e-03 -1.273314e-01
3.690622e-02
## [3029,]  8.231573e-02  3.091253e-01  1.955007e-01 -5.149062e-02
8.822613e-02
## [3030,]  1.543899e+00  2.053256e-01 -3.357616e-01 -2.422279e-01
3.826351e-02
## [3031,] -6.501157e-01  7.849374e-02 -1.139030e-01 -1.953072e-01 -
1.513816e-01
## [3032,]  4.684521e-01  7.561590e-02  4.663005e-02 -3.039741e-02 -
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## [3033,] -4.476763e-01  3.028902e-01 -5.296569e-01 -8.806474e-01
2.556554e-01
## [3034,]  2.843270e-01 -6.443609e-02 -3.756468e-01 -8.609264e-01
2.182830e-01
## [3035,] -4.941139e-02  2.574193e-01  3.318958e-02  1.183076e-01 -
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## [3036,]  3.982115e-01 -6.261693e-02  2.389371e-01  2.269103e-01 -
1.469921e-01
## [3037,] -2.690887e-01  5.001422e-02  3.722457e-02 -5.067382e-02
7.408013e-02
## [3038,]  4.651078e-01 -6.195744e-02 -8.064772e-01 -1.389312e+00
4.348374e-01
## [3039,]  2.741574e-01  1.828877e-01 -5.327213e-02 -4.199896e-02 -
1.015767e-01
## [3040,]  1.336568e+00 -1.606086e+00  1.067391e+00 -7.983308e-01
7.877293e-02
## [3041,]  1.811225e-01  9.245563e-02 -6.731163e-02 -4.028839e-03 -
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## [3042,]  3.497201e-01  2.191486e-01  1.168262e-01  1.099082e-01 -
2.224444e-01
## [3043,] -6.033560e-01 -1.757046e+00  1.147099e+00 -4.481658e-01 -
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## [3044,]  3.516032e-01  2.496381e-02 -1.107181e-01 -1.521877e-01 -
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## [3045,]  3.924555e-01 -2.689212e-01  7.535860e-02  1.882556e-01 -
2.210239e-01
## [3046,] -6.646491e-02 -7.029284e-02 -3.618772e-01 -6.675878e-01
1.423836e-01
## [3047,]  6.327473e-01 -9.815105e-02 -3.596684e-02 -1.668402e-01 -
4.042928e-01
## [3048,]  7.008714e-02 -1.592082e+00 -1.078296e+00  5.621800e-01 -
1.321058e-02
## [3049,] -2.470271e-02  1.820962e-01  1.024077e-03 -9.433735e-03 -
9.865657e-02
## [3050,] -9.390263e-01 -6.683003e-01  4.272018e-01  3.701720e-01
2.806243e+00
```

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## [3051,]  2.469245e+00  2.580105e+00  9.766958e-01 -7.504426e-01
6.802808e-01
## [3052,] -2.042773e-01  7.287802e-02  1.609233e-01  1.049065e-01 -
5.097447e-02
## [3053,]  9.408558e-01 -1.790013e+00  1.088001e+00 -6.768684e-01
3.590519e-02
## [3054,] -3.029247e-01 -5.182548e-02 -1.100540e-03  5.653667e-02 -
5.930279e-02
## [3055,]  2.674788e-02 -1.149244e-01 -4.719320e-02 -7.724207e-02 -
1.079698e-01
## [3056,]  7.033825e-01  2.835435e-01 -1.974464e-01 -3.574151e-01
6.769743e-02
## [3057,] -1.636557e+00  2.440497e-01 -2.117674e-01 -5.740469e-02 -
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## [3058,] -1.605144e+00  1.793806e-01 -2.079743e-01 -9.067542e-02 -
1.669178e-01
## [3059,]  2.685594e-01 -3.983180e-02  9.512974e-02  1.246097e-01 -
1.315860e-01
## [3060,]  1.207129e-01  2.949340e-01 -3.014099e-02  1.353887e-02 -
1.290595e-01
## [3061,]  2.932670e-01  1.868223e-01  1.304074e-01  2.002496e-02 -
6.142227e-02
## [3062,]  1.381551e+00  6.048133e-01 -5.234717e-02  3.906022e-01
3.422890e-01
## [3063,]  4.700539e-01  2.235231e-01 -1.032161e-01 -1.135146e-01 -
1.163195e-01
## [3064,]  3.372269e-01  1.134912e-01  4.062696e-02  5.559795e-02 -
1.034024e-01
## [3065,] -6.767933e-01 -4.736181e-02 -9.365522e-02 -1.423912e-01
3.684826e-02
## [3066,]  2.966323e-01  7.707656e-02 -2.940748e-03 -3.933870e-02 -
7.817343e-02
## [3067,] -6.633296e-02  1.147054e-02 -2.574644e-02 -1.691562e-01 -
3.768602e-02
## [3068,] -6.433615e-01 -1.749677e+00  1.150280e+00 -4.470847e-01 -
6.818290e-02
## [3069,]  2.721506e-01 -3.876304e-02  1.118699e-02 -6.649853e-04 -
1.014487e-01
## [3070,]  3.772767e-01  7.982879e-02  3.679393e-02 -1.050531e-01 -
9.732582e-02
## [3071,] -3.707073e-01  3.385019e-03 -8.435147e-02 -1.262338e-01
2.604867e-02
## [3072,]  2.599198e-01 -5.447633e-02 -6.435813e-02  6.214659e-02 -
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## [3073,]  1.971740e-01 -1.709794e+00 -1.293200e+00  2.265466e-01
9.738126e-02
## [3074,]  3.542085e-01 -1.690762e+00 -1.125926e+00  6.054422e-01 -
2.135221e-01
## [3075,] -1.338516e-01  1.636402e-02 -2.954730e-01 -6.437303e-01
1.271867e-01
```

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## [3076,]  8.353288e-02  3.735963e-01 -5.906233e-02 -2.823362e-02 -
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2.307505e-01
## [3078,]  1.042137e+00 -1.749900e+00  1.166749e+00 -6.028702e-01
1.344897e-01
## [3079,] -1.699125e+00  1.617420e-01 -2.290255e-01 -1.033488e-01 -
1.436092e-01
## [3080,]  2.762033e-01  1.826884e-01  1.246249e-01  1.669668e-02 -
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## [3081,]  3.213412e-01 -9.584007e-02 -1.673032e-01 -2.890710e-01 -
1.138267e-01
## [3082,]  2.015433e-01 -1.745071e-01 -4.396312e-02  6.628577e-03 -
7.215628e-02
## [3083,] -1.067935e-01 -5.548170e-02 -3.780691e-01 -6.889735e-01
1.538168e-01
## [3084,] -1.116173e+00  2.645948e-02 -3.240419e-02 -1.482654e-01
1.412787e-01
## [3085,]  5.583336e-03  2.758592e-01 -5.600047e-02 -4.739422e-02 -
1.604627e-01
## [3086,] -1.440287e-02  2.624346e-01  2.718925e-02  1.063489e-01 -
1.400904e-01
## [3087,] -3.863215e-01  2.489641e-01 -6.507231e-02 -1.078801e-01
1.239372e-01
## [3088,] -4.313327e-01  2.212102e-01 -3.552359e-01 -4.920207e-01
1.588334e-01
## [3089,]  4.184858e-01  1.057020e-01  9.963199e-02 -3.068955e-02 -
1.095425e-01
## [3090,]  1.242557e+00  3.594495e-01  6.743006e-02  7.195590e-02
1.184046e-01
## [3091,] -4.440053e-01  3.026571e-01 -5.405716e-01 -9.095843e-01
2.762945e-01
## [3092,] -2.266235e-01 -8.137578e-02  3.757738e-02 -5.187743e-02 -
4.972729e-02
## [3093,] -5.812897e-01  3.034166e-03 -1.501253e-01 -2.038262e-01
3.130566e-02
## [3094,] -1.878426e+00 -6.013424e-02  1.268485e-01  2.802253e-01 -
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## [3095,] -2.660322e+00  3.674515e-01 -3.292786e-02 -4.470950e-01
5.457206e-01
## [3096,]  1.698257e+00 -3.581847e-01  1.781478e-01  2.184541e-01 -
1.169837e-01
## [3097,] -2.075099e-01  2.741665e+00 -1.123094e+00  8.700668e-01
4.907184e-01
## [3098,]  1.642580e+00  8.140596e-01  1.628342e-01 -5.438272e-02 -
6.624886e-01
## [3099,]  5.043168e-02  2.359398e-01 -1.526308e-01 -7.992613e-02 -
6.910351e-02
## [3100,] -1.645694e-01 -2.279426e-02 -7.678647e-02 -5.314396e-02 -
1.179361e-01
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## [3102,]  3.751952e-01 -4.080261e-02  2.470730e-01  2.283227e-01 -
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## [3103,] -5.623658e-02  6.307533e-02 -2.156300e-01 -2.987418e-01
5.384308e-02
## [3104,]  5.733200e-02  3.666566e-01 -7.063645e-02 -4.510614e-02 -
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## [3105,]  3.763978e-01 -5.813584e-02  2.119842e-01  2.007282e-01 -
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## [3106,]  4.614237e-01  9.587441e-02  1.646111e-01  1.512280e-02 -
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## [3107,] -1.221572e-01  1.636653e-01  1.213589e-01 -3.602204e-02 -
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## [3108,]  6.784596e-02  1.220058e-01  1.938997e-01  2.720272e-01 -
1.679299e-01
## [3109,]  3.383172e-01  4.418053e-02  8.731620e-02  4.199145e-02 -
1.300528e-01
## [3110,] -1.676670e+00  1.628894e-01 -1.967278e-01 -4.451384e-02 -
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## [3111,]  4.242653e-01 -1.899598e-01  2.699542e-03  7.111745e-02 -
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## [3112,] -6.613381e-01 -6.606984e-02 -7.013803e-02 -8.158777e-02
1.551369e-02
## [3113,] -8.837634e-02  4.997063e-02  1.353761e-01  1.009704e-01 -
1.183254e-01
## [3114,]  5.936872e-02 -4.040332e-01 -1.176797e-01 -2.845138e-01
3.531267e-01
## [3115,] -4.824296e-01  3.459648e-01  1.570859e-01 -2.125986e-01
1.106032e-02
## [3116,] -4.432272e-01  2.245855e-01  1.982150e-01 -3.785466e-02
2.715055e-01
## [3117,]  1.090858e+00 -1.764943e+00  1.220923e+00 -5.355373e-01
1.160882e-01
## [3118,] -8.540953e-02 -5.956316e-02  2.685689e-02  1.838553e-02 -
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## [3119,]  4.055539e-02  7.826654e-02  1.332621e-01  6.902030e-02
5.276784e-02
## [3120,]  4.805845e-01  5.599381e-02 -2.900133e-01 -5.533169e-01 -
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## [3121,]  1.823263e-01  1.534279e-01  1.369668e-01 -6.999800e-02
6.219795e-02
## [3122,]  4.530185e-01  5.913577e-02  2.068783e-01  1.373217e-01 -
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## [3123,]  3.313412e-01  3.424399e-02 -1.613389e-01 -2.228510e-01 -
1.419580e-01
## [3124,]  2.136441e-01 -1.202405e-01  2.325345e-02 -4.264399e-02 -
8.320687e-02
## [3125,]  6.299063e-01 -1.042159e-01 -1.259804e-02 -1.261571e-01 -
4.164185e-01
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## [3126,]  2.178576e-01  3.036395e-01 -5.982031e-01 -1.030120e+00
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## [3127,]  2.510274e-01  1.216498e-01  1.915887e-01  2.176702e-01 -
2.375177e-01
## [3128,]  6.535676e-02  2.128889e-01 -8.788092e-02 -1.213738e-01 -
8.278460e-02
## [3129,]  3.800363e-01  7.266241e-02  5.077756e-02  1.070266e-02 -
1.242918e-01
## [3130,]  4.183576e-01  1.282981e-02 -8.199087e-01 -1.504173e+00
4.290917e-01
## [3131,] -9.757700e-01 -4.659703e-02 -5.405716e-01 -4.067044e-01
1.266904e-01
## [3132,]  3.547225e-01  1.156544e-01  4.455722e-02  8.295223e-02 -
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## [3133,] -1.590827e-01  1.573411e-01 -1.086305e-01 -1.263363e-01
2.413680e-02
## [3134,] -1.024056e-01 -4.853131e-02  4.591135e-02  1.356838e-01 -
5.635989e-02
## [3135,] -1.993884e-01  2.833772e+00 -1.019566e+00  9.160126e-01
4.692597e-01
## [3136,]  2.668586e+00  2.551488e+00  9.574993e-01 -7.671400e-01
7.151342e-01
## [3137,]  1.828998e+00 -1.359694e-01  1.562692e-01  6.313440e-02 -
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## [3138,]  6.983880e-02 -9.904238e-02 -3.883904e-02 -7.652445e-04 -
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## [3139,]  1.812263e+00 -1.464309e-01  2.368531e-01  1.863886e-01 -
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## [3140,]  4.271725e-01  9.763367e-02  5.025715e-02 -1.170557e-01 -
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## [3141,] -9.932638e-01  1.348699e-01  1.303580e-01  1.748796e-01 -
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## [3142,]  3.278412e-01 -5.361576e-01 -5.381338e-01 -1.182294e+00
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## [3143,]  2.826537e-01 -3.926317e-02  1.206261e-01  1.507176e-01 -
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## [3144,]  7.781801e-02  2.063073e-01 -2.243083e-01 -4.100594e-01 -
3.931579e-02
## [3145,]  4.133272e-01 -3.998675e-02  2.627095e-01  2.572830e-01 -
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## [3146,]  5.147399e-01  3.735589e-01 -2.329204e-01 -3.338430e-01 -
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## [3147,]  1.117846e-01 -1.145337e-01 -7.696024e-02 -7.310064e-02 -
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## [3148,] -9.033690e-01 -6.009604e-01  4.826432e-01  4.659747e-01
2.789382e+00
## [3149,] -2.233935e-01  1.766297e-02 -1.767991e-01 -2.300191e-01
5.424457e-02
## [3150,] -3.779432e-02 -1.059217e-01 -5.989863e-02 -6.517583e-02 -
1.053749e-01
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## [3151,]  2.151168e-01 -1.805802e-01  1.522746e-02  1.073175e-01 -
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## [3152,]  6.496180e-01 -2.404987e-01  1.570515e-02  2.677605e-02 -
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## [3153,] -3.521347e-01 -1.653922e-01 -1.097009e-01  4.088498e-02 -
1.091184e-01
## [3154,] -9.274607e-02 -1.697104e-02  9.180529e-02  1.256454e-01 -
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## [3155,]  6.116617e-02 -1.031227e-01 -3.210933e-01 -4.453695e-01
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## [3156,]  2.677661e-01 -2.099363e-02 -1.745605e-01 -3.614199e-01
7.748531e-02
## [3157,]  1.425017e+00  6.535911e-01 -9.709428e-02  2.364477e-01
6.398811e-01
## [3158,] -3.288788e-01  2.292953e-03 -3.388068e-01 -6.387453e-01
3.107537e-01
## [3159,] -5.326691e-01 -4.507545e-01  5.661648e-01  6.821197e-01
2.550192e+00
## [3160,] -1.356842e-01 -1.390261e-01 -1.323975e-01 -9.819043e-02
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## [3161,]  5.794241e-01  1.400266e-01  1.920935e-01  2.396191e-02
1.524635e-01
## [3162,] -1.881876e+00 -8.389830e-02  1.883609e-02  3.622844e-02 -
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## [3163,]  1.000847e-01 -1.789450e-01 -1.021102e-01  5.043949e-02 -
1.475687e-01
## [3164,] -5.724385e-01  3.142136e-01 -3.830746e-02 -7.018399e-01
2.271522e-01
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4.075598e-03
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1.017980e-02
## [3167,]  6.531415e-01 -2.361520e+00 -7.745658e-01  7.483633e-01 -
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## [3168,]  5.895355e-01  2.938392e-01  1.998041e-01  1.257577e-01 -
4.765688e-02
## [3169,]  3.859383e-01 -3.499790e-02 -9.029819e-02  6.647323e-02 -
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## [3170,]  5.019698e-01  1.901130e-02 -2.728420e-01 -5.132923e-01 -
1.131823e-01
## [3171,]  5.408412e-01  1.705905e-01  1.237932e-01  1.921483e-01 -
2.421208e-01
## [3172,]  1.492841e+00 -1.595048e+00  1.042348e+00 -8.299242e-01
7.094374e-02
## [3173,] -2.071537e-02 -1.828947e+00 -1.344838e+00  2.619562e-01
1.328288e-01
## [3174,] -5.950817e-01  2.006850e-01  1.638787e-01  3.583078e-01 -
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8.876857e-02
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## [3176,]  8.059961e-02  3.386915e-01  4.869596e-02 -1.215071e-01
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## [3177,] -1.067669e+00  3.315235e-02  1.765358e-02 -7.394970e-02
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## [3178,]  3.136144e-01  2.838630e-01 -4.603933e-01 -8.203289e-01 -
1.457478e-02
## [3179,] -1.569311e-01  7.434587e-03 -1.404883e-01 -2.019028e-01
5.278399e-02
## [3180,] -1.768235e-01  1.641660e-01 -1.880030e-02 -1.562531e-01
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## [3181,] -7.077529e-01  1.184940e-01 -3.118531e-01 -6.727530e-01
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## [3182,] -7.373397e-01  6.857933e-02 -7.076484e-02 -3.287971e-01 -
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## [3183,] -4.276939e-01 -6.099954e-02  3.267460e-02  4.535083e-02
9.004499e-03
## [3184,]  2.858855e-01  3.028076e-01 -4.877135e-01 -8.689336e-01
9.864617e-03
## [3185,]  8.109506e-01 -1.816416e+00  1.103599e+00 -6.327570e-01
4.726422e-02
## [3186,]  3.453977e-01  2.220879e-02  7.579281e-02  1.477279e-02 -
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## [3187,]  1.515296e-01 -1.752115e+00 -1.361291e+00  2.200276e-01
1.179899e-01
## [3188,] -1.966912e-02 -1.153423e-01 -4.289130e-03  2.172231e-02 -
1.357506e-01
## [3189,] -3.401125e-01  1.113997e-02 -1.546106e-01 -1.926400e-01
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## [3190,]  4.053524e-01  6.023494e-02 -3.537342e-02  1.370453e-03 -
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## [3191,] -9.939468e-01 -2.714189e-02 -1.212868e-01 -3.020178e-01
2.423079e-01
## [3192,]  3.935874e-01 -1.609145e+00  1.052023e+00 -9.807660e-01
3.451588e-01
## [3193,]  4.067877e-02  1.149592e-01 -1.623927e-01 -1.570232e-01 -
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## [3194,]  2.715303e-01 -1.223422e-02 -1.337167e-01 -3.654259e-01
1.708984e-02
## [3195,] -1.728150e+00 -1.646539e-01 -2.146089e-01 -1.229351e-01 -
7.287430e-02
## [3196,]  1.952456e-01 -3.788702e-01 -1.554887e-01 -3.335507e-01
4.053907e-01
## [3197,]  2.462021e+00  2.600033e+00  1.003992e+00 -7.079542e-01
6.675371e-01
## [3198,]  8.616660e-02  1.202401e-01  2.112501e-01  2.913224e-01 -
1.718018e-01
## [3199,]  4.528094e-01  5.626853e-02  2.434480e-01  2.032809e-01 -
2.391683e-01
## [3200,]  1.970274e-01  2.724579e-01  2.388613e-01  1.132342e-01 -
7.570967e-02
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## [3201,] -1.453208e-01  7.678992e-02  1.413380e-01  3.937650e-02
5.592257e-02
## [3202,] -8.767906e-01 -6.331139e-01  4.679193e-01  4.519557e-01
2.780200e+00
## [3203,]  2.803714e-01 -1.669063e+00  1.065923e+00 -9.790964e-01
3.594075e-01
## [3204,] -1.457628e-01  3.360097e-02 -3.021338e-01 -6.559219e-01
1.246724e-01
## [3205,]  4.937237e-01  3.606033e-01 -2.145940e-01 -3.082511e-01 -
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## [3207,]  4.008603e-01  1.066012e-01  5.075103e-02  6.262864e-02 -
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## [3208,] -1.058895e+00 -5.776104e-02 -8.490391e-03 -1.373520e-01
1.943226e-01
## [3209,]  3.365070e-01 -5.452779e-02 -7.998288e-01 -1.460340e+00
4.085475e-01
## [3210,]  2.187860e-01 -1.097603e-02 -1.165567e-01 -1.885943e-01 -
1.278060e-01
## [3211,]  5.166036e-02 -4.129114e-02 -2.419171e-01 -3.880901e-01
4.553060e-02
## [3212,] -5.767938e-01 -5.437670e-01  5.643370e-01  7.463798e-01
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## [3213,]  2.547237e-01 -8.435810e-02 -1.470491e-01 -5.795756e-02 -
1.881808e-01
## [3214,]  6.823848e-01  3.998878e-01 -5.541256e-02 -6.672982e-02
2.757061e-01
## [3215,]  1.210583e+00  3.230356e-01  3.713571e-03 -2.308010e-02
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## [3216,] -1.959641e-01  1.143152e-01 -9.733005e-02 -1.701949e-01
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## [3217,] -2.272881e-01  6.049965e-02 -3.702228e-02 -6.417363e-02
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## [3218,] -3.191514e-01 -5.066579e-02  7.220455e-03  7.875075e-02
4.154925e-02
## [3219,] -9.929829e-02 -4.716126e-02  2.021060e-03  6.586557e-02 -
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## [3220,] -2.830177e-01 -7.118461e-04 -8.157103e-03 -1.192668e-02 -
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## [3223,]  2.817185e-01  1.469031e-01  1.630840e-01  1.714737e-01 -
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## [3224,]  2.096028e-01  2.909351e-01  2.143234e-01  6.651627e-02 -
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## [3225,]  2.931859e-01 -1.529353e-01  2.933924e-03  7.010777e-02 -
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## [3226,] -2.043357e-01  9.780657e-02 -1.152706e-01 -1.597522e-01
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1.682799e-02
## [3228,]  3.075361e-01 -3.367687e-01 -2.207461e-01 -4.347972e-01
4.231604e-01
## [3229,]  3.586939e-01 -1.007010e-02 -1.499880e-01 -4.292960e-02 -
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## [3230,]  1.566354e-01  1.280891e-01  7.672503e-02  1.015539e-01 -
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## [3231,] -9.652084e-01 -2.035915e-02 -3.019427e-02 -1.586410e-01
1.846782e-01
## [3232,] -1.597170e-01  6.971980e-02 -5.537352e-02 -9.229122e-02 -
1.192273e-02
## [3233,]  9.636354e-02  3.260510e-01  4.720479e-04 -1.968391e-01
4.512608e-02
## [3234,] -2.316512e-01  1.732951e-01 -4.403505e-02 -1.519997e-02 -
9.787791e-02
## [3235,]  1.088311e-01 -8.277909e-02 -1.352315e-01 -1.733638e-01
1.244706e-02
## [3236,]  5.017831e-01 -1.721787e+00 -1.257542e+00  5.151808e-01 -
2.144395e-01
## [3237,] -2.267281e-01  9.035010e-02 -4.339309e-02 -5.670313e-02
4.211332e-02
## [3238,]  4.532437e-01  1.673108e-01  6.723999e-02  1.172951e-01 -
2.084507e-01
## [3239,]  2.263167e-01 -1.163333e-01  4.835919e-02  1.396593e-02 -
1.114058e-01
## [3240,]  1.098862e-01 -5.914735e-02  6.803712e-02  6.725164e-02 -
9.374074e-02
## [3241,]  2.762436e-01 -4.424506e-02  6.405543e-02  1.063267e-01 -
1.396375e-01
## [3242,] -1.016487e+00  5.629813e-01  1.630458e-01 -2.472805e-01
4.867726e-02
## [3243,] -3.587086e-01 -1.097648e-01  7.958683e-02  1.815542e-01
8.425383e-03
## [3244,] -8.191276e-01  2.786276e-01  7.801778e-03 -1.932051e-01 -
9.794254e-02
## [3245,] -5.165238e-02 -1.634916e+00 -1.050542e+00  5.785356e-01 -
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## [3246,] -8.491006e-01  3.306490e-03 -4.541718e-02 -9.835751e-02
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## [3247,] -2.623018e-01  1.151317e-02  2.873090e-02  3.939817e-02 -
5.346246e-02
## [3248,] -6.034974e-02 -6.624599e-02  7.595285e-02  1.805769e-01 -
6.456580e-02
## [3249,]  2.448238e-01 -1.873575e-02 -8.808293e-02 -1.273496e-01 -
1.569697e-01
## [3250,]  1.284135e+00  5.995126e-01 -9.088617e-02  3.316940e-01
3.812316e-01
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## [3251,] -1.192797e-01  3.038267e-02 -5.275824e-02  7.221522e-03 -
1.421871e-01
## [3252,]  2.671288e-01 -2.026816e-01 -8.960166e-03  6.565229e-02 -
1.105244e-01
## [3253,]  2.623397e-01 -1.942091e-01 -1.119238e-02  6.015622e-02 -
1.104820e-01
## [3254,]  9.703362e-01 -1.812446e+00  1.139219e+00 -5.855363e-01 -
4.858965e-03
## [3255,] -1.540799e-01 -3.751474e-02  1.806235e-02 -5.116708e-02 -
6.090140e-02
## [3256,] -2.392958e-01  9.477150e-02 -9.337336e-03 -1.496566e-04
2.916446e-02
## [3257,]  3.232549e-01 -1.624516e-02 -1.391331e-01 -1.574242e-01 -
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## [3258,]  3.476056e-01 -4.482199e-02 -7.781717e-01 -1.424253e+00
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## [3259,]  1.726878e-01  2.744778e-01  1.425758e-01 -1.590303e-02 -
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## [3260,] -9.443206e-01 -8.448775e-02 -8.073169e-02 -1.410142e-01
1.930021e-01
## [3261,]  7.646946e-01  1.393665e-01 -1.021960e-01  5.436141e-02 -
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## [3262,]  1.817730e-01 -5.954356e-02 -1.442909e-01 -1.847391e-01 -
1.422834e-01
## [3263,] -1.286399e-01  1.593841e-01 -2.004196e-01 -3.745261e-01 -
1.588884e-02
## [3264,] -2.220371e+00  1.049247e-01  5.500570e-02  4.227760e-02 -
7.746604e-02
## [3265,]  2.274608e-01  1.521387e-01  1.505795e-01  2.064687e-01 -
1.674363e-01
## [3266,]  1.540748e-01  2.869818e-01  1.971706e-01  6.645016e-02 -
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## [3267,]  1.983386e-01 -3.909541e-01 -2.248724e-01 -4.518379e-01
4.395028e-01
## [3268,]  3.700050e-01  3.277005e-02  2.570644e-02 -5.874256e-02 -
1.134243e-01
## [3269,]  5.878425e-02 -2.504374e-02  2.176506e-01  7.705451e-02 -
3.577410e-02
## [3270,] -3.443188e-01  1.509879e-01  6.772619e-02  3.188045e-02 -
7.828778e-02
## [3271,] -5.010083e-01 -7.009472e-02  6.043770e-02  1.034633e-01
2.988976e-03
## [3272,]  1.596038e-01 -1.757689e+00 -1.319063e+00  2.703937e-01
1.098060e-01
## [3273,]  2.703217e-01  4.835150e-02  2.163657e-01  1.315240e-01 -
1.208355e-01
## [3274,] -2.080142e-01  2.725061e-01 -2.822658e-02 -1.963125e-01 -
8.467049e-02
## [3275,]  4.679947e-01  1.733723e-01  9.575144e-02  1.710892e-01 -
2.287849e-01
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## [3276,]  1.049953e-01  1.949496e-01 -2.304452e-01 -4.199294e-01 -
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## [3277,] -6.340548e-01  9.462676e-02 -3.570649e-01 -7.406711e-01
3.223026e-01
## [3278,] -5.355096e-01 -5.467466e-02  4.635385e-02  7.897676e-02
2.419604e-02
## [3279,]  1.790418e+00 -1.428556e-01  2.452920e-01  2.180282e-01 -
1.319871e-01
## [3280,] -1.399485e+00  2.391850e-01  8.732977e-02  1.748301e-01 -
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## [3281,] -1.337455e-01 -4.359147e-02  3.236664e-02  1.158164e-01 -
3.874977e-02
## [3282,]  2.915480e-01  2.062466e-01 -1.718303e-02  1.434764e-02 -
1.260731e-01
## [3283,] -6.712122e-01 -4.412012e-01  5.763095e-01  6.139094e-01
2.528803e+00
## [3284,] -1.130143e+00 -1.465120e-01 -1.056092e-01 -1.703200e-01
2.244950e-01
## [3285,]  1.418230e+00 -1.599637e+00  1.087117e+00 -7.568111e-01
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## [3286,]  2.073213e-02  3.630835e-02 -3.000896e-02  5.712319e-02 -
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## [3287,] -2.027579e-01  3.156641e-01  2.378688e-02 -5.816498e-02 -
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## [3288,]  6.969452e-01  3.790660e-01 -1.089847e-01 -3.502399e-01 -
4.159930e-03
## [3289,] -3.877865e-02  1.920316e-01 -1.298749e-01 -8.673085e-02 -
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## [3290,]  4.474936e-01  1.123133e-01  2.088526e-01  1.683322e-01 -
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## [3291,] -2.645802e-01 -6.174092e-02  1.965121e-02  8.412087e-02
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## [3294,]  5.507565e-01  1.824056e-01  8.351472e-02  1.167961e-01 -
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## [3295,] -1.113170e+00  2.693353e-02  3.660486e-03 -9.562566e-02
1.250189e-01
## [3296,]  1.338059e+00 -1.666100e+00  1.104616e+00 -7.240575e-01
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## [3297,] -7.865274e-02 -8.857539e-02 -3.679130e-01 -6.015960e-01
1.299159e-01
## [3298,] -7.854150e-01  4.601283e-02 -1.252322e-02 -4.339121e-02
1.253612e-01
## [3299,] -4.391836e-01  5.593207e-02  5.469523e-02 -3.194999e-03 -
5.498800e-02
## [3300,]  1.740824e-01 -3.268396e-01 -3.045264e-01 -3.873421e-01 -
2.346313e-02
```

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## [3301,] -5.417047e-02  1.177037e-01 -1.517088e-01 -2.383634e-01 -
6.458084e-02
## [3302,]  2.046124e-01 -3.879625e-02  1.417841e-01  1.200046e-01 -
8.339638e-02
## [3303,] -1.122435e-01  1.005722e-02 -5.425565e-02  9.029388e-03 -
1.454544e-01
## [3304,] -2.669284e-01 -2.633877e-03 -9.110840e-02 -6.793452e-02 -
9.537532e-02
## [3305,] -1.509699e-01  4.631070e-02  2.841379e-04  8.854869e-02 -
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## [3306,] -7.558845e-01  4.266522e-01 -8.040438e-02 -9.218189e-02 -
3.523275e-02
## [3307,] -4.824383e-02 -7.970158e-02  6.655440e-04  7.465692e-02 -
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## [3308,]  1.229458e+00  6.268789e-01 -6.876250e-02  3.717121e-01
3.777469e-01
## [3309,]  1.676860e-01 -7.384754e-02  8.010594e-02  2.917170e-02 -
6.110708e-02
## [3310,] -5.753267e-01  1.859626e-01 -1.330561e-02 -1.200695e-01 -
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## [3311,]  6.087397e-02  3.713301e-01 -1.461355e-02  5.852843e-02 -
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## [3312,] -2.715186e-01 -3.265755e-03  6.108653e-02  9.852110e-02 -
6.750788e-02
## [3313,]  3.437840e-01  1.673364e-01 -4.835966e-02 -3.498505e-02 -
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## [3314,] -1.088762e+00  2.294188e-02 -6.058527e-04 -9.973367e-02
1.140220e-01
## [3315,] -9.981861e-03  9.410077e-02  6.166917e-02 -3.508989e-02
8.928902e-02
## [3316,]  1.285521e-01 -7.998142e-02  8.580767e-02  1.058468e-01 -
1.124850e-01
## [3317,] -2.159883e-01  6.439192e-02  3.384983e-02  5.890694e-02 -
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## [3318,] -2.400780e-01  1.503167e-01 -7.560717e-02  1.186831e-02 -
7.649029e-02
## [3319,] -1.709807e+00 -1.646364e-01 -2.487691e-01 -1.729816e-01 -
7.278850e-02
## [3320,]  4.096021e-01  1.602446e-01  8.336432e-02  1.287052e-01 -
2.256600e-01
## [3321,] -2.957772e-01 -2.194420e-03 -1.518387e-01 -1.919956e-01
3.725648e-02
## [3322,] -3.395778e-02  1.515707e-04 -2.878249e-01 -6.390412e-01
1.037950e-01
## [3323,] -2.278805e-01  7.469304e-02 -1.057484e-01 -1.303954e-01
5.737661e-02
## [3324,]  1.905164e-01 -9.433384e-02  3.124206e-02  2.154654e-02 -
1.043395e-01
## [3325,]  1.583875e-02  1.094145e-01  1.615073e-01  2.451937e-01 -
1.591993e-01
```

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## [3326,]  4.523874e-01  6.479059e-02  2.506550e-01  2.033062e-01 -
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## [3327,] -7.454158e-02  1.480402e-01 -2.030493e-01 -3.302800e-01 -
3.164687e-02
## [3328,]  2.103595e-01 -1.603580e-02  9.872382e-02  4.975123e-02 -
7.693944e-02
## [3329,] -7.139519e-01  5.317557e-02 -8.477253e-02 -1.454993e-01
1.123237e-01
## [3330,] -1.489990e+00  2.114311e-01 -2.105289e-01 -7.994732e-02 -
1.802401e-01
## [3331,]  3.487406e-01 -8.091325e-02  7.646089e-02  1.207752e-01 -
1.628966e-01
## [3332,] -3.226086e-02 -1.430804e-01  2.657701e-02  1.079716e-01 -
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## [3333,]  1.389273e+00 -1.607943e+00  1.072403e+00 -7.646926e-01
7.614221e-02
## [3334,]  1.038387e-01  1.575506e-01  1.353285e-02 -2.597946e-04 -
3.134968e-02
## [3335,]  4.562888e-01  3.418456e-01 -9.471285e-02  1.297202e-02 -
1.179802e-01
## [3336,] -2.203130e-01  7.540162e-02 -9.467354e-02 -1.483667e-01
3.644574e-02
## [3337,] -1.554852e+00  2.174249e-01 -2.302680e-01 -8.605464e-02 -
1.768392e-01
## [3338,] -3.739217e-01 -1.136572e-02 -1.523733e-01 -1.857481e-01
5.287947e-02
## [3339,] -3.310476e-03 -1.312553e-01 -4.634948e-02 -6.021437e-02 -
1.103059e-01
## [3340,] -3.779917e-01 -1.185968e-01 -7.501970e-03  3.225461e-02
5.987929e-02
## [3341,]  1.430512e-01  3.315110e-01 -4.972662e-02 -9.710944e-03 -
2.028964e-01
## [3342,] -3.717572e-02  1.973216e-02  7.483765e-02 -7.361395e-03 -
8.907682e-02
## [3343,]  2.407327e-01 -5.938282e-02 -1.339705e-01 -4.499496e-02 -
1.883010e-01
## [3344,] -3.940875e-01 -1.248521e-01 -2.073451e-03  6.459373e-02
3.184946e-02
## [3345,]  2.214050e-01 -2.524020e-01 -3.205869e-01 -3.925721e-01 -
2.248917e-02
## [3346,] -1.295753e-01  1.263486e-01  1.031123e-01  2.566169e-01 -
1.834286e-01
## [3347,] -2.650436e-01  2.424384e-02  4.984550e-03  1.360054e-02 -
4.852983e-02
## [3348,]  2.618533e-01  1.362100e-01  2.060271e-01  4.372227e-02
8.475516e-03
## [3349,]  1.801552e-01 -1.673258e-01 -2.862398e-02  2.662918e-02 -
7.774574e-02
## [3350,] -7.734209e-01  1.794179e-01  3.872976e-02 -3.286235e-02 -
1.391938e-01
```

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## [3351,]  2.430091e+00  2.554262e+00  9.992710e-01 -7.055314e-01
6.744832e-01
## [3352,]  2.881307e-01  3.369611e-02 -1.333174e-01 -3.792586e-01
1.955432e-02
## [3353,]  3.549867e-01  1.087831e-01  1.124222e-01 -6.291587e-02 -
1.225655e-01
## [3354,]  3.627884e-01  2.969591e-02 -8.010896e-01 -1.456932e+00
4.162344e-01
## [3355,]  3.923124e-01  1.004966e-02 -8.143396e-01 -1.478753e+00
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## [3356,] -4.175056e-02 -1.001726e-01 -3.184456e-01 -5.729093e-01
9.622963e-02
## [3357,]  3.171818e-01 -2.577428e-01  5.045461e-02  1.557406e-01 -
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## [3358,]  3.891368e-01  3.975648e-03 -9.386444e-02 -3.428018e-01
2.284112e-03
## [3359,]  2.502752e-02 -1.528766e-01  2.780167e-02  1.122366e-01 -
4.405807e-02
## [3360,]  3.332440e-01 -7.864808e-02 -3.206209e-01 -7.750910e-01
1.753087e-01
## [3361,] -2.362566e-01  1.062692e-01 -1.614712e-01 -2.650899e-01
7.782593e-02
## [3362,] -7.787018e-02 -2.659388e-01 -7.285198e-02 -4.631102e-01 -
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## [3363,] -8.984979e-01  1.034639e-02 -5.403871e-02 -8.724385e-02
1.176912e-01
## [3364,]  1.590394e-01 -6.733630e-02  1.769611e-02 -1.209360e-02 -
7.694685e-02
## [3365,]  3.391707e-01  1.809634e-01 -1.630288e-02  1.373809e-02 -
1.375895e-01
## [3366,]  2.557919e+00  2.571745e+00  9.300528e-01 -8.000894e-01
7.456690e-01
## [3367,]  2.922156e-01  1.105073e-01  2.884578e-01  1.403463e-01 -
1.402473e-01
## [3368,] -1.264035e-01 -1.124222e-01 -7.608483e-02 -9.194328e-02 -
8.431646e-02
## [3369,]  1.827342e-01 -3.376726e-02 -1.246821e-01 -1.472374e-02 -
2.346830e-01
## [3370,]  1.006197e+00 -1.778267e+00  1.196749e+00 -5.460951e-01
1.249680e-01
## [3371,]  1.280199e+00  2.233526e-01 -2.740542e-02  8.136237e-02 -
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## [3372,]  1.335040e+00 -1.628331e+00  1.104370e+00 -7.640411e-01
9.281660e-02
## [3373,]  1.192650e-01 -1.776070e+00 -1.320506e+00  3.036222e-01
1.043756e-01
## [3374,] -7.870088e-01 -4.683386e-02 -1.285720e-01 -2.577901e-01
2.256541e-01
## [3375,] -1.122293e-02  2.549725e-01  1.751817e-01  2.440026e-02 -
8.477121e-02
```

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## [3376,] -1.068958e+00  1.901724e-01  8.954853e-02 -4.650086e-02
1.018251e-01
## [3377,] -3.115284e-02 -1.193555e-01 -9.060740e-02 -1.272153e-01 -
8.761670e-02
## [3378,] -1.389774e+00 -4.829885e-03  8.180939e-02  3.281574e-01 -
3.382907e-01
## [3379,]  6.688779e-01  1.543445e-01  3.041680e-02  6.875728e-02 -
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## [3380,] -9.795471e-01 -9.744616e-02 -5.161040e-02 -9.860556e-02
1.967254e-01
## [3381,]  1.842683e-02  2.976838e-01 -2.133109e-02  1.654287e-02 -
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## [3382,]  2.626901e-01 -1.582659e+00  1.078749e+00 -9.185312e-01
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## [3383,] -5.716461e-02 -8.192192e-02 -5.012435e-02 -1.053804e-01 -
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## [3384,] -7.691569e-02  1.366954e-02  1.273953e-01  3.922522e-02
7.820225e-02
## [3385,]  1.326124e+00  5.751344e-01 -1.140488e-01  2.952820e-01
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## [3407,]  3.875487e-02 -1.852612e+00 -1.325428e+00  2.663920e-01
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## [3424,]  3.125296e-01 -5.591424e-02 -3.559349e-01 -8.251339e-01
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## [3454,] -3.283669e-01 -1.465404e-02 -1.012011e-01 -9.849451e-02
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## [3455,] -3.071245e-02 -1.091735e-01 -5.448915e-02 -5.372983e-02 -
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## [3479,] -1.943805e-02 -8.551378e-02 -6.658683e-04 -4.473100e-02 -
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## [3485,] -1.029380e-01  3.997865e-02  1.415225e-01  6.749259e-02
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## [3494,]  3.860774e-01 -5.513429e-02  2.494937e-01  2.515714e-01 -
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## [3540,]  1.712199e+00 -1.506428e-01  2.359235e-01  2.023585e-01 -
1.138671e-01
## [3541,]  9.841111e-02  1.608073e-01 -4.164651e-02 -2.422689e-02 -
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## [3542,]  1.863205e-01 -2.736099e-01 -3.175593e-01 -3.829879e-01 -
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## [3543,] -1.874489e+00 -1.608922e-01  1.620507e-02  3.342516e-01 -
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## [3544,] -3.055705e-02  2.221894e-01  1.317722e-03  4.654431e-02 -
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## [3545,]  4.164869e-01 -2.169580e-03 -7.784852e-01 -1.432448e+00
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## [3546,] -3.487232e-01  1.049662e-02 -5.253260e-02 -4.448724e-02 -
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## [3548,]  3.907504e-01 -8.387425e-02  1.822790e-01  1.656223e-01 -
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## [3549,]  1.911073e-01  1.537196e-01  1.868808e-01  2.188358e-02
3.277048e-02
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## [3553,]  4.687301e-01  3.707757e-01 -2.183176e-01 -2.912648e-01 -
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## [3554,] -8.825152e-03 -1.081239e-02  3.000374e-02  1.428860e-01 -
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## [3555,]  2.991537e-01  1.218064e-01  1.339683e-01 -1.656003e-02 -
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6.793215e-01
## [3557,] -9.824676e-01 -6.502030e-01  4.884769e-01  4.941613e-01
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## [3564,]  2.044158e-01  1.984484e-01 -8.017648e-02 -6.602051e-02 -
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## [3567,] -3.410726e-01 -2.448976e-02 -1.149318e-01 -1.128057e-01
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## [3568,]  4.208366e-01  6.032581e-02  2.267828e-01  1.641635e-01 -
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## [3577,]  5.887489e-02  1.871539e-01 -2.443337e-01 -4.490970e-01 -
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## [3578,] -4.804049e-02  1.820391e-01  8.907634e-02  1.079613e-01 -
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## [3579,]  4.713812e-01  3.465266e-01 -2.585433e-01 -3.613775e-01 -
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## [3581,] -7.758125e-01 -3.575529e-02  1.120217e-02 -2.317965e-03 -
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## [3584,]  7.547584e-02 -1.028837e-01 -9.099358e-02 -8.985190e-02 -
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## [3585,]  2.947465e-01 -1.090471e-01  3.336628e-02  3.604722e-02 -
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## [3586,]  2.738335e-01  4.703319e-02 -6.611034e-02 -2.501666e-01
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## [3589,] -3.272880e-01 -5.774170e-02  2.687857e-02  1.266863e-01
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## [3594,] -4.320131e-01  5.500212e-01  1.012389e-01 -2.285097e-01 -
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## [3599,]  2.851578e-01 -4.522678e-03 -8.844442e-02 -2.912867e-01 -
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## [3600,]  3.936178e-01  2.343476e-02 -2.173410e-01 -4.122717e-01 -
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## [3604,]  1.350398e+00  6.463912e-02  6.895456e-02  1.551983e-02 -
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## [3605,] -2.243294e+00  3.705259e-02 -2.612324e-02 -2.699055e-01
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## [3607,]  2.424176e-01  2.218675e-02 -1.165883e-01 -3.343304e-01
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## [3609,]  8.977043e-02  3.546394e-01 -4.065176e-02  1.510083e-02 -
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6.985617e-02
## [3614,]  4.260317e-01 -1.699230e+00 -1.254089e+00  5.321350e-01 -
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## [3615,] -2.602549e-02 -3.607523e-02  3.080220e-01  2.371035e-01 -
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## [3616,]  3.710005e-01  1.424887e-03  7.666768e-02  4.456303e-02 -
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## [3617,] -2.710055e-02 -6.319245e-02  2.260873e-01  1.211884e-01 -
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## [3618,]  2.495307e-01 -5.353388e-01 -6.032700e-01 -1.260151e+00
2.615415e-01
## [3619,] -2.039467e-02 -1.352285e-01  5.280676e-02  1.446054e-01 -
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## [3620,]  2.385899e-01 -4.482979e-02  7.695705e-02  1.354742e-01 -
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## [3623,]  5.812155e-01 -2.534212e-01 -2.423912e-02 -1.095362e-02 -
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## [3624,]  2.556241e-01  7.129701e-01 -2.303703e+00  1.513856e+00
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## [3630,]  3.836393e-01 -8.240433e-02  1.196504e-02  1.735007e-01 -
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## [3634,] -5.113499e-02  2.138258e-01  2.360826e+00 -1.362563e+00
2.657796e-01
## [3635,] -6.688927e-01  3.081589e-01 -6.118855e-02 -1.312928e-01
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## [3637,]  4.013812e-01  4.381590e-01 -1.974555e-01 -3.768573e-01
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## [3640,] -2.861217e-01  5.999041e-02 -5.828568e-02 -5.858887e-02
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## [3641,]  3.643133e-01  4.348168e-01 -2.329381e-01 -4.356390e-01
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## [3644,]  2.926685e-01 -1.130275e-03 -1.641803e-01 -4.081429e-01
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1.902888e-02
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## [3674,] -4.518454e-02 -1.225747e-01 -2.620940e-01 -3.072103e-01 -
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## [3692,]  3.988989e-01 -9.363526e-02  2.479640e-01  2.989549e-01 -
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## [3693,] -8.095197e-01  2.977316e-02 -9.068414e-02 -1.723603e-01
2.988174e-02
## [3694,]  1.595321e+00  2.317570e-02  9.211119e-02  5.970822e-02 -
1.776500e-01
## [3695,]  1.326942e+00  7.261047e-01 -7.817393e-02  2.192441e-01
5.964443e-01
## [3696,]  1.966615e-01  1.020521e-01  5.612894e-02  1.570463e-01 -
1.681129e-01
## [3697,]  3.323252e-01 -1.033093e-01  2.014144e-02 -3.262970e-03 -
4.093833e-01
## [3698,]  5.870768e-02 -8.796382e-02 -1.658228e-01 -1.953813e-01
8.393352e-03
## [3699,] -2.525701e-01  2.525312e-01  1.345406e-01  8.508435e-02 -
1.223298e-01
## [3700,] -3.886861e-02  8.500562e-02 -8.255226e-02 -2.823832e-01
4.220611e-02
```

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## [3701,]  4.433077e-02 -1.115260e-01 -2.003064e-01  3.104145e-02 -
2.215296e-01
## [3702,]  1.704864e-01  1.901543e-01  2.105659e-01  4.849497e-02 -
5.077915e-02
## [3703,] -2.550788e-01  2.861832e-02 -1.381254e-01 -2.094291e-01
9.984051e-02
##                   PC26          PC27
##    [1,] -8.193842e-03 -6.278426e-03
##    [2,]  1.781253e-03 -3.255746e-02
##    [3,] -2.174428e-02 -1.375836e-02
##    [4,] -7.290721e-01 -1.527548e-01
##    [5,]  2.160944e-02  2.061854e-03
##    [6,]  8.264341e-03  1.021973e-02
##    [7,]  2.981423e-02 -1.275857e-02
##    [8,]  1.524033e-02  1.213507e-02
##    [9,]  6.018744e-03 -4.928019e-02
##   [10,]  1.125198e-01  8.960234e-02
##   [11,] -9.745833e-01 -1.934012e-01
##   [12,]  4.253156e-02  2.361089e-03
##   [13,] -1.803971e-03 -1.952634e-02
##   [14,] -1.394007e+00  4.725918e-01
##   [15,]  1.949159e-03 -2.976155e-02
##   [16,]  1.591163e-01 -6.487877e-02
##   [17,]  1.135000e-01 -4.865825e-02
##   [18,] -8.575677e-01 -1.114934e-01
##   [19,] -7.720849e-03 -4.130457e-03
##   [20,]  5.950279e-02  2.908623e-02
##   [21,] -5.528255e-03 -2.351097e-02
##   [22,]  4.634777e-01  9.955284e-02
##   [23,]  4.623105e-02  7.788906e-03
##   [24,]  2.354743e-01  5.059930e-02
##   [25,]  2.269969e-01  6.154042e-02
##   [26,]  6.431577e-02  2.120372e-02
##   [27,]  6.765620e-02  3.282315e-02
##   [28,] -3.451010e-01 -1.126149e+00
##   [29,]  1.300157e-02 -5.100397e-02
##   [30,]  2.051856e-01 -1.285174e-02
##   [31,] -8.011903e-03 -1.613381e-02
##   [32,]  2.739884e-01 -1.257990e-01
##   [33,]  4.947191e-02  1.075473e-03
##   [34,]  2.020807e-02 -1.202334e-03
##   [35,]  5.469606e-02  3.420789e-02
##   [36,]  6.125640e-02  3.129376e-02
##   [37,]  7.004119e-02  1.197532e-02
##   [38,]  1.769602e-02 -4.340466e-02
##   [39,]  5.746342e-02  2.902126e-02
##   [40,] -1.694149e-02  5.135699e-03
##   [41,]  5.490581e-02  5.812897e-02
##   [42,]  6.977703e-02  6.267390e-02
##   [43,]  3.697548e-02 -5.355111e-02
```

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##   [44,] -3.313758e-02 -1.073252e-02
##   [45,]  4.490694e-02  7.921627e-02
##   [46,]  6.581127e-02  4.551293e-02
##   [47,]  4.560911e-02 -4.283380e-02
##   [48,]  4.812515e-02  3.021933e-03
##   [49,]  3.899554e-02  3.472965e-02
##   [50,]  5.040688e-02 -1.561132e-02
##   [51,] -2.975968e-02 -1.748023e-02
##   [52,] -8.985381e-01 -1.434666e-01
##   [53,]  3.605033e-02  5.522477e-02
##   [54,]  9.131012e-02 -3.235649e-02
##   [55,]  1.739740e-01 -3.650332e-02
##   [56,] -1.315235e-02 -2.297938e-02
##   [57,]  3.881285e-04 -1.172617e-02
##   [58,]  3.518565e-01  1.415910e-01
##   [59,]  1.377932e-02  1.372147e-02
##   [60,]  1.039567e-01 -7.743034e-02
##   [61,]  2.588388e-02 -9.142131e-03
##   [62,] -3.926889e-03 -2.206339e-02
##   [63,] -2.509325e-02 -9.234196e-04
##   [64,]  6.091955e-01  4.690004e-01
##   [65,]  6.038890e-03  2.263205e-02
##   [66,]  2.328762e-02 -2.447514e-02
##   [67,]  4.917590e-02  4.361128e-02
##   [68,]  6.727933e-02  3.573436e-02
##   [69,]  8.243765e-02 -8.605721e-03
##   [70,]  1.188940e-01  3.195288e-02
##   [71,]  2.779964e-02  2.899081e-02
##   [72,]  1.542327e-01 -9.144099e-02
##   [73,]  1.203353e-01  3.295175e-02
##   [74,] -8.327752e-01 -9.843296e-02
##   [75,]  2.091791e-01 -3.742774e-03
##   [76,]  5.412978e-02  2.141165e-02
##   [77,] -1.439696e-02 -1.950350e-02
##   [78,]  5.849309e-02 -3.420216e-02
##   [79,]  6.241844e-02  3.650623e-02
##   [80,]  2.737541e-02  1.641039e-02
##   [81,]  5.426395e-02  3.684057e-02
##   [82,]  1.112117e-01  3.137795e-02
##   [83,]  1.229432e-01  1.362084e-02
##   [84,]  3.528489e-02  2.233312e-02
##   [85,]  6.201505e-02  2.482797e-02
##   [86,] -1.121639e-02 -4.285677e-03
##   [87,]  3.168062e-02 -4.988766e-02
##   [88,] -3.838642e-03 -3.726087e-02
##   [89,]  1.562069e-01  6.512002e-03
##   [90,]  2.084000e-02 -5.875333e-03
##   [91,]  2.764253e-02 -1.937956e-02
##   [92,] -2.651383e-02 -3.122680e-02
##   [93,]  1.742213e-01 -9.795214e-01
```

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##   [94,] -1.525327e-02 -1.675519e-02
##   [95,] -1.708398e-03  3.468915e-02
##   [96,]  3.361468e-02  2.168429e-02
##   [97,] -5.551816e-03 -2.640068e-03
##   [98,]  4.301198e-02  5.502143e-02
##   [99,]  4.758675e-02  4.619639e-02
##  [100,]  9.919096e-02  6.811966e-02
##  [101,]  1.413885e-02 -1.628186e-02
##  [102,]  1.183486e-01  1.296784e-02
##  [103,]  1.138715e-01  3.606862e-02
##  [104,] -2.229938e-02  2.847739e-03
##  [105,] -8.684800e-03  3.445339e-02
##  [106,] -3.864170e-01 -9.898243e-01
##  [107,] -1.096758e-02 -1.376234e-02
##  [108,]  1.141689e-01  3.386713e-02
##  [109,]  1.994568e-02  5.624308e-02
##  [110,] -8.218330e-03 -7.084920e-03
##  [111,] -6.114433e-03 -9.027055e-03
##  [112,]  1.044545e-01  1.954787e-02
##  [113,] -9.070913e-01 -1.395509e-01
##  [114,]  8.684168e-02  1.376661e-02
##  [115,]  1.296256e-03  3.272365e-03
##  [116,] -8.393381e-01 -1.047851e-01
##  [117,] -5.637435e-03 -3.246127e-02
##  [118,] -1.244945e-02 -8.300583e-03
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##  [120,]  8.937889e-02 -1.151064e-01
##  [121,]  4.215592e-02 -1.000718e-02
##  [122,]  7.062913e-02 -3.171178e-02
##  [123,] -1.423942e-02 -9.628512e-03
##  [124,]  1.595619e-02 -1.281467e-02
##  [125,]  2.325421e-02 -2.371120e-02
##  [126,] -1.365580e+00  4.933129e-01
##  [127,] -1.511955e-03 -1.499076e-02
##  [128,] -3.739752e-01 -9.543532e-01
##  [129,] -4.568979e-03  1.953479e-02
##  [130,]  6.549079e-02  1.063195e-02
##  [131,]  4.310001e-02  3.493207e-03
##  [132,] -1.362578e+00  4.971582e-01
##  [133,]  1.094941e-01  2.497436e-02
##  [134,] -9.878757e-03 -1.501180e-02
##  [135,]  1.053033e-01  1.909391e-02
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##  [138,] -5.948687e-03 -1.025570e-02
##  [139,] -9.555469e-03 -6.601234e-03
##  [140,]  5.029147e-01 -6.194172e-01
##  [141,]  1.803573e-01  1.080522e-03
##  [142,]  1.828821e-02 -4.132109e-03
##  [143,]  1.189820e-01  8.679957e-03
```

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##  [144,] -8.684482e-01 -1.190100e-01
##  [145,]  5.410488e-01 -5.976795e-01
##  [146,] -3.742695e-01 -9.633754e-01
##  [147,] -9.643989e-04 -1.088731e-02
##  [148,]  2.076288e-01 -9.781225e-03
##  [149,]  7.368754e-02  1.524388e-02
##  [150,] -1.860863e-02  6.519986e-03
##  [151,]  2.017216e-02  1.672650e-02
##  [152,]  2.164386e-02  4.254369e-03
##  [153,]  6.246761e-01  4.687786e-01
##  [154,]  5.447967e-02 -6.776200e-03
##  [155,]  6.466232e-01  4.524181e-01
##  [156,]  1.787527e-01  1.223533e-04
##  [157,]  4.587375e-02  6.787869e-02
##  [158,] -1.677410e-02  2.121780e-03
##  [159,]  1.033513e-01  4.416607e-02
##  [160,]  6.418214e-01  4.486285e-01
##  [161,] -2.860325e-02  5.322224e-03
##  [162,]  2.546513e-01 -7.679126e-03
##  [163,] -2.199724e-02  1.238416e-03
##  [164,]  7.746372e-02 -5.481031e-02
##  [165,]  7.311003e-01  4.899649e-01
##  [166,]  7.441887e-01  4.845186e-01
##  [167,] -4.279559e-02 -2.016510e-03
##  [168,]  4.189272e-02 -3.537469e-02
##  [169,]  4.221498e-03  3.172359e-03
##  [170,] -1.711325e-02 -3.724713e-02
##  [171,]  4.817091e-02  2.859354e-02
##  [172,]  2.244365e-01 -6.529152e-01
##  [173,]  8.494346e-02  3.904345e-03
##  [174,]  5.916753e-01  4.774942e-01
##  [175,]  1.211931e-01  7.612695e-02
##  [176,]  2.704366e-01  1.522830e-02
##  [177,]  1.079916e-02  3.323617e-02
##  [178,]  4.311706e-03 -1.314850e-03
##  [179,]  1.418176e-01 -5.621370e-02
##  [180,]  4.889274e-02 -1.562028e-02
##  [181,]  1.037854e-01 -1.520950e-02
##  [182,] -4.904573e-03  6.693064e-03
##  [183,] -9.148820e-03  2.120481e-02
##  [184,] -4.139789e-02 -6.129516e-03
##  [185,]  1.588250e-02 -2.020996e-02
##  [186,]  1.761247e-01  1.186209e-03
##  [187,]  3.757786e-02 -1.525776e-03
##  [188,] -6.324174e-03 -1.975779e-02
##  [189,] -1.934928e-02  1.282310e-02
##  [190,] -1.373478e+00  4.917525e-01
##  [191,] -3.661824e-01 -9.657169e-01
##  [192,]  2.289448e-02 -4.124503e-02
##  [193,]  1.037142e-01  1.133148e-02
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##  [194,] -1.172706e-02 -1.253716e-02
##  [195,]  1.922773e-01  1.161312e-02
##  [196,]  7.742874e-02  1.638623e-02
##  [197,] -2.260920e-02 -2.269521e-02
##  [198,] -1.394287e-03 -6.486200e-03
##  [199,]  1.004891e-01  6.847611e-02
##  [200,]  8.130496e-02  1.580967e-02
##  [201,]  1.105255e-01  7.051262e-02
##  [202,] -1.303890e-02  1.677904e-02
##  [203,] -2.672784e-02 -1.828553e-01
##  [204,]  1.456097e-03 -4.234789e-03
##  [205,]  6.644914e-02  4.853992e-02
##  [206,] -6.440659e-03 -2.188650e-02
##  [207,] -7.846949e-03  1.706999e-02
##  [208,] -1.420311e-02  1.480159e-02
##  [209,] -1.214260e-02 -1.208934e-02
##  [210,]  1.157014e-01  7.016430e-02
##  [211,]  9.721359e-03 -3.327769e-02
##  [212,]  4.142106e-02  2.950585e-03
##  [213,] -3.919823e-02  3.384718e-02
##  [214,]  3.719870e-02  7.333207e-02
##  [215,]  4.236322e-02  1.595063e-03
##  [216,]  2.008799e-01 -5.659339e-03
##  [217,] -1.097434e-01 -7.027994e-02
##  [218,]  2.981113e-01 -6.026004e-01
##  [219,]  8.773243e-04  3.869109e-02
##  [220,]  1.592500e-01 -4.230800e-02
##  [221,]  2.681170e-01 -9.141792e-01
##  [222,]  2.191312e-02 -2.098233e-03
##  [223,]  2.849666e-02  1.548727e-02
##  [224,] -1.306016e-02  1.882200e-02
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##  [227,]  6.358812e-01  5.105352e-01
##  [228,]  1.210892e-01  3.312194e-02
##  [229,]  1.215260e-01  3.701974e-02
##  [230,] -3.772465e-01 -9.631739e-01
##  [231,]  1.418986e-01  9.313919e-02
##  [232,]  3.039357e-02  3.649945e-03
##  [233,] -1.664557e-02  5.122490e-02
##  [234,]  7.870639e-03 -1.636426e-02
##  [235,]  7.605828e-02  1.396739e-02
##  [236,]  2.611026e-02  5.943955e-02
##  [237,] -1.124159e-02 -1.725439e-02
##  [238,] -8.361203e-01 -9.944022e-02
##  [239,]  1.669578e-03  8.083461e-03
##  [240,] -3.758798e-01 -9.619377e-01
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##  [242,]  5.354029e-01 -6.011743e-01
##  [243,]  4.029026e-02  6.194619e-02
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##  [246,]  8.643807e-01  4.849064e-01
##  [247,] -3.486057e-01 -1.147963e+00
##  [248,]  1.280739e-02 -1.154784e-03
##  [249,]  9.936060e-02  5.684241e-02
##  [250,]  6.422536e-02  1.444150e-02
##  [251,]  6.748813e-02  1.166544e-02
##  [252,]  2.870627e-01 -6.028891e-01
##  [253,] -1.036720e-03  3.969646e-02
##  [254,]  1.854829e-02 -9.722016e-04
##  [255,]  7.548237e-02  7.535413e-02
##  [256,]  7.976805e-02  3.138338e-02
##  [257,]  1.308355e-01  8.625059e-02
##  [258,]  8.330445e-03  4.699962e-02
##  [259,]  4.619241e-02  1.833991e-02
##  [260,]  1.234441e-01  3.802064e-02
##  [261,]  5.880949e-02  4.863825e-02
##  [262,]  6.941986e-02  4.989613e-02
##  [263,]  1.093644e-02 -2.194272e-03
##  [264,]  6.316698e-02 -3.892403e-02
##  [265,]  7.681379e-03 -2.899490e-02
##  [266,]  3.820688e-02  2.827087e-03
##  [267,]  2.057064e-01 -3.347522e-03
##  [268,]  5.308439e-02  1.730167e-02
##  [269,] -8.400006e-01 -1.012094e-01
##  [270,]  1.145894e-01  3.085527e-02
##  [271,]  1.353370e-02 -1.250397e-02
##  [272,]  5.927847e-02  4.498535e-02
##  [273,]  1.322720e-01  8.039889e-02
##  [274,]  3.458562e-03  6.420253e-02
##  [275,] -3.144744e-01 -1.118241e+00
##  [276,] -3.035168e-02  5.257385e-02
##  [277,]  1.130593e-02 -1.245564e-02
##  [278,]  9.772867e-03  6.780656e-03
##  [279,] -2.168845e-02  5.918454e-02
##  [280,] -6.118055e-03 -1.262187e-02
##  [281,] -1.404162e-02 -2.885650e-03
##  [282,]  1.003304e-01  1.416794e-02
##  [283,] -1.661696e-02  3.767956e-05
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##  [287,]  8.762559e-02  9.351928e-03
##  [288,]  9.562300e-02  1.029158e-02
##  [289,]  4.543272e-02 -1.398184e-02
##  [290,]  4.984056e-02 -2.374150e-02
##  [291,]  5.314076e-02  5.628415e-02
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##  [293,]  5.375792e-01 -5.985724e-01
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##  [308,]  1.649755e-02 -3.466164e-02
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##  [310,]  3.299175e-01  1.421816e-01
##  [311,]  1.702353e-01 -3.654180e-02
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##  [313,] -1.870400e-02  2.294268e-03
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##  [318,] -4.435413e-02 -1.092499e-01
##  [319,] -9.269913e-03 -1.798153e-02
##  [320,]  1.474511e-02 -5.507762e-02
##  [321,]  2.276107e-02 -2.326307e-02
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##  [325,]  5.388644e-02 -2.190843e-02
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##  [329,]  2.399114e-02 -3.233786e-02
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##  [348,]  4.395939e-02  2.874951e-02
##  [349,]  4.577213e-02  3.368318e-03
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##  [622,] -1.833671e-02 -5.338169e-03
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##  [626,]  2.247683e-02 -1.626292e-02
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##  [680,]  2.039097e-01 -5.302146e-02
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##  [682,]  2.426183e-02  3.760706e-02
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##  [693,]  3.605072e-02  3.655831e-02
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##  [935,] -8.351476e-01 -7.344074e-02
##  [936,]  7.016278e-02 -5.223812e-02
##  [937,]  6.073266e-03  1.975605e-02
##  [938,] -8.194575e-04  1.941955e-02
##  [939,]  7.946261e-02  2.474157e-03
##  [940,]  3.657607e-02  8.959902e-02
##  [941,]  2.121640e-01  6.245049e-02
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##  [943,]  6.571751e-02  1.985842e-02
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##  [945,]  9.760067e-02  1.695771e-02
##  [946,]  2.395156e-02 -1.126031e-02
##  [947,] -8.438934e-01 -9.762021e-02
##  [948,]  1.383105e-02 -1.097363e-02
##  [949,]  5.960431e-02  5.080604e-02
##  [950,]  1.226562e-02 -3.229398e-02
##  [951,]  4.656080e-02 -1.087439e-02
##  [952,] -1.690812e-02 -3.922908e-02
##  [953,]  5.541797e-02  1.569365e-02
##  [954,]  1.458903e-02 -2.402777e-02
##  [955,]  6.973318e-03  7.623552e-02
##  [956,]  2.500484e-03  4.904007e-03
##  [957,]  1.846295e-02  1.068809e-02
##  [958,]  4.084874e-02  8.196899e-03
##  [959,]  6.214439e-02  4.523761e-02
##  [960,]  5.144137e-02  4.101739e-02
##  [961,] -1.361335e-03  7.293524e-03
##  [962,]  1.029702e-01 -3.430339e-02
##  [963,] -3.419875e-01 -1.097688e+00
##  [964,]  3.260357e-02  2.917413e-02
##  [965,]  3.020002e-02  3.530331e-02
##  [966,] -1.347137e+00  4.942897e-01
##  [967,]  1.189869e-01  2.376086e-02
##  [968,]  1.285637e-01  3.748169e-02
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##  [972,] -1.177286e-02  1.470318e-02
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##  [975,] -3.283532e-02 -5.830961e-03
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##  [977,]  1.587836e-02  8.232537e-02
##  [978,]  5.478972e-02 -6.410519e-03
##  [979,]  3.129717e-02  1.102715e-02
##  [980,]  5.768301e-01  4.626826e-01
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##  [982,]  1.133368e-01  2.915324e-02
##  [983,]  4.654695e-01  1.253230e-01
##  [984,]  1.119193e-02 -3.116622e-02
##  [985,]  3.371168e-02  3.358039e-02
##  [986,]  9.279393e-02  9.344576e-03
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##  [988,]  6.010096e-01  4.729459e-01
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##  [990,]  2.397321e-02  2.329279e-02
##  [991,]  2.525274e-03  1.535397e-02
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##  [993,]  2.870717e-02 -1.186211e-02
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## [1013,]  5.214092e-02  2.103004e-02
## [1014,]  1.818195e-02 -2.371517e-02
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## [1017,]  2.211542e-02 -1.761339e-02
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## [1019,]  5.026568e-02  7.455885e-02
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## [1024,]  7.382495e-02  2.908845e-02
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## [1026,] -9.128987e-03  8.271387e-03
## [1027,]  1.772559e-02 -2.171631e-02
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## [1029,] -1.459574e-02  1.429733e-02
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## [1137,]  1.114797e-01 -4.175675e-02
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## [1160,] -8.992952e-04  3.275220e-02
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## [1163,]  2.593438e-02 -2.564175e-02
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## [1191,]  9.867722e-02 -3.338947e-02
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## [1255,] -3.499352e-01 -1.090879e+00
## [1256,] -3.153461e-03  3.315566e-03
## [1257,]  8.215513e-01  4.837709e-01
## [1258,] -3.523433e-01 -1.085758e+00
## [1259,] -1.022068e-02  2.392358e-02
## [1260,]  1.364789e-02  2.836675e-02
## [1261,]  7.338220e-02  1.091123e-02
## [1262,] -3.392674e-01 -1.086108e+00
## [1263,] -8.179807e-03 -6.372309e-03
## [1264,]  6.006932e-02 -3.700926e-03
## [1265,]  4.251129e-02 -3.376155e-02
## [1266,]  3.714738e-02  7.455311e-03
## [1267,]  2.636167e-01  4.397454e-03
## [1268,]  3.881294e-02 -2.374109e-02
## [1269,] -4.846716e-02 -3.052042e-02
## [1270,]  3.639274e-02 -4.499641e-03
## [1271,]  3.522182e-02 -1.236510e-02
## [1272,]  6.554931e-02  7.252304e-02
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## [1274,]  3.577505e-03  2.204834e-02
## [1275,]  5.676462e-02  6.171518e-02
## [1276,]  1.139878e-01  7.227989e-02
## [1277,]  2.408505e-02  2.439229e-02
## [1278,] -1.346410e-02  8.041722e-03
## [1279,]  3.672576e-02 -5.648202e-03
## [1280,]  2.411905e-02  3.060366e-02
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## [1287,] -6.313651e-04 -2.049761e-02
## [1288,] -1.999254e-03 -1.717025e-02
## [1289,]  1.121324e-01  3.549639e-02
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## [1293,]  1.278900e-02  4.540487e-02
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## [1313,]  7.858275e-02  1.245650e-02
## [1314,] -2.449554e-02  5.448633e-02
## [1315,] -4.475299e-03 -6.615419e-03
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## [1319,]  6.398261e-03 -1.956277e-02
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## [1327,]  1.148598e-02  3.870808e-02
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## [1331,] -3.056280e-01 -1.065898e+00
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## [1333,] -9.836039e-01 -1.621347e-01
## [1334,]  9.229481e-02  2.600542e-02
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## [1339,]  6.195328e-01  4.456184e-01
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## [1361,]  1.565096e-01  1.153359e-01
## [1362,]  2.180538e-02  3.006605e-02
## [1363,] -6.197793e-03 -2.241868e-02
## [1364,] -2.100647e-02 -2.546325e-02
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## [1457,]  1.620385e-02 -3.975772e-02
## [1458,]  2.756008e-02  1.880225e-02
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## [1460,]  2.973368e-02 -2.885982e-02
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## [1474,]  7.481927e-02 -2.557408e-05
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## [1476,]  2.147423e-02  4.759695e-03
## [1477,] -1.830708e-02 -8.274311e-03
## [1478,]  7.082733e-03  4.833535e-02
## [1479,]  6.534062e-02  3.445384e-02
## [1480,]  5.107485e-02  3.385358e-02
## [1481,]  3.812444e-02 -1.848338e-02
## [1482,] -3.496042e-01 -1.098449e+00
## [1483,] -1.331385e-02 -8.497805e-03
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## [1486,]  8.227816e-02  3.436713e-02
## [1487,]  7.509431e-02  6.241812e-03
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## [1498,] -5.438215e-05  4.658870e-03
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## [1508,] -6.884308e-01 -1.072374e-01
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## [1577,]  2.854397e-02 -8.050277e-03
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## [1579,]  3.471429e-02 -8.845465e-03
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## [1586,] -2.325209e-04  2.424341e-02
## [1587,]  7.930000e-03  3.168911e-02
## [1588,] -2.626172e-02  1.236392e-02
## [1589,]  5.886266e-01  4.837332e-01
## [1590,] -3.291325e-01 -1.120773e+00
## [1591,]  1.179632e-02  1.280109e-02
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## [1593,]  5.887423e-02  5.786869e-02
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## [1597,]  9.947224e-02  7.090061e-02
## [1598,]  4.693894e-01  1.367698e-01
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## [1602,] -7.968951e-02 -2.299729e-02
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## [1612,] -1.356895e+00  4.950649e-01
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## [1619,]  2.166645e-01  3.018719e-03
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## [1621,]  3.613759e-02 -1.071386e-02
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## [1629,]  4.654260e-01  1.363606e-01
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## [1819,]  1.095098e-01  4.163549e-04
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## [1898,] -6.934644e-01 -1.082532e-01
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## [1999,]  4.474372e-02  2.750856e-02
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## [2002,]  5.160276e-02  3.610866e-02
## [2003,]  5.388738e-02  5.679665e-02
## [2004,]  9.206895e-02 -3.573225e-02
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## [2006,]  5.274132e-03  3.318954e-02
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## [2009,] -2.599047e-02  1.274156e-02
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## [2226,]  2.476195e-02  3.648769e-02
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## [2228,]  5.900543e-02  3.202082e-02
## [2229,]  1.244725e-02  1.069646e-02
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## [2239,]  1.954942e-01 -3.511461e-02
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## [2243,]  6.835356e-02 -1.722392e-03
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## [2262,] -2.670612e-02  7.283206e-02
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## [2279,] -2.288236e-02 -2.716464e-03
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## [2543,]  6.018789e-01  4.839445e-01
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## [2544,] -3.466411e-02 -4.897279e-03
## [2545,]  1.614264e-01 -3.952891e-02
## [2546,]  2.134035e-02  2.707568e-02
## [2547,] -5.215425e-02  3.468505e-02
## [2548,]  5.677726e-02 -6.567467e-02
## [2549,] -2.612916e-02 -2.768052e-03
## [2550,] -3.474735e-02 -6.409380e-03
## [2551,]  5.076985e-01 -6.104327e-01
## [2552,] -2.764853e-02  2.229326e-02
## [2553,]  1.504002e-01  3.074109e-02
## [2554,]  8.123802e-04  1.557062e-02
## [2555,]  1.068324e-01 -5.162832e-02
## [2556,]  2.755425e-02 -1.817576e-02
## [2557,]  6.877612e-02 -2.826068e-02
## [2558,]  8.999617e-02  9.155730e-02
## [2559,] -4.880421e-02  3.464291e-02
## [2560,] -2.308902e-02 -9.528588e-03
## [2561,]  1.695852e-01 -2.311215e-02
## [2562,]  1.322481e-02 -2.000242e-02
## [2563,] -1.167213e+00  5.017159e-01
## [2564,] -5.622971e-03  1.455612e-02
## [2565,] -9.573773e-01  5.773285e-01
## [2566,] -3.905924e-02 -3.795090e-02
## [2567,]  5.574106e-03  1.125853e-02
## [2568,]  1.293120e-02  3.612316e-03
## [2569,]  6.074150e-02  3.985933e-02
## [2570,] -6.278360e-03 -6.406298e-02
## [2571,] -3.684275e-02  2.240854e-03
## [2572,]  2.139565e-01 -8.353638e-02
## [2573,] -4.141753e-02 -7.092519e-03
## [2574,]  1.634655e-02  4.042910e-03
## [2575,]  1.967512e-02 -1.298070e-02
## [2576,]  2.696087e-02  2.835828e-02
## [2577,] -4.577727e-02 -5.869883e-02
## [2578,] -1.652175e-03 -3.072194e-02
## [2579,] -1.692587e-02  1.061688e-02
## [2580,] -3.347810e-03 -3.867092e-02
## [2581,] -2.135593e-02 -3.310558e-02
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## [2584,]  1.688664e-01 -1.549454e-02
## [2585,]  6.864448e-05  1.469711e-02
## [2586,]  6.607812e-02 -2.731735e-04
## [2587,]  1.801890e-01 -2.089848e-02
## [2588,]  2.005830e-02  9.355376e-02
## [2589,] -1.528114e+00 -6.562100e-01
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## [2591,] -2.447003e-02  1.137480e-02
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## [2593,]  3.215327e-02 -3.017342e-02
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## [2597,]  5.972231e-02 -1.082559e-02
## [2598,] -5.925686e-02  4.305880e-02
## [2599,]  3.465313e-02 -5.341703e-03
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## [2601,]  2.518877e-02  1.458459e-04
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## [2606,]  6.476544e-02  1.054433e-03
## [2607,]  4.536852e-02 -3.563480e-03
## [2608,] -1.535144e-02 -7.972179e-02
## [2609,]  3.208776e-02 -1.217398e-02
## [2610,] -6.587055e-03  5.728786e-02
## [2611,]  1.895480e-01  6.945347e-04
## [2612,]  4.700164e-02  1.746442e-02
## [2613,]  4.485251e-02  3.595243e-02
## [2614,] -1.032914e-02  2.748503e-02
## [2615,]  4.825464e-02 -5.693997e-04
## [2616,] -4.707604e-03  1.944812e-02
## [2617,] -3.635882e-03  3.392668e-02
## [2618,] -1.135311e+00 -4.021136e-01
## [2619,]  2.205906e-01 -8.013851e-02
## [2620,]  4.557120e-02  1.244396e-02
## [2621,] -2.767233e-03  1.252380e-01
## [2622,]  1.603309e-02  2.158535e-03
## [2623,]  5.130012e-02  1.144688e-02
## [2624,] -2.975767e-02 -2.436830e-03
## [2625,] -1.727398e-02  1.965576e-02
## [2626,]  2.076960e-01 -5.386675e-03
## [2627,] -6.715349e-03  2.373079e-02
## [2628,] -2.678810e-03  2.861917e-02
## [2629,] -2.245387e-02  1.240100e-02
## [2630,]  6.949713e-02  6.658843e-02
## [2631,]  1.111407e-01  1.023723e-01
## [2632,]  3.836331e-02  1.384685e-02
## [2633,]  3.394904e-02  1.537533e-03
## [2634,] -1.137149e+00 -4.008924e-01
## [2635,] -3.499184e-01 -1.062983e+00
## [2636,] -1.089196e+00 -4.958033e-01
## [2637,]  4.538929e-02  5.436683e-02
## [2638,]  2.251261e-02  2.949095e-02
## [2639,]  5.594187e-02  1.255548e-02
## [2640,]  3.763917e-02  1.515921e-02
## [2641,]  1.398715e-01  9.518709e-03
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## [2643,]  6.624376e-02  4.142051e-02
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## [2644,]  4.464692e-02  5.441029e-02
## [2645,] -3.412048e-01 -1.055941e+00
## [2646,]  2.803066e-02  2.859734e-02
## [2647,]  1.752655e-02 -1.486951e-03
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## [2650,] -8.230405e-03  3.113074e-02
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## [2657,]  4.469542e-02  1.406440e-02
## [2658,]  3.825630e-02  1.136455e-02
## [2659,]  2.330756e-03  3.936067e-02
## [2660,] -1.141114e+00 -4.051602e-01
## [2661,] -5.093367e-02 -3.719668e-02
## [2662,]  1.731287e-02  1.763732e-02
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## [2665,] -3.950452e-02 -1.372639e-01
## [2666,]  5.167682e-02  4.702798e-02
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## [2670,]  1.475247e-01  4.141404e-03
## [2671,]  9.796245e-02 -3.474034e-02
## [2672,]  6.899016e-03  9.857444e-03
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## [2675,]  4.939544e-02  1.857578e-02
## [2676,] -1.930799e-03 -3.776288e-03
## [2677,] -6.095878e-03  3.907829e-02
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## [2680,]  2.766649e-01 -6.110693e-01
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## [2684,] -2.616046e-02  1.879081e-02
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## [2688,] -9.043414e-01  6.163436e-01
## [2689,] -1.268913e-02  2.392311e-03
## [2690,] -9.944258e-01 -1.748928e-01
## [2691,]  1.445681e-01  8.666650e-03
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## [2693,] -2.633206e-03  3.418707e-03
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## [2696,]  6.249160e-02 -1.955273e-02
## [2697,]  1.257118e-01 -4.495522e-02
## [2698,] -3.536629e-02  1.149542e-03
## [2699,]  1.952556e-01 -3.617351e-03
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## [2701,]  6.463898e-02  5.515225e-02
## [2702,] -2.681816e-03  2.735443e-02
## [2703,]  2.995974e-02  3.461901e-02
## [2704,]  2.183037e-02 -2.791031e-03
## [2705,]  1.099533e-01  1.037268e-01
## [2706,]  1.980320e-01 -2.108893e-02
## [2707,] -1.843943e-02  1.236412e-02
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## [2710,] -6.150779e-03  1.248788e-03
## [2711,] -2.326672e-02  1.526281e-02
## [2712,]  6.208281e-02  1.340455e-02
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## [2714,]  6.290134e-02  1.850457e-02
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## [2716,]  5.293172e-02  4.305165e-02
## [2717,]  7.389305e-02  4.307299e-02
## [2718,]  3.757581e-02  8.267751e-03
## [2719,]  7.459136e-02 -3.447552e-02
## [2720,]  7.644499e-02  4.327779e-02
## [2721,]  2.359876e-02  3.513316e-02
## [2722,] -1.407268e+00  4.946825e-01
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## [2724,]  6.210504e-02  5.531423e-02
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## [2726,]  5.209690e-02  4.485180e-02
## [2727,] -3.863812e-01 -1.121614e+00
## [2728,]  4.052019e-02  5.956401e-02
## [2729,]  1.130709e-01  1.039049e-01
## [2730,]  7.202669e-03  6.286247e-03
## [2731,]  5.687955e-02  4.852298e-02
## [2732,]  7.555565e-02  7.350073e-02
## [2733,] -1.065689e-02 -3.223155e-02
## [2734,]  6.769921e-02  4.283443e-02
## [2735,] -1.477082e-02  2.152244e-02
## [2736,] -2.232409e-02  1.159157e-02
## [2737,]  6.961315e-03  1.750746e-02
## [2738,]  4.539389e-02 -5.603399e-02
## [2739,] -3.304324e-02  8.036211e-02
## [2740,] -2.253192e-02  2.360306e-02
## [2741,]  1.864167e-01 -1.327528e-02
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## [2743,]  4.529607e-02  1.379266e-02
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## [2747,]  3.533514e-02  1.169054e-02
## [2748,]  1.008385e-02  3.638623e-03
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## [2750,]  3.266716e-02  4.007294e-02
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## [2755,]  5.296808e-02  5.059942e-02
## [2756,] -1.399547e+00  4.986721e-01
## [2757,]  2.014374e-02  5.561800e-02
## [2758,]  3.796995e-02  2.928256e-03
## [2759,]  6.263375e-01  4.936927e-01
## [2760,]  1.640107e-01 -1.156295e-02
## [2761,] -5.192764e-02  2.808686e-02
## [2762,] -3.621023e-01 -1.104557e+00
## [2763,] -1.402111e+00  4.944748e-01
## [2764,]  1.600452e-02  9.515337e-03
## [2765,] -1.642553e+00 -5.341990e-01
## [2766,]  1.467184e-02  1.513564e-02
## [2767,]  6.391151e-02 -5.302674e-04
## [2768,] -2.063551e-02  1.303318e-02
## [2769,] -2.943033e-03 -7.803425e-03
## [2770,]  7.388672e-03 -5.495747e-02
## [2771,]  2.402209e-02  3.262796e-02
## [2772,] -6.673693e-03 -1.290271e-03
## [2773,]  2.913471e-02  5.688534e-03
## [2774,] -8.015215e-03  1.822293e-02
## [2775,]  1.255744e-02  1.714022e-02
## [2776,] -2.973564e-02  6.343572e-03
## [2777,]  4.350570e-02  4.515897e-02
## [2778,]  1.059522e-01  2.426402e-02
## [2779,] -2.162913e-02  7.105035e-02
## [2780,]  1.099860e-02 -5.609539e-03
## [2781,]  1.481012e-02  1.935473e-03
## [2782,]  6.197614e-02 -2.395665e-03
## [2783,]  6.555721e-02  1.928702e-02
## [2784,]  5.309890e-02 -5.739342e-02
## [2785,]  6.678629e-02 -9.983638e-03
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## [2787,]  7.247381e-02  4.329530e-02
## [2788,]  4.484262e-02 -5.056592e-03
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## [2790,]  3.823710e-02  5.623312e-02
## [2791,]  4.144604e-02  4.439782e-02
## [2792,] -2.671608e-02  5.655444e-02
## [2793,]  1.041917e-02  5.670499e-02
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## [2796,] -3.044917e-02  1.539256e-03
## [2797,]  6.635347e-03 -4.321985e-03
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## [2803,]  5.943511e-02  7.204450e-02
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## [2808,]  2.589466e-02  1.646106e-02
## [2809,]  5.727962e-02  1.379701e-02
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## [2811,]  4.516682e-02  7.110489e-03
## [2812,]  8.446495e-02  2.702744e-02
## [2813,] -2.484991e-02  2.051804e-02
## [2814,] -9.899535e-01 -1.715986e-01
## [2815,] -1.103140e-02  1.388038e-01
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## [2817,] -1.709026e-02  3.690308e-02
## [2818,]  5.275016e-02  4.871542e-02
## [2819,]  2.240266e-01 -7.953275e-02
## [2820,]  2.283365e-02  2.988587e-02
## [2821,]  5.188635e-02  1.169514e-02
## [2822,]  1.029457e-01  5.500365e-02
## [2823,]  3.847859e-03 -1.758368e-02
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## [2825,] -2.698462e-02  1.827826e-02
## [2826,]  1.347891e-01  2.053918e-02
## [2827,] -1.517703e-02 -3.505019e-02
## [2828,] -3.015993e-02 -5.306052e-03
## [2829,]  4.742909e-01  1.282771e-01
## [2830,] -1.402638e+00  4.987519e-01
## [2831,]  6.888228e-02  6.871871e-03
## [2832,]  3.855076e-02  2.312644e-02
## [2833,]  2.894007e-02 -1.236452e-02
## [2834,]  2.469314e-01  9.391072e-02
## [2835,]  1.534723e-02  1.309336e-02
## [2836,] -5.447552e-03 -9.188091e-02
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## [2839,]  6.651537e-02  7.596639e-02
## [2840,]  1.760613e-01 -8.119562e-03
## [2841,] -6.876384e-04  2.863895e-02
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## [2843,]  4.153378e-02  5.743247e-02
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## [2850,]  2.443595e-02 -7.428493e-03
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## [2859,]  1.690723e-02  5.670258e-02
## [2860,]  6.873151e-03  2.392395e-03
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## [2862,]  4.428900e-02 -2.794113e-02
## [2863,] -2.737146e-02  9.259172e-03
## [2864,] -3.685240e-01 -1.108810e+00
## [2865,]  1.752924e-01  1.162603e-02
## [2866,]  3.487567e-02  6.856524e-03
## [2867,]  1.867894e-01 -3.385567e-02
## [2868,] -1.545837e-02 -4.266869e-02
## [2869,] -1.773049e-02  1.740205e-02
## [2870,]  6.451086e-02  2.117424e-02
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## [2872,]  1.611448e-01 -1.696331e-02
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## [2874,]  6.438740e-02  5.048736e-02
## [2875,]  4.546402e-02  2.863710e-02
## [2876,]  2.167033e-01  3.606989e-03
## [2877,]  4.662336e-02  3.889392e-03
## [2878,]  1.267976e-02 -1.996138e-03
## [2879,]  4.795745e-02  5.800956e-02
## [2880,]  1.562430e-01 -1.456855e-02
## [2881,] -2.532641e-02  4.652205e-03
## [2882,]  1.879113e-01 -6.156906e-03
## [2883,]  7.142252e-03 -3.023124e-03
## [2884,] -7.843494e-03  7.691389e-03
## [2885,] -1.676752e-02  5.605538e-03
## [2886,] -2.195498e-02  2.710685e-02
## [2887,] -1.986011e-02 -2.347541e-02
## [2888,]  1.432255e-02  2.969541e-03
## [2889,]  1.962493e-02  8.198466e-03
## [2890,] -1.816835e-02 -2.937254e-02
## [2891,] -1.277972e+00  3.160479e-01
## [2892,] -1.960274e-03  2.559867e-02
## [2893,]  1.943594e-02 -5.969050e-02
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## [2896,]  2.005483e-02 -5.356529e-02
## [2897,] -1.792720e-02  1.018286e-02
## [2898,]  2.834848e-02  6.845861e-02
## [2899,]  1.967103e-01 -3.126661e-02
## [2900,]  2.692563e-02  2.812059e-02
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## [2902,]  8.926141e-02  4.259692e-02
## [2903,] -9.269981e-03  3.941923e-02
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## [2905,] -3.068484e-02 -8.070816e-03
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## [2907,]  1.924091e-01 -1.628317e-02
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## [2911,]  7.472877e-02  6.600207e-02
## [2912,]  2.501889e-02  2.329050e-02
## [2913,] -3.379291e-02 -1.147061e-02
## [2914,]  9.054820e-02 -3.223201e-02
## [2915,]  4.021722e-02  5.539065e-02
## [2916,]  4.291028e-02  2.095223e-02
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## [2918,]  1.891856e-01 -3.459921e-02
## [2919,]  8.415721e-02  2.371833e-02
## [2920,]  6.269246e-03  4.747358e-03
## [2921,]  1.078629e-02  3.280361e-02
## [2922,]  4.790784e-02  3.336948e-02
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## [2925,] -3.317359e-02  1.253688e-02
## [2926,]  1.140904e-02  4.889898e-02
## [2927,] -3.231498e-02  1.067780e-02
## [2928,] -3.678019e-02  5.802379e-02
## [2929,]  1.935569e-02 -2.446447e-04
## [2930,]  5.136083e-02  3.397713e-02
## [2931,]  5.283625e-02  4.044891e-02
## [2932,]  2.093989e-02  3.027440e-02
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## [2934,] -2.922524e-02  1.296321e-02
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## [2940,] -2.021008e-02 -3.053433e-02
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## [2943,]  5.050619e-02  3.991262e-03
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## [2947,] -4.866677e-03  4.221173e-02
## [2948,]  7.703767e-02  4.453346e-02
## [2949,]  9.286989e-02 -3.366452e-02
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## [2951,] -7.413409e-03 -1.180102e-02
## [2952,]  4.803745e-01  1.314539e-01
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## [2999,] -3.745778e-02  5.020458e-03
## [3000,]  3.380451e-02  1.653998e-02
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## [3002,]  5.930770e-02  6.104078e-02
## [3003,]  7.610875e-02  3.772140e-02
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## [3006,] -9.986235e-01 -1.695517e-01
## [3007,]  1.598237e-02  5.536907e-02
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## [3019,] -8.830323e-03 -1.277113e-01
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## [3022,]  1.786928e-02  6.396133e-02
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## [3048,]  2.299989e-02  4.970218e-02
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## [3050,] -8.995798e-01  6.198073e-01
## [3051,] -1.256141e+00  3.315661e-01
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## [3057,]  9.523879e-02  9.601337e-02
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## [3059,]  6.606945e-02  6.664021e-02
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## [3066,]  2.265609e-02  3.319180e-03
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## [3068,]  2.281950e-02  3.222738e-02
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## [3071,]  2.423427e-03  1.743033e-02
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## [3074,] -2.952901e-02  5.414847e-02
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## [3080,]  4.537913e-02  3.929090e-02
## [3081,]  6.534503e-02  4.617054e-02
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## [3083,]  8.533664e-02 -2.745551e-02
## [3084,]  7.968094e-03 -5.080340e-02
## [3085,] -2.927184e-02 -2.217265e-02
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## [3087,]  2.350337e-02  4.509585e-02
## [3088,] -2.334607e-02  3.171697e-03
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## [3093,]  9.126534e-03 -7.244240e-03
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## [3097,]  4.157569e-02  1.796574e-02
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## [3101,]  5.401283e-02  1.479798e-02
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## [3103,]  2.596949e-02  3.628692e-02
## [3104,] -4.001015e-02 -3.103134e-02
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## [3106,]  5.971285e-02  1.908830e-02
## [3107,]  7.989961e-02  1.620488e-03
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## [3109,]  5.490445e-02  3.923380e-02
## [3110,]  1.009967e-01  1.044270e-01
## [3111,]  4.958247e-02  4.680845e-02
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## [3157,] -5.212442e-02 -1.609365e-02
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## [3184,]  2.753728e-02 -4.820477e-02
## [3185,] -8.029493e-02 -4.045973e-02
## [3186,]  6.405202e-02  4.001111e-02
## [3187,]  6.248978e-02  5.891158e-02
## [3188,]  3.952725e-02  6.639381e-02
## [3189,]  3.859570e-02  3.937754e-02
## [3190,]  1.672704e-02  5.725888e-02
## [3191,]  6.671271e-02 -9.206971e-04
## [3192,]  1.163020e-03 -8.787098e-02
## [3193,] -2.409643e-02  6.678152e-03
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## [3194,]  7.177048e-02  2.956180e-02
## [3195,] -1.655261e+00 -5.343687e-01
## [3196,]  2.095224e-01 -7.954141e-02
## [3197,] -1.262253e+00  3.284543e-01
## [3198,] -3.736736e-01 -1.107218e+00
## [3199,]  2.624618e-02  9.537368e-03
## [3200,]  4.034459e-02  9.572346e-03
## [3201,]  5.847100e-02  7.551337e-03
## [3202,] -9.030083e-01  6.227107e-01
## [3203,]  4.788824e-03 -8.844134e-02
## [3204,]  9.053851e-02 -3.752930e-02
## [3205,] -1.323858e-02  3.761907e-02
## [3206,] -3.757403e-02  7.480807e-03
## [3207,] -4.977266e-03  2.587631e-02
## [3208,]  5.529190e-02 -1.120750e-03
## [3209,]  1.810327e-01  1.424126e-02
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## [3211,]  5.511297e-02  4.459588e-02
## [3212,]  4.199465e-01  9.657481e-02
## [3213,] -3.406448e-01 -1.057919e+00
## [3214,]  1.813305e-01  1.168095e-02
## [3215,]  2.156908e-01  2.609845e-02
## [3216,]  3.320069e-02  1.649363e-02
## [3217,]  2.764778e-03  1.913856e-02
## [3218,]  1.405282e-02  1.781610e-02
## [3219,]  4.931480e-02  3.375678e-02
## [3220,]  4.699472e-02  3.411945e-02
## [3221,]  3.094987e-02 -1.276962e-02
## [3222,] -8.680377e-03  2.247056e-02
## [3223,] -7.968193e-04 -5.638749e-03
## [3224,]  4.078000e-02  8.735072e-03
## [3225,]  3.703187e-02  4.978121e-02
## [3226,] -1.396819e+00  4.981189e-01
## [3227,]  7.044909e-02  2.128109e-02
## [3228,]  2.184142e-01 -8.113878e-02
## [3229,] -3.479010e-01 -1.059831e+00
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## [3231,]  5.872574e-02 -1.398328e-03
## [3232,]  4.261772e-03  1.725727e-02
## [3233,]  5.798216e-02 -1.552795e-03
## [3234,]  2.320668e-04 -2.984739e-03
## [3235,]  3.376297e-02  2.629515e-02
## [3236,] -3.385317e-02  5.861951e-02
## [3237,] -1.399390e+00  4.998789e-01
## [3238,] -1.431447e-02  2.491853e-02
## [3239,]  5.031235e-02  5.566660e-02
## [3240,]  6.476760e-02  5.962290e-02
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## [3243,]  1.120720e-02  2.225129e-02
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## [3246,]  1.486411e-02  2.921919e-03
## [3247,]  4.370447e-02  3.218278e-02
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## [3249,]  4.099799e-02  5.943110e-02
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## [3255,]  7.149165e-02  7.230323e-02
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## [3263,]  2.631595e-02 -3.256623e-04
## [3264,]  2.866216e-02  5.484519e-04
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## [3268,]  6.513009e-02  3.896460e-02
## [3269,]  6.024324e-02  7.498576e-03
## [3270,]  3.210237e-03  2.929146e-03
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## [3272,]  6.392217e-02  5.938907e-02
## [3273,]  6.335094e-02  2.618625e-02
## [3274,]  2.232855e-02 -2.383744e-02
## [3275,] -2.003318e-02  2.663214e-02
## [3276,]  3.519001e-02  3.330472e-03
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## [3278,]  4.099407e-03  2.753760e-02
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## [3282,]  3.442662e-02  3.744429e-02
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## [3293,] -2.082085e-02  3.022924e-03
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## [3302,]  5.161919e-02  3.431994e-02
## [3303,] -1.021815e-02  1.894336e-02
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## [3337,]  1.033785e-01  1.029141e-01
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## [3340,]  2.400035e-02  2.000132e-02
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## [3364,]  7.141315e-02  6.252483e-02
## [3365,]  4.086924e-02  4.179260e-02
## [3366,] -1.264093e+00  3.251005e-01
## [3367,]  7.908436e-02  2.204131e-02
## [3368,]  4.509246e-02  6.014980e-02
## [3369,] -3.363274e-01 -1.046953e+00
## [3370,] -2.394101e-02 -4.057138e-02
## [3371,] -7.622436e-03  1.522655e-02
## [3372,] -1.246511e-02 -3.452021e-02
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## [3375,]  5.258580e-02  1.759313e-02
## [3376,]  7.198692e-03 -6.193355e-02
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## [3382,] -1.287152e-02 -9.371979e-02
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## [3386,]  3.043823e-02  4.380933e-02
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## [3389,]  9.178947e-04  1.701594e-02
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## [3391,]  3.409910e-02 -1.895719e-02
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## [3398,]  1.721473e-02 -5.826017e-03
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## [3402,] -2.638057e-02 -3.836982e-03
## [3403,] -1.372816e-02 -4.334880e-03
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## [3405,]  1.406184e-02 -1.917231e-03
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## [3407,]  6.844152e-02  6.849432e-02
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## [3411,]  6.356591e-02  1.782310e-02
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## [3413,] -4.478140e-02 -2.021675e-03
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## [3417,] -1.129087e+00  5.337717e-01
## [3418,]  4.862612e-02 -8.388738e-03
## [3419,] -1.447518e-02  1.617254e-02
## [3420,]  5.704172e-02  1.564256e-02
## [3421,]  2.701856e-02 -1.249336e-02
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## [3425,] -7.923675e-03  4.149508e-02
## [3426,] -4.710631e-02 -2.558938e-02
## [3427,] -1.843156e-02  2.068656e-02
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## [3431,] -7.612944e-03  4.493380e-02
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## [3436,]  1.542807e-01 -1.638232e-02
## [3437,]  3.134226e-02  3.242405e-02
## [3438,]  5.327868e-02  1.820239e-02
## [3439,]  1.746473e-01  1.478046e-02
## [3440,] -3.836362e-03  8.635079e-02
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## [3457,] -8.131471e-03  3.025805e-03
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## [3461,]  3.306688e-02  7.460600e-03
## [3462,]  3.467444e-03  1.890924e-02
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## [3464,] -9.011146e-01  6.198662e-01
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## [3469,]  3.609282e-03  3.235608e-02
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## [3481,]  4.991037e-02  6.030013e-02
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## [3502,] -1.123895e+00  5.382070e-01
## [3503,]  6.285693e-02  4.759503e-02
## [3504,]  7.818242e-02 -1.972736e-02
## [3505,]  7.327302e-03  3.712661e-02
## [3506,] -1.304554e-02  3.842888e-02
## [3507,]  2.240215e-01 -1.292572e-02
## [3508,]  6.629585e-02  4.594033e-02
## [3509,] -1.306501e-02  1.754607e-03
## [3510,] -1.403431e+00  5.076269e-01
## [3511,]  3.444028e-02  4.860785e-02
## [3512,] -5.152670e-03  7.631648e-03
## [3513,]  1.509271e-01 -3.053425e-02
## [3514,]  7.527124e-03  2.474826e-02
## [3515,]  3.714874e-02  1.226273e-02
## [3516,]  5.534238e-02  1.607262e-02
## [3517,]  5.239446e-02  1.521265e-02
## [3518,] -2.166341e-02  8.623973e-03
## [3519,]  5.731278e-03  1.331376e-02
## [3520,]  1.117880e-01 -2.362096e-03
## [3521,] -8.368805e-04  2.937070e-02
## [3522,] -3.036032e-02  1.662377e-02
## [3523,] -1.714730e-04  2.052559e-02
## [3524,] -4.218673e-02 -3.203239e-02
## [3525,] -3.773472e-01 -1.093218e+00
## [3526,]  5.634553e-02  2.166204e-02
## [3527,]  2.225955e-01 -7.470069e-02
## [3528,]  2.199661e-01 -1.631891e-02
## [3529,]  2.991878e-02  4.482186e-02
## [3530,]  3.170119e-02  2.936688e-02
## [3531,] -1.406604e+00  4.966484e-01
## [3532,]  4.716036e-02  1.182091e-02
## [3533,]  2.391686e-02  3.569867e-02
## [3534,]  2.076144e-02  3.459538e-03
## [3535,]  5.276709e-02  3.028201e-03
## [3536,]  4.452711e-02  3.222661e-02
## [3537,] -2.026979e-02  1.184752e-02
## [3538,]  3.572519e-02  2.488667e-02
## [3539,] -1.404637e-01 -3.855840e-02
## [3540,]  1.836971e-01 -4.857251e-03
## [3541,]  1.850147e-02  2.686497e-02
## [3542,] -1.134054e+00  5.321367e-01
## [3543,]  5.798586e-02  9.578482e-02
```

```
## [3544,] -1.880656e-02  6.207629e-03
## [3545,]  1.822721e-01  1.480658e-02
## [3546,]  2.570787e-03  2.685368e-02
## [3547,]  1.662949e-02  4.995219e-02
## [3548,]  5.538902e-02  1.616378e-02
## [3549,]  7.664330e-02  2.759806e-02
## [3550,]  2.522903e-02  1.225089e-02
## [3551,]  6.947917e-02  6.297410e-03
## [3552,]  4.024650e-02  2.867276e-02
## [3553,] -2.095490e-02  3.860316e-02
## [3554,]  4.447476e-02  3.711016e-02
## [3555,]  5.277928e-02  1.270300e-02
## [3556,] -1.265797e+00  3.326285e-01
## [3557,] -9.148517e-01  6.205147e-01
## [3558,]  9.934190e-03  5.859157e-02
## [3559,] -3.716550e-02  6.440983e-02
## [3560,]  1.884051e-02  1.894028e-02
## [3561,]  3.719541e-02  6.477685e-02
## [3562,] -1.987821e-02 -6.367961e-02
## [3563,]  5.667797e-02  2.739257e-02
## [3564,]  3.659571e-02  3.529748e-02
## [3565,] -1.567610e-02  1.758684e-02
## [3566,] -2.352343e-02  1.772955e-02
## [3567,]  3.862046e-02  4.738326e-02
## [3568,]  3.141500e-02  6.874414e-03
## [3569,] -3.846357e-01 -1.111075e+00
## [3570,]  5.418594e-02  1.602051e-02
## [3571,] -3.805374e-02  9.695876e-03
## [3572,]  2.420822e-02  4.463700e-02
## [3573,]  3.328392e-02  4.828121e-02
## [3574,]  3.547552e-02 -8.126749e-03
## [3575,]  5.231192e-02  7.545294e-03
## [3576,]  7.212507e-02  2.164046e-03
## [3577,]  3.995007e-02  3.728505e-03
## [3578,]  1.624738e-02 -2.148809e-02
## [3579,] -1.075949e-02  3.998155e-02
## [3580,]  1.688625e-02  1.716667e-02
## [3581,]  8.284560e-03 -7.652448e-03
## [3582,] -1.273866e+00  3.209320e-01
## [3583,]  5.946022e-02  1.485584e-02
## [3584,]  4.211454e-02  3.317356e-02
## [3585,]  4.646824e-02  6.441605e-02
## [3586,]  5.461274e-02 -7.413978e-03
## [3587,]  1.042397e-01  1.090872e-01
## [3588,] -1.131025e-02  2.943051e-02
## [3589,]  1.059189e-02  2.239246e-02
## [3590,] -6.290615e-03  2.251298e-02
## [3591,]  2.699540e-02  9.559184e-03
## [3592,] -9.544285e-04  2.912913e-02
## [3593,]  4.742757e-01  9.860104e-02
```

```
## [3594,]  7.673884e-02  3.576025e-03
## [3595,]  6.136216e-02  1.021417e-02
## [3596,]  1.738403e-02  2.904304e-02
## [3597,]  3.776163e-02 -1.016851e-02
## [3598,]  1.854785e-01 -9.269160e-04
## [3599,]  6.732160e-02  3.196988e-02
## [3600,]  3.822843e-02  3.606707e-04
## [3601,]  5.100880e-01 -6.026163e-01
## [3602,]  3.055283e-02  2.600319e-03
## [3603,]  1.464348e-02  2.637810e-02
## [3604,]  1.579846e-01 -2.456264e-02
## [3605,]  8.418446e-02 -5.955704e-03
## [3606,]  5.303457e-03 -3.024478e-02
## [3607,]  6.403179e-02  2.621920e-02
## [3608,] -7.905801e-03 -4.757081e-03
## [3609,] -4.246987e-02 -2.512712e-02
## [3610,]  4.696946e-02 -2.793077e-03
## [3611,]  1.259532e-01  1.935847e-02
## [3612,]  4.031460e-02  4.774169e-02
## [3613,]  1.499862e-01  1.227780e-02
## [3614,] -4.125006e-02  5.539531e-02
## [3615,]  4.966657e-02  1.060655e-02
## [3616,]  6.149320e-02  4.613143e-02
## [3617,]  5.815555e-02  1.387653e-02
## [3618,]  1.519803e-01 -1.288770e-02
## [3619,]  2.388931e-02  4.313049e-02
## [3620,]  8.437131e-03  6.017483e-02
## [3621,] -4.939841e-02 -1.554123e-02
## [3622,] -3.187563e-02  1.367706e-02
## [3623,] -1.021996e+00 -1.830077e-01
## [3624,]  2.868437e-02  4.666866e-02
## [3625,] -5.832153e-02 -6.123890e-02
## [3626,] -6.204970e-03  5.052976e-02
## [3627,]  5.990599e-02 -5.853076e-02
## [3628,]  2.665106e-03  2.123666e-03
## [3629,] -1.752330e-02 -8.381863e-03
## [3630,] -1.285217e-02  4.097367e-02
## [3631,] -1.274030e+00  3.261956e-01
## [3632,]  1.344143e-02 -5.696449e-03
## [3633,]  3.339195e-02 -2.526866e-02
## [3634,] -8.971899e-03 -1.237229e-01
## [3635,]  2.564142e-02 -2.179537e-02
## [3636,] -9.400432e-03  2.480654e-03
## [3637,]  4.352114e-02 -8.249359e-03
## [3638,] -2.921959e-02  1.991822e-02
## [3639,] -3.239998e-02  2.089044e-02
## [3640,] -4.539135e-03  2.090893e-02
## [3641,]  4.719612e-02 -1.010912e-02
## [3642,]  1.541152e-02 -4.061666e-04
## [3643,]  4.667576e-02 -5.245904e-03
```

```
## [3644,]  7.383726e-02  2.817631e-02
## [3645,]  3.764244e-03  9.046688e-03
## [3646,]  4.339419e-02  3.518574e-02
## [3647,]  1.197962e-02  1.533323e-02
## [3648,]  3.590247e-02  3.421659e-02
## [3649,]  1.996345e-03  1.564507e-04
## [3650,]  1.102310e-02  2.233741e-02
## [3651,]  2.929853e-02  3.481569e-02
## [3652,] -1.264200e+00  3.364635e-01
## [3653,]  2.039565e-02  2.534025e-02
## [3654,]  3.922783e-02  6.800554e-02
## [3655,] -1.485290e-02 -3.425287e-02
## [3656,] -1.347275e-01 -2.988922e-02
## [3657,] -7.040133e-04  6.286256e-03
## [3658,]  2.226675e-03 -1.849219e-02
## [3659,]  3.855284e-02  3.673508e-02
## [3660,]  2.034028e-02 -4.561454e-02
## [3661,]  2.954363e-02  3.791426e-02
## [3662,] -1.179697e-02  2.534260e-02
## [3663,]  5.164694e-02  1.017575e-03
## [3664,]  4.843760e-02 -2.992844e-03
## [3665,]  5.627734e-02  5.066574e-02
## [3666,] -8.355919e-02 -4.178657e-02
## [3667,] -1.776801e-02 -3.237988e-02
## [3668,]  1.417198e-02  2.322620e-02
## [3669,]  1.893209e-02  3.531630e-02
## [3670,]  3.593606e-02  4.561756e-02
## [3671,]  6.060640e-02  1.012477e-02
## [3672,]  1.782087e-02 -3.685755e-02
## [3673,]  5.989372e-01  4.745972e-01
## [3674,]  3.386146e-02  7.784934e-03
## [3675,]  4.107883e-02  4.789710e-03
## [3676,]  1.517249e-02 -3.736545e-02
## [3677,] -1.554126e-02 -3.080938e-02
## [3678,]  4.762415e-02  6.398998e-02
## [3679,]  7.383582e-02  9.059745e-02
## [3680,] -5.896787e-02 -1.852839e-01
## [3681,]  4.812996e-02  3.823976e-02
## [3682,]  3.877595e-02  7.915903e-03
## [3683,] -1.006537e+00 -1.728592e-01
## [3684,] -1.321302e-01 -2.719584e-02
## [3685,]  5.053981e-02  9.613034e-03
## [3686,]  1.436186e-02  2.744532e-02
## [3687,]  4.038657e-02  9.069962e-03
## [3688,] -1.483723e-02 -1.737685e-02
## [3689,]  3.279574e-02 -9.448644e-03
## [3690,]  3.625744e-02 -9.747561e-03
## [3691,]  4.506629e-01  9.638050e-02
## [3692,]  1.646579e-03 -2.596226e-02
## [3693,]  6.221590e-02  5.350668e-02
```

```
## [3694,]  1.567620e-01 -2.261528e-02
## [3695,] -1.848097e-02  1.543999e-02
## [3696,]  5.015864e-03  5.304735e-02
## [3697,] -1.005222e+00 -1.661592e-01
## [3698,]  3.284571e-02  2.560563e-02
## [3699,]  1.716404e-02 -3.854114e-02
## [3700,]  6.548241e-02  2.207210e-02
## [3701,] -5.097124e-02  4.238421e-02
## [3702,]  4.313621e-02 -2.525252e-02
## [3703,] -1.395897e+00  5.027907e-01
##  [ reached getOption("max.print") -- omitted 2257 rows ]
```

#Remove the flag varibles

```
pca2 = prcomp(df_pca[,c(1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19)]
,center=TRUE, scale=TRUE)
summary(pca2)
```

```
## Importance of components:
##                           PC1    PC2    PC3     PC4     PC5     PC6
PC7
## Standard deviation     1.9936 1.4939 1.3004 1.13050 1.08106 1.02859
0.97776
## Proportion of Variance 0.2092 0.1175 0.0890 0.06726 0.06151 0.05568
0.05032
## Cumulative Proportion  0.2092 0.3266 0.4156 0.48290 0.54441 0.60009
0.65041
##                            PC8     PC9    PC10    PC11    PC12    PC13
PC14
## Standard deviation     0.95902 0.93746 0.89068 0.85608 0.83143 0.79368
0.77679
## Proportion of Variance 0.04841 0.04625 0.04175 0.03857 0.03638 0.03315
0.03176
## Cumulative Proportion  0.69882 0.74507 0.78682 0.82540 0.86178 0.89493
0.92669
##                           PC15    PC16   PC17    PC18    PC19
## Standard deviation     0.75167 0.57532 0.4358 0.42085 0.36031
## Proportion of Variance 0.02974 0.01742 0.0100 0.00932 0.00683
## Cumulative Proportion  0.95643 0.97385 0.9839 0.99317 1.00000
```

```
head(pca2)
```

```
## $sdev
##  [1] 1.9935667 1.4938826 1.3004131 1.1305002 1.0810619 1.0285866 0.9777590
##  [8] 0.9590154 0.9374575 0.8906850 0.8560804 0.8314313 0.7936821 0.7767863
## [15] 0.7516714 0.5753151 0.4358106 0.4208532 0.3603072
##
## $rotation
##                      PC1          PC2          PC3         PC4
PC5
## LOAN         0.073067236 -0.274860870  0.143828134  0.03735318
```

```
0.3848685304
## IMP_MORTDUE  0.070238024 -0.551961385  0.083562463 -0.15415579
0.1767721332
## M_MORTDUE   -0.199279438  0.136818534  0.165726813  0.11200427
0.4899154823
## IMP_VALUE    0.100776305 -0.557531636  0.121668607 -0.10174623
0.1664763201
## M_VALUE     -0.065279398 -0.001501880 -0.250774128  0.24304929
0.4078768117
## IMP_YOJ      0.061481766 -0.008289364  0.086843742  0.57113108 -
0.1160481951
## M_YOJ       -0.229428489  0.028566247  0.185723033  0.02759637
0.3234513304
## IMP_DEROG   -0.182983829 -0.057248985 -0.381162772  0.04525554
0.0970878998
## M_DEROG     -0.387559044 -0.142902728 -0.070309361  0.02494576 -
0.1986883925
## IMP_DELINQ  -0.112761752 -0.091609955 -0.426665315  0.32649436
0.0115912515
## M_DELINQ    -0.425194031 -0.096125607  0.002506417 -0.04755769 -
0.1088304327
## IMP_CLAGE    0.024823798 -0.213452580  0.205193953  0.53165684 -
0.1075211600
## M_CLAGE     -0.379468166 -0.026242714  0.127538480 -0.08140126
0.0003988665
## IMP_NINQ    -0.007877375 -0.066892874 -0.356290497 -0.25385379
0.0744092792
## M_NINQ      -0.420640255 -0.082041986  0.054683891 -0.01364507 -
0.1020313225
## IMP_CLNO     0.059635407 -0.388276826 -0.182755452  0.17783046 -
0.3120586371
## M_CLNO      -0.414255005 -0.070343216  0.092419203 -0.04467791 -
0.0883784075
## IMP_DEBTINC  0.068600101 -0.178987466 -0.237730067 -0.24059098 -
0.1140706042
## M_DEBTINC   -0.022547229  0.053022070 -0.453983762  0.09471379
0.2487001306
##                      PC6         PC7          PC8         PC9
PC10
## LOAN         0.343513158  0.36487693 -0.197596477 -0.22866138 -
0.0007852759
## IMP_MORTDUE -0.195334694 -0.13962131 -0.059553387  0.08748645 -
0.1179301618
## M_MORTDUE    0.185357599 -0.24725866  0.009591641  0.14700390 -
0.0947835185
## IMP_VALUE   -0.187605813  0.01462799 -0.093011261  0.04812866 -
0.1729828342
## M_VALUE     -0.380602511  0.06891073  0.027583321 -0.39450613
0.5973277241
## IMP_YOJ      0.096751342  0.57473076 -0.100603756 -0.02782401 -
```

```
0.2356212236
## M_YOJ        0.329795310 -0.13489788  0.441465118  0.03354162 -
0.0172434020
## IMP_DEROG    0.256621968 -0.16404336 -0.269145432  0.01815483
0.0156841432
## M_DEROG      0.119575978 -0.03465103 -0.142136385 -0.12571043 -
0.0204761618
## IMP_DELINQ  -0.003066927 -0.20765988 -0.086978645 -0.11963683 -
0.3099554737
## M_DELINQ     0.118777264 -0.01676472 -0.143207795 -0.12828642 -
0.0157221971
## IMP_CLAGE    0.121565460 -0.16226457  0.297463735  0.28690712
0.2329971910
## M_CLAGE     -0.292982818  0.27342541  0.158582191  0.16878507
0.0413363093
## IMP_NINQ     0.326245897  0.35649410 -0.085086260  0.53454325
0.3491297942
## M_NINQ       0.022971489 -0.01685402 -0.096735369 -0.07224282 -
0.0548285816
## IMP_CLNO     0.059670787 -0.19045378  0.131533010  0.11425232
0.2711794633
## M_CLNO      -0.248440438  0.23476988  0.163926254  0.08081834
0.0458154491
## IMP_DEBTINC  0.265942441  0.16600897  0.609940529 -0.44449233 -
0.1048853002
## M_DEBTINC   -0.271007658  0.11760892  0.275220215  0.30459474 -
0.4123741971
##                    PC11         PC12         PC13        PC14        PC15
## LOAN         0.40483485 -0.238963104  0.354736034  0.04221928 -0.20178721
## IMP_MORTDUE -0.22736654  0.074200415 -0.161113355 -0.01422245  0.04536230
## M_MORTDUE   -0.50381954 -0.035542137  0.008604354  0.06697740 -0.50207135
## IMP_VALUE   -0.03125595  0.105819789 -0.093769454 -0.08617612  0.17641977
## M_VALUE     -0.14239139  0.039646494 -0.020081904  0.03218888  0.14182511
## IMP_YOJ     -0.26186737  0.221852299 -0.298019637  0.16827608  0.04855226
## M_YOJ        0.26693982  0.005283300 -0.369758544  0.26110419  0.44562929
## IMP_DEROG    0.29945157  0.680346939 -0.144824627 -0.19003604 -0.17298781
## M_DEROG     -0.22950643 -0.042521473  0.165321704 -0.02305945  0.19565674
## IMP_DELINQ   0.11614996 -0.576473849 -0.316526192 -0.26793898 -0.03232695
## M_DELINQ    -0.15607414 -0.012205810  0.255012414  0.09137294  0.17498161
## IMP_CLAGE    0.01851073  0.053223809  0.329741260 -0.47276817  0.09126408
## M_CLAGE      0.20406973 -0.022355666 -0.157522269 -0.20186879 -0.29050148
## IMP_NINQ    -0.22251156 -0.212517671 -0.119044895 -0.09785772  0.14898173
## M_NINQ      -0.04237041 -0.001126383  0.158032676  0.14472652  0.13316814
## IMP_CLNO     0.10024100 -0.072405409 -0.039194278  0.62036824 -0.34539997
## M_CLNO       0.14605946 -0.023866140 -0.116746301 -0.03322661 -0.23528725
## IMP_DEBTINC -0.24704606  0.107065933  0.014249396 -0.20356996 -0.18170227
## M_DEBTINC    0.05994922  0.105772019  0.460233209  0.22272117  0.11300894
##                     PC16         PC17         PC18         PC19
## LOAN        -0.053366984 -0.017161986  0.110041918  0.043069910
## IMP_MORTDUE -0.011391014 -0.404079953  0.521080485  0.159054698
```

```
## M_MORTDUE   -0.002450729  0.109505100 -0.106797037 -0.014984290
## IMP_VALUE    0.035024118  0.395243602 -0.558619871 -0.144271176
## M_VALUE      0.021248090  0.016463632 -0.004303667 -0.021609218
## IMP_YOJ      0.019823287 -0.063712936  0.026955713 -0.020022478
## M_YOJ       -0.089637891 -0.016094221  0.016144468 -0.008562487
## IMP_DEROG    0.010520774 -0.010620020  0.009675611  0.028765184
## M_DEROG     -0.644727175  0.372294027  0.239613959 -0.009649549
## IMP_DELINQ   0.082282220 -0.043129558 -0.039493382  0.002276033
## M_DELINQ     0.024730047 -0.636341470 -0.453943136 -0.064360121
## IMP_CLAGE    0.069327925 -0.036973413  0.016292215  0.033451293
## M_CLAGE     -0.127721950 -0.108660774  0.106861255 -0.620353165
## IMP_NINQ     0.090399384  0.026695559 -0.017784079  0.018170873
## M_NINQ       0.721818242  0.312091405  0.298015057 -0.107996960
## IMP_CLNO    -0.040799174  0.024194195 -0.062108293 -0.111635918
## M_CLNO      -0.002873167  0.076747058 -0.144416396  0.730755238
## IMP_DEBTINC  0.089673145  0.017413313 -0.010080589 -0.036866800
## M_DEBTINC   -0.060970335 -0.007330223  0.033713951  0.004820447
##
## $center
##         LOAN  IMP_MORTDUE    M_MORTDUE    IMP_VALUE      M_VALUE
IMP_YOJ
## 1.860797e+04 7.299939e+04 8.691275e-02 1.015360e+05 1.879195e-02
8.756166e+00
##        M_YOJ    IMP_DEROG      M_DEROG   IMP_DELINQ     M_DELINQ
IMP_CLAGE
## 8.640940e-02 3.431208e-01 1.187919e-01 5.030201e-01 9.731544e-02
1.794683e+02
##      M_CLAGE     IMP_NINQ       M_NINQ     IMP_CLNO       M_CLNO
IMP_DEBTINC
## 5.167785e-02 1.170134e+00 8.557047e-02 2.124782e+01 3.724832e-02
3.403929e+01
##    M_DEBTINC
## 2.125839e-01
##
## $scale
##         LOAN  IMP_MORTDUE    M_MORTDUE    IMP_VALUE      M_VALUE
IMP_YOJ
## 1.120748e+04 4.255304e+04 2.817308e-01 5.687040e+04 1.358010e-01
7.259424e+00
##        M_YOJ    IMP_DEROG      M_DEROG   IMP_DELINQ     M_DELINQ
IMP_CLAGE
## 2.809912e-01 8.300165e-01 3.235707e-01 1.083364e+00 2.964117e-01
8.357281e+01
##      M_CLAGE     IMP_NINQ       M_NINQ     IMP_CLNO       M_CLNO
IMP_DEBTINC
## 2.213944e-01 1.653866e+00 2.797522e-01 9.951308e+00 1.893856e-01
7.649022e+00
##    M_DEBTINC
## 4.091700e-01
##
```

```
## $x
##                    PC1           PC2           PC3           PC4
PC5
##    [1,]  0.4290662133  2.577840e+00 -1.038554e+00 -0.4291935597 -
2.531232e-01
##    [2,]  0.3604417015  1.321803e+00 -1.524855e+00  0.1037763072 -
1.364533e-01
##    [3,]  0.3390210954  2.774892e+00 -1.066292e+00 -0.4861323191 -
3.544240e-01
##    [4,] -9.7215118959 -1.846459e-01 -1.297791e+00  1.6744432930
3.888483e+00
##    [5,]  0.6519366678  7.711290e-01 -7.021153e-01 -1.1721582491
1.993900e-01
##    [6,]  0.5004835693  2.333176e+00  4.280713e-02 -0.8351714578 -
8.023865e-01
##    [7,] -0.3701483666  1.450690e+00 -3.366731e+00 -0.1749225999
1.498907e-01
##    [8,]  0.5184456080  2.406607e+00  2.611604e-01 -0.5950397652 -
8.567199e-01
##    [9,]  0.2425906007  1.800754e+00 -1.628616e+00  0.3812379236 -
2.816904e-01
##   [10,] -0.0849651109  2.129378e+00 -5.182102e-02  0.5820518784
1.461389e+00
##   [11,] -8.1712258287 -2.468945e-01 -2.492231e+00  2.1993323670
6.636479e-01
##   [12,]  0.3184653663  2.557012e+00 -1.375711e+00  0.1291609935 -
3.044916e-01
##   [13,]  0.5199703874  1.515922e+00 -1.574610e+00 -1.0345424379 -
4.221161e-01
##   [14,]  0.6270678425  9.093949e-01 -8.737535e-01 -0.5250246675 -
3.753127e-01
##   [15,]  0.5194843847  1.140839e+00 -1.107743e+00 -0.1041639252 -
1.507237e-01
##   [16,] -0.4641741433  2.187028e+00 -7.076014e-02  1.1614702632
7.038406e-01
##   [17,] -0.3523428573 -1.382002e-01 -4.252598e+00  1.2806464265
1.508947e-01
##   [18,] -8.3862633306  3.441572e-01 -3.949029e-01  3.0298156358
5.150782e-01
##   [19,]  0.4220540201  2.342428e+00 -1.314138e+00 -1.0355907617 -
2.713667e-01
##   [20,]  0.6886082416  6.057478e-01  5.499200e-01 -1.4383408188 -
2.413974e-01
##   [21,]  0.3396716375  1.983107e+00 -1.491577e+00 -0.5025036641 -
2.041280e-01
##   [22,] -1.4730196267  1.862428e+00 -4.890786e-01 -0.9738993048
3.788808e-01
##   [23,]  0.5219960595  2.020796e+00 -1.516801e+00 -0.4117812090 -
5.460924e-01
##   [24,] -1.4776777664  1.385582e+00 -3.839371e+00  3.2885236848
```

```
2.137573e+00
##   [25,] -1.1532360915  3.161733e+00 -3.193773e-01 -1.2111499721
3.185616e+00
##   [26,]  0.6292675466  1.731481e+00 -2.390864e-01 -0.6261515556 -
1.172408e+00
##   [27,]  0.6768047734  7.261288e-01  6.255706e-01 -1.1818236123 -
2.724170e-01
##   [28,]  0.5227421679  2.363677e+00 -1.073731e+00  0.6825319299 -
7.923962e-01
##   [29,]  0.0583640093  1.915926e+00 -1.616882e+00  1.5160011704 -
3.495217e-01
##   [30,] -0.3724740103  2.470162e+00  1.299549e-02  0.3859841182
6.554272e-01
##   [31,]  0.6330024320  1.078823e+00 -3.198508e-01  0.3766292592 -
2.066950e-01
##   [32,] -1.1255066896 -1.063832e+00 -8.522916e+00  5.9546104202 -
9.789185e-01
##   [33,] -0.3918468031  2.236460e+00 -2.954648e+00  0.2301352322
1.797855e-01
##   [34,]  0.5185631664  1.755433e-01 -1.620072e+00 -0.4443519636 -
1.461733e-01
##   [35,]  0.6594167890  6.774373e-01  5.910111e-01 -1.4247589539 -
2.066249e-01
##   [36,]  0.6835132622  5.797124e-01  6.388993e-01 -1.3234365290 -
2.018332e-01
##   [37,] -0.0890650552  2.040925e+00 -1.357749e+00 -0.0769854642 -
5.040916e-01
##   [38,]  0.8816689136 -3.542002e-01 -7.924447e-01 -0.5659627695 -
1.662273e+00
##   [39,]  0.7068804131  5.154374e-01  5.193294e-01 -1.4748156055 -
2.377633e-01
##   [40,]  0.2816296376  2.917502e+00 -2.149672e+00 -1.8022134760
3.487188e-02
##   [41,] -0.4670392683  3.047596e+00 -6.243856e-01 -0.5397131460
1.936285e+00
##   [42,] -0.4595593440  2.949176e+00 -9.153694e-01 -1.1795399605
2.169536e+00
##   [43,]  0.9723415519 -9.521189e-01 -5.566395e-01 -0.5342754423
3.929907e-02
##   [44,]  0.3936326812  2.394517e+00 -7.592678e-01 -0.2569493891 -
3.618213e-01
##   [45,] -0.4373962412  2.722773e+00 -3.372139e+00 -3.3749115078
2.675606e+00
##   [46,] -0.2582968280  2.389544e+00 -4.601144e-01 -0.4751613525
1.421341e+00
##   [47,]  0.5780873007  4.912112e-01 -2.040960e+00  0.4417536356 -
5.225311e-01
##   [48,]  0.2441091167  2.267550e+00 -1.675511e+00 -0.0534302776 -
1.134946e-01
##   [49,] -0.9430013477  2.327015e-01 -2.141496e+00  1.2849531914 -
```

```
1.124969e+00
##   [50,]  0.6986768866  1.411394e+00 -5.325189e-01  1.3294856353 -
7.452877e-01
##   [51,]  0.4307890759  2.044393e+00 -1.047306e+00 -0.7116879205 -
2.245419e-01
##   [52,] -9.2633414669 -3.048013e-02  5.295789e-01 -0.0766933908
8.854899e-01
##   [53,] -0.7165754921 -8.066716e-02 -7.821886e-01  0.5156703784 -
1.755937e+00
##   [54,]  0.3552109750  9.627312e-01 -2.511824e+00  2.5003110704 -
7.964903e-01
##   [55,] -0.2845933080  2.052391e+00  1.458761e+00  0.5576980915
1.764121e-01
##   [56,]  0.5250651131  1.299659e+00 -1.598460e+00 -1.2353445629 -
1.583481e-01
##   [57,]  0.7746877527  6.313646e-01  5.536518e-01 -0.2404711812 -
8.461608e-01
##   [58,] -1.7421325902  2.027521e+00 -1.653163e+00  3.9252044328
2.161180e+00
##   [59,]  0.7254880294 -9.126088e-01 -1.256299e+00 -0.1010230505 -
2.879128e-01
##   [60,]  0.4402977596 -1.860365e+00 -1.815784e+00  1.6159114620 -
8.301577e-01
##   [61,]  0.3225684525  2.105235e+00 -9.660418e-01 -0.1868209983 -
8.635443e-03
##   [62,]  0.4988456765  2.228112e+00 -7.172014e-01  0.3038514828 -
4.800701e-01
##   [63,]  0.3598601526  2.827169e+00 -9.066052e-01 -0.6338902775 -
2.108724e-01
##   [64,] -7.7317150062 -5.048464e-01 -7.024247e-01 -0.3070109873 -
2.074720e+00
##   [65,]  0.3908214491  2.396714e+00 -1.214326e+00 -1.4780346362
2.891873e-01
##   [66,]  0.7747636348  6.538966e-02 -8.984443e-01 -0.1493321886 -
3.643925e-01
##   [67,] -0.8224874033 -1.308896e-01 -1.244702e+00  0.6909232469 -
1.752842e+00
##   [68,]  0.7027462783  6.707168e-01  6.415375e-01 -1.0312593979 -
2.812236e-01
##   [69,] -0.0403319222  1.317825e+00 -2.843679e+00  1.2302223905 -
1.888244e-01
##   [70,]  0.6418921681  1.458447e+00  1.056926e+00  1.4607216746 -
1.058549e+00
##   [71,]  0.3451185251  2.775345e+00  3.313684e-01 -0.5357138399 -
6.900438e-01
##   [72,] -0.2379208381  4.290248e-01 -3.725545e+00  1.9545038019 -
3.985204e-01
##   [73,]  0.6365702728  1.484527e+00  1.067360e+00  1.4759170938 -
1.051346e+00
##   [74,] -9.3130435206  9.368417e-02  2.050197e+00  0.0900840432
```

```
4.999593e-01
##   [75,] -0.2417197022  2.117475e+00  9.381393e-01 -0.1243424190
4.334732e-02
##   [76,]  0.4813526433  2.218038e+00  7.133216e-01  0.2639949797 -
8.471817e-01
##   [77,]  0.2267639378  2.480332e+00 -2.244748e+00 -0.8737727078
8.232622e-03
##   [78,]  0.2516018415  5.331561e-01 -2.717856e+00  1.3332500530 -
6.813487e-01
##   [79,]  0.6729187186  6.582486e-01  6.210060e-01 -1.3939871148 -
1.530416e-01
##   [80,]  0.3033336370  2.277110e+00 -1.809822e+00 -0.7267094543 -
1.635609e-01
##   [81,]  0.6627401882  6.510300e-01  6.252262e-01 -1.4139723495 -
1.513978e-01
##   [82,]  0.6590670541  1.444973e+00  1.053702e+00  1.4851741098 -
1.048361e+00
##   [83,] -0.3874604632  1.638046e+00 -1.549575e+00 -0.3922282758
1.989529e+00
##   [84,]  0.5580775649  2.309111e+00  1.963853e-01 -0.5146790045 -
9.245946e-01
##   [85,] -0.2143841416  2.212784e+00 -2.647061e+00  0.9015651853
3.707149e-02
##   [86,]  0.5139506604  1.824133e+00 -1.369493e+00 -0.4941257921 -
6.017856e-01
##   [87,]  0.1971025378  1.389063e+00 -1.982919e+00  0.0994225625 -
7.229647e-02
##   [88,]  0.4723169825  1.214602e+00 -1.118156e+00 -0.0527376634 -
2.311969e-01
##   [89,] -0.4404010394  3.018161e+00 -6.000526e-01 -0.7122891161
7.180809e-01
##   [90,]  0.5070374668  1.550232e+00 -1.399502e+00 -0.8257970789 -
1.220964e-01
##   [91,]  0.4121017769  2.318946e+00 -1.885274e+00  0.6235744920 -
7.914280e-01
##   [92,]  0.1074188756  1.111140e+00 -1.350987e+00 -0.0910175607
3.599302e-01
##   [93,] -2.0112645981  2.500307e+00  7.048709e-01 -0.8703122085
2.072158e+00
##   [94,]  0.5668746763  1.430788e+00 -7.821847e-01 -0.7741573795 -
3.810368e-02
##   [95,]  0.1715470903  9.178270e-01 -1.952027e+00 -0.2572707632 -
1.230021e-01
##   [96,] -1.4527524398  5.105827e-01 -2.104548e+00  0.1848064890 -
3.623684e-03
##   [97,]  0.2012901770  1.194339e+00 -1.698178e+00  0.3811377439 -
2.832583e-01
##   [98,] -0.6994849183 -1.506839e-01 -7.020618e-01  0.6555697979 -
1.720328e+00
##   [99,] -0.8229186220 -1.866392e-01 -1.090187e+00  0.9914660714 -
```

```
1.740312e+00
##  [100,] -0.2069855566  2.220664e+00  6.899422e-01 -0.7759833637
9.037079e-01
##  [101,]  0.1208817410  1.394178e+00 -2.557526e+00 -0.3632068473
1.358543e-01
##  [102,]  0.1935566176  6.384020e-01 -1.225613e+00  1.3645723167 -
1.044864e+00
##  [103,]  0.6201169700  1.413213e+00  8.966675e-01  1.3120596608 -
9.605937e-01
##  [104,]  0.1672049464  2.375068e+00 -1.446829e+00 -1.1624888112
3.026558e-01
##  [105,]  0.6774213078  6.882600e-01 -1.017099e+00 -0.3838631690 -
5.370087e-01
##  [106,] -2.5200260669  1.001001e+00 -2.032541e+00 -0.4784863696 -
9.986135e-01
##  [107,]  0.7066428076  9.939086e-01  7.603373e-02 -1.3692543857 -
7.177609e-01
##  [108,]  0.6174923155  1.556665e+00  1.077125e+00  1.4274935783 -
1.018642e+00
##  [109,]  0.7264895266  5.115892e-01  1.204051e-01 -0.6766774920 -
1.095076e+00
##  [110,]  0.7091339802  1.076112e+00  1.683678e-01 -1.1355284378 -
6.982832e-01
##  [111,]  0.1849926026  9.706327e-01 -6.892476e-02 -0.3343573826 -
2.285619e-01
##  [112,]  0.3026146127  8.240143e-01 -6.500239e-01  1.1534697509 -
1.090818e+00
##  [113,] -9.2728522572  3.714366e-02  5.245472e-01 -0.0542013924
9.004203e-01
##  [114,]  0.1806085112  1.084399e+00 -1.450256e+00  0.5778610176 -
8.201230e-01
##  [115,]  0.4563058022  1.094346e+00 -3.616395e-01 -1.3253035350 -
5.402327e-01
##  [116,] -9.2747381165 -3.220417e-02  1.975314e+00 -0.0082485473
4.913450e-01
##  [117,]  0.5227659428  1.486125e+00 -1.022104e+00 -0.5989492931 -
2.623149e-01
##  [118,]  0.6967654201  1.024194e+00  1.956292e-01 -1.2004525279 -
6.635996e-01
##  [119,] -2.1564701458  2.872593e+00  2.553465e+00 -0.3716383444
1.839305e+00
##  [120,] -2.8308010648  1.927584e-01 -3.559785e+00  1.8967498792
2.086745e+00
##  [121,]  0.3954911659  1.621750e+00 -1.826079e+00 -0.4514172192 -
3.577625e-01
##  [122,]  0.3466981500  1.438126e-01 -2.560278e+00  1.3153747955 -
6.456392e-01
##  [123,]  0.5212486597  1.847478e+00 -9.566952e-01 -0.6005247232 -
2.673833e-01
##  [124,]  0.4011371922 -5.979311e-01 -1.506645e+00 -0.4144326617
```

```
4.061273e-01
##  [125,] -0.1236235243  5.378930e-01 -3.364141e+00 -0.4904327207
7.405067e-01
##  [126,]  0.7192454870  5.799309e-01  2.744121e-01 -0.8511684510 -
8.375279e-01
##  [127,]  0.2087842962  8.271942e-01  1.881683e-03 -0.2219007979 -
2.168834e-01
##  [128,] -2.3509146348  8.787416e-01 -5.096112e-01 -1.1885159209 -
1.478342e+00
##  [129,]  0.4703678357  1.742212e+00 -1.472336e+00 -1.5716808820
2.556128e-02
##  [130,]  0.7944671801  5.813571e-02  6.296523e-01 -0.1483778173 -
8.193965e-01
##  [131,]  0.0643000249  1.917940e+00 -2.380494e+00  0.2078813112 -
1.598310e-01
##  [132,]  0.7111949904  6.595516e-01  3.208863e-01 -0.7929304047 -
7.999631e-01
##  [133,]  0.3009223164  8.042481e-01 -7.773474e-01  1.2009822635 -
1.024920e+00
##  [134,]  0.8047972173  4.665007e-01  6.406943e-01 -0.1454589569 -
7.768077e-01
##  [135,]  0.3218299762  6.148744e-01 -9.873509e-01  1.1465175897 -
1.035036e+00
##  [136,]  0.7216616258  6.501077e-01  1.954018e-01 -0.9349378480 -
8.643489e-01
##  [137,]  0.4187945182  2.623276e+00  3.257227e-01 -0.8133186179 -
6.873631e-01
##  [138,]  0.7099079000  9.751280e-01  1.644068e-01 -1.2262820256 -
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##  [139,]  0.5268872007  1.842690e+00 -1.451727e+00 -0.8760057878
2.474640e-03
##  [140,] -9.3259653454  3.367566e-01  4.629041e-01  0.0043804481
8.244660e-01
##  [141,]  0.3065991437 -1.877103e+00  4.245124e-01 -0.8636808770
1.790149e+00
##  [142,]  0.2255466776  1.102373e+00 -1.391705e+00 -0.8311937755 -
4.749204e-01
##  [143,]  0.2234828216  5.995339e-01 -9.321443e-01  1.6741244827 -
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##  [144,] -9.2093402607 -1.671162e-01  1.700948e+00 -0.2602162167
3.567585e-01
##  [145,] -9.2736087805  1.803948e-01  1.638559e+00 -0.1864770271
2.633806e-01
##  [146,] -2.3344914303  8.144168e-01 -5.882702e-01 -1.2313794913 -
1.551847e+00
##  [147,]  0.7069767111  9.593188e-01  2.267138e-01 -1.1300088384 -
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##  [148,] -0.1951832271  1.912948e+00  8.988014e-01 -0.1640097607
4.660057e-02
##  [149,]  0.7847468335  5.022415e-02  7.581467e-01  0.1216201560 -
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8.185028e-01
##  [150,]  0.4046191056  2.798410e+00 -1.007187e+00 -0.6891744131
2.433168e-02
##  [151,]  0.4276282994  2.083583e+00 -1.291330e+00 -1.6970927522
3.114291e-01
##  [152,]  0.5766596581  6.645445e-01 -1.164873e+00 -0.8804896211
2.586462e-01
##  [153,] -7.7817370603 -3.094209e-03 -7.515053e-01 -0.0083478788 -
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##  [154,]  0.6439803182  9.800266e-01 -6.797314e-01 -1.0171661651
2.021503e-01
##  [155,] -7.5134609497 -1.706503e+00 -4.278796e-01 -0.3269578272 -
1.716271e+00
##  [156,] -0.1294683664  1.146575e+00 -6.372090e-01  1.2446907338
1.726802e+00
##  [157,] -0.3442571130  2.864156e+00 -7.954422e-01 -1.2777903346
1.973954e+00
##  [158,]  0.4399664992  2.358860e+00 -1.092449e+00 -1.0592754069
7.001717e-02
##  [159,] -0.1238628649  2.083492e+00 -3.693273e-01 -0.3433888627
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##  [160,] -7.4601000281 -2.272874e+00 -3.710763e-01 -0.7747253874 -
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##  [161,]  0.3390468996  2.991068e+00 -9.937148e-01 -0.8553090548
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##  [162,] -1.0719671324  2.023789e+00  6.690119e-01  1.2553133375
2.841482e+00
##  [163,]  0.3703331532  2.547169e+00 -1.562046e+00 -1.3400618299
7.290434e-02
##  [164,]  0.5469062900  6.804874e-01 -1.910170e+00  1.4963212244 -
1.390846e+00
##  [165,] -8.3255612107 -2.326367e-01  4.533165e-02  0.7681862706 -
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##  [166,] -8.2907956698 -4.249724e-01  8.730456e-02  0.7330861291 -
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##  [167,]  0.5485670794  1.244547e+00 -1.061834e+00 -1.3561524301
3.438982e-01
##  [168,]  0.7341717100  2.083521e-01 -8.576870e-01  1.8789360127 -
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##  [169,]  0.5153077713  2.176579e+00 -6.201355e-01  0.4948648923 -
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##  [170,] -3.8830777680  3.801890e-01 -1.784701e+00  0.4227968250 -
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##  [172,] -7.7217227166 -8.066487e-01 -6.923615e-01 -0.7567268700 -
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##  [173,] -0.1033638438  1.390971e+00 -3.076235e-01  0.6549968199
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##  [174,] -7.7345406132 -9.650037e-01 -7.161139e-01 -1.1610894569 -
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1.737572e+00
##  [175,] -0.2555830264  2.556186e+00 -1.719788e-01 -1.1225494714
2.170036e+00
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3.530969e+00
##  [177,]  0.7689975733  1.032892e+00 -1.223543e+00 -0.1400658099
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##  [178,]  0.7138111630  9.561498e-01 -6.374010e-01  0.6943308434 -
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##  [179,] -0.7233248691  1.201423e+00 -4.487415e+00  3.1045509885 -
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##  [180,]  0.8273864014  2.844117e-01 -1.087401e+00  0.4446799895 -
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##  [184,]  0.1816453717  2.207438e+00 -1.180988e+00 -0.2745796283
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##  [185,] -0.3620388855  1.540403e+00 -3.129125e+00  0.6779571186
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##  [195,]  0.4355275523 -2.303146e+00  1.392149e+00 -1.3332453148
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5.349797e-02
##  [203,] -1.9201282928 -2.539074e+00 -1.931384e+00  2.0705135056 -
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##  [204,] -0.0716231050  2.261536e+00 -2.699675e+00 -0.6719091286
6.273352e-02
##  [205,]  0.7147490606 -1.021521e+00  2.104528e-01 -0.0930121391 -
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##  [206,]  0.2123791083  7.884552e-01 -1.040186e-01 -0.3731339809 -
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##  [209,]  0.6904386615  1.059742e+00  6.140066e-02 -1.4353141023 -
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##  [210,] -0.2277147177  1.987453e+00  1.361198e+00  0.4834311736
1.098078e+00
##  [211,]  0.5823775357  8.399784e-01 -1.251894e+00  0.1514256456 -
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##  [212,] -3.8995039532  3.972774e-01 -3.059653e-01  0.6116771638 -
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##  [214,] -0.4696907880  2.977979e+00 -7.954975e-01 -0.7624635121
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##  [215,]  0.8305446018  7.257404e-01 -5.270962e-01  0.5233501014
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##  [220,] -0.2398876171  1.916232e+00  1.353739e+00  0.5044250090
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##  [221,] -2.1471247208  2.840374e+00  2.552335e+00 -0.3818981000
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##  [225,]  0.8895027168  5.024294e-01  5.453852e-01 -0.0318331075 -
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2.172490e+00
##  [228,]  0.6310700345  1.488871e+00  1.088561e+00  1.4526314611 -
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##  [230,] -2.3177005290  6.934429e-01 -5.475463e-01 -1.2210561406 -
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##  [232,] -3.9203181742  3.682070e-01 -3.119234e-01  0.3648243641 -
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##  [234,]  0.5028724217  1.016713e+00 -1.267155e+00  0.1553686015 -
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##  [235,]  0.7729024512 -6.017210e-03  4.956453e-01 -0.2563414588 -
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##  [239,]  0.6620868734  8.230603e-01 -1.400061e+00 -0.9656826905
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##  [240,] -2.3372182812  8.404940e-01 -5.205076e-01 -1.0283995850 -
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1.761650e+00
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##  [252,] -7.7787863425 -7.144856e-01  8.841453e-01 -0.5640752488 -
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##  [253,]  0.3311313898  4.402106e-01 -8.571207e-01 -0.7237656497 -
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##  [254,]  0.4281921921  1.786563e+00 -3.825846e-02 -0.4152336784 -
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1.535362e+00
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##  [266,] -3.9230466669  4.100579e-01 -3.537225e-01  0.3557572697 -
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##  [268,]  0.9356136228  4.134465e-01  6.825732e-01  0.1727588176 -
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##  [272,]  0.4681787957  2.242965e+00  8.098198e-01  0.4247951016 -
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##  [273,] -0.1421828242  2.189469e+00  7.870786e-01 -1.5562190729
1.504337e+00
##  [274,]  0.0679535499  2.368049e+00 -2.349484e+00 -3.1361683915
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2.511280e-01
##  [275,]  0.6838289538  5.011340e-01 -2.352407e-01 -0.4751944022 -
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##  [277,]  0.6432718600  7.816080e-01 -1.239934e+00 -0.4283295550 -
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##  [292,]  0.4448056679 -2.236141e+00  1.308818e+00 -1.4179041390
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1.502790e+00
##  [295,]  0.4875001139  1.901201e+00  5.182923e-01 -0.6396436430 -
5.849682e-01
##  [296,] -0.8504727372  2.520624e+00 -1.884422e+00 -0.8589919276
2.282951e+00
##  [297,]  0.7894912370  6.053685e-01  6.623962e-02 -0.7687903866 -
9.836036e-01
##  [298,] -1.0381213937  2.506550e+00  7.772488e-01  0.4684856396
3.036913e+00
##  [299,] -2.1252391713  2.790431e+00  2.553906e+00 -0.3266227629
```

```
1.861324e+00
##  [300,] -7.7085208749 -1.073059e+00  6.757768e-01 -1.0571306342 -
2.190650e+00
##  [301,]  0.4082173235  1.064579e+00 -1.530720e+00 -0.4739319318 -
1.170298e+00
##  [302,]  0.6968767361  5.032769e-01 -2.585998e-01 -0.2939022753 -
9.662777e-01
##  [303,] -9.2160626334 -1.425713e-01  1.736460e+00 -0.2228473067
3.966534e-01
##  [304,] -0.3873910350 -6.518604e-01 -5.554551e+00  2.8386723506
3.108161e+00
##  [305,] -9.2090805756 -1.749511e-01  1.737245e+00 -0.2332565178
4.047690e-01
##  [306,]  0.9250884965  3.349346e-01  5.595657e-01  0.1798157344 -
5.715182e-01
##  [307,]  0.0523043359  5.676448e-01 -3.081034e+00 -0.7598850520
7.872887e-02
##  [308,]  0.4118576753  1.165803e+00 -3.375760e+00 -1.0531496282 -
5.054177e-01
##  [309,]  0.3645959512  1.557746e-01 -2.756407e+00  1.8117331320 -
6.107209e-01
##  [310,] -3.5903604043  3.399799e-01 -3.476461e+00  2.8563619241
3.610546e+00
##  [311,]  0.0894090098  1.317857e+00 -2.889550e+00  1.0835111460
2.828104e+00
##  [312,]  0.6117166233  1.864232e+00 -1.100654e+00  0.0531167254 -
1.720743e-01
##  [313,]  0.4153688130  2.335166e+00 -1.135127e+00 -1.4050792824
1.797162e-01
##  [314,]  0.2884279319  2.545790e+00 -1.710715e+00 -0.3377288731
1.947147e-02
##  [315,]  0.4420308409  2.089020e+00 -1.733887e+00 -1.0817654721 -
2.541597e-01
##  [316,]  0.4059642660  1.175094e+00 -2.544790e+00 -0.1796790018 -
7.620029e-01
##  [317,]  1.0173636399 -6.889029e-01 -7.335881e-01  2.5774235058 -
1.478576e+00
##  [318,] -2.7899474014  1.119390e+00 -1.714117e+00 -0.9446055448 -
5.562358e-01
##  [319,]  0.3037268737  1.229080e+00 -2.347406e+00 -0.8505236332
8.659895e-02
##  [320,]  0.6066713985  1.967783e-01 -1.287999e+00 -0.0895780908 -
4.372263e-01
##  [321,]  0.6709476141  7.228414e-01 -1.056490e+00 -0.0146652702 -
3.604173e-01
##  [322,]  0.3841668769  1.072958e+00 -1.707865e+00  0.0317174561 -
2.635149e-01
##  [323,] -5.4787254765  1.269850e+00 -5.326304e-01 -0.0763502623
1.809553e+00
##  [324,]  0.6785915384  1.640436e+00 -3.168148e-01  2.0905956721 -
```

```
6.860026e-01
##  [325,]  0.1073407487  1.423052e+00 -2.518628e+00  0.5790824915 -
2.014433e-01
##  [326,]  0.0852964079  2.426088e+00 -1.953010e+00  0.4797702425 -
8.940930e-02
##  [327,] -0.2748046619 -2.491765e+00 -4.605340e+00 -1.7985682411
1.416948e+00
##  [328,] -0.4599273729  1.051018e+00 -1.641967e+00  0.5034551178
1.738935e+00
##  [329,]  0.8175024428 -1.110559e-01  1.859367e-01 -0.7296089235 -
1.029207e+00
##  [330,] -2.1077599478  2.712752e+00  2.472132e+00 -0.4848267733
1.850433e+00
##  [331,] -9.3538422673  3.364449e-01  2.025203e+00  0.1602217250
4.938844e-01
##  [332,]  0.9491914815 -6.737327e-01 -1.831672e-01  0.2132382296
1.476672e-01
##  [333,] -1.3113126468  9.248181e-01 -3.384010e+00  0.5151684651 -
3.564955e-01
##  [334,] -9.2845397378  1.214271e-01  5.188724e-01 -0.0255457016
9.211832e-01
##  [335,]  0.9011264417  4.685517e-01  5.403842e-01  0.1072333040 -
5.427409e-01
##  [336,]  0.4942159811  1.882794e+00  4.562158e-01 -0.6983985786 -
6.084775e-01
##  [337,] -5.4143399761  7.131661e-01 -1.075356e-01  1.2774628110
1.435376e+00
##  [338,]  0.6055272053  1.109873e+00  3.510488e-01 -1.1711369690 -
3.525036e-01
##  [339,] -3.8831769096  2.714401e-01 -3.941997e-01  0.3290551865 -
2.046589e+00
##  [340,]  0.4964678733  7.139558e-01 -3.126089e-01 -0.7847137751 -
8.022375e-01
##  [341,]  1.0248669481 -8.080822e-01  7.950877e-01  2.4773222311 -
1.950788e+00
##  [342,] -2.2392196788  2.731811e+00  2.124045e+00 -0.1129756355
1.873813e+00
##  [343,] -7.7115482859 -1.094596e+00  6.140288e-01 -1.2481928472 -
2.176455e+00
##  [344,] -7.7099911556 -1.098773e+00  6.179910e-01 -1.2457643454 -
2.174560e+00
##  [345,]  0.7418556372  4.472977e-01  2.277349e-01 -0.6334837736 -
9.451873e-01
##  [346,]  0.4157718661 -2.170569e+00  1.411926e+00 -1.2240219015
1.155283e+00
##  [347,] -9.2570176517  1.329426e-01  1.615816e+00 -0.2173741890
2.845059e-01
##  [348,]  0.5105926534  1.799795e+00  4.812904e-01 -0.6322041379 -
6.226075e-01
##  [349,]  0.7189013383  5.455087e-01  8.344707e-02 -0.4251079911 -
```

```
8.413308e-01
##  [350,]  0.6433228535  6.081813e-01 -4.199622e-01 -0.7146929695 -
8.931833e-01
##  [351,] -5.3989780281  6.928035e-01  1.162401e+00  1.1105213815
9.643580e-01
##  [352,] -3.5537918602  7.016359e-01 -3.595722e+00  1.1276489035
4.051655e+00
##  [353,] -9.2571931976 -1.057574e-01  1.998717e+00 -0.0124281827
5.559896e-01
##  [354,]  0.5354153394  1.058614e+00 -1.495695e+00  0.4277460680 -
6.005369e-01
##  [355,]  0.3014925696  4.867474e-01 -7.524275e-01 -0.6729045697 -
7.016027e-01
##  [356,]  0.6917719688 -5.131230e-02 -2.010142e-01 -0.4083142021 -
1.015075e+00
##  [357,] -2.4384182143  7.011502e-01 -9.749311e-01 -1.0113496014 -
1.476859e+00
##  [358,] -7.7308296487 -1.018900e+00  6.650029e-01 -1.1812640961 -
2.158888e+00
##  [359,] -9.4244694613  4.775242e-01  2.343691e+00  0.4487840730
6.676409e-01
##  [360,]  0.8597179521 -5.304008e-01  1.348141e+00  0.1754547975 -
1.690536e-01
##  [361,]  1.0442551083 -7.072314e-01  7.956554e-01  2.6565660331 -
1.979545e+00
##  [362,] -2.4646322028  8.909339e-01 -2.384043e-01 -1.3335182316 -
1.311116e+00
##  [363,]  0.9150617946  3.848111e-01  5.965555e-01  0.1619152263 -
4.930581e-01
##  [364,]  0.6666429084  1.295687e+00 -7.194947e-01  0.2028018010 -
3.415857e-01
##  [365,] -0.1544311306  2.289505e+00  8.263396e-01 -1.6192495459
1.619063e+00
##  [366,] -2.3539704150  9.483298e-01 -4.543684e-01 -0.9470208424 -
1.508826e+00
##  [367,] -5.3855871202  6.463119e-01  1.102164e+00  1.0973715718
9.094908e-01
##  [368,]  1.0518469149 -7.545657e-01  5.217421e-01  2.4660291279 -
1.970530e+00
##  [369,]  0.5603469611  1.450518e+00 -5.791037e-01 -0.9905066018
3.250938e-01
##  [370,]  0.0863685612  1.351339e+00 -1.929172e+00 -1.2894085905
5.081785e-01
##  [371,]  0.6644515052  4.766810e-01 -3.999854e-01 -0.6566333899 -
9.091636e-01
##  [372,]  0.7966801141 -3.919022e-02  7.879647e-01  0.0280900672 -
7.212684e-01
##  [373,]  0.2216053196  6.017161e-01 -1.152933e+00  1.4428877885 -
9.278406e-01
##  [374,] -1.2277193531  7.569160e-01 -2.155692e+00  0.2213660338 -
```

```
9.989129e-01
##  [375,] -7.6893421079 -1.149056e+00  6.053712e-01 -1.2035944978 -
2.190808e+00
##  [376,] -0.7653165824  1.270159e+00 -2.977824e+00  3.1221760443 -
8.463928e-01
##  [377,]  0.3117373679  4.303519e-01 -1.010577e+00 -0.9062792156 -
6.530608e-01
##  [378,]  0.0574883284  2.459607e+00 -2.331181e+00 -3.0679745989
2.657257e-01
##  [379,]  0.4316572684  1.691548e+00 -2.283566e+00  1.2199867267 -
4.255806e-01
##  [380,] -1.7775572588 -2.997363e+00 -8.037508e-01  1.5847973398 -
2.746435e+00
##  [381,] -7.7541294677 -7.987502e-01  8.607698e-01 -0.6079615462 -
2.188477e+00
##  [382,] -2.5033904061  9.472577e-01 -1.854908e-01 -1.3954211330 -
1.247376e+00
##  [383,]  0.2998804539  7.315194e-01 -7.466436e-01  1.0862739018 -
9.268305e-01
##  [384,]  0.8022450523  5.108376e-01  6.894362e-01 -0.0897354312 -
7.004994e-01
##  [385,]  0.7927184052  1.382348e+00  8.890350e-01  1.8379955759 -
1.355931e+00
##  [386,] -0.7079922340 -1.138314e-01 -7.386482e-01  0.4702218270 -
1.627742e+00
##  [387,]  0.7848075635  8.761859e-01  2.536367e-01 -0.2897212038 -
9.614688e-01
##  [388,]  0.7883652033  5.482519e-01  1.400298e-01 -0.6355109945 -
9.546756e-01
##  [389,]  0.7165449599  5.017269e-01  2.794845e-01 -0.4626755390 -
1.005698e+00
##  [390,] -3.9041286573  4.089972e-01 -3.945338e-01  0.3774666524 -
2.067017e+00
##  [391,]  0.7266628781  3.982357e-01 -6.938015e-04 -0.2901760119 -
1.032494e+00
##  [392,] -2.7248174139  9.062496e-01 -6.351455e-01 -1.3861971446 -
1.093493e+00
##  [393,] -0.2025720667  2.019530e+00  8.700922e-01 -0.2151818247
8.265573e-02
##  [394,]  0.0786784522  2.376824e+00 -2.368364e+00 -3.1378099023
2.678358e-01
##  [395,]  0.5035020756  1.074049e+00  4.401980e-02 -0.3261615868 -
7.113044e-01
##  [396,] -3.8709212180  2.367964e-01 -4.193712e-01  0.3119356676 -
2.054861e+00
##  [397,] -5.4034490564  6.541487e-01  1.290520e+00  1.4061786553
9.294950e-01
##  [398,]  0.6529933580  9.175195e-01 -2.815993e-01 -1.3892813891 -
7.047840e-01
##  [399,] -7.6788952992 -1.190430e+00  5.898065e-01 -1.2298299880 -
```

```
2.187976e+00
##  [400,]  0.4132739039  8.475596e-01 -3.668493e-01 -0.0997640149 -
6.929123e-01
##  [401,]  0.4943189341  2.120272e+00  8.721612e-01  0.5505256266 -
7.902901e-01
##  [402,] -7.7150712435 -1.063265e+00  6.002888e-01 -1.2467780382 -
2.181002e+00
##  [403,]  0.6913451266  4.235383e-01 -3.690188e-01 -0.5602423436 -
8.921157e-01
##  [404,] -0.8316176383  1.211935e+00 -5.655782e+00  3.4835007560
3.016126e+00
##  [405,]  0.3896855513  5.434312e-01 -3.054162e+00 -1.4541657584 -
3.307644e-01
##  [406,]  0.7078020538  1.078023e+00 -2.876613e-01  0.7821842175 -
1.942323e-01
##  [407,]  0.4989898495  1.626158e+00 -1.657073e+00 -0.8169345208 -
5.722930e-01
##  [408,]  1.0783029262 -7.490025e-01 -6.495129e-01  2.6094513402 -
1.104863e+00
##  [409,]  0.8459039987  8.934336e-01 -3.883985e-01  1.8843555818 -
5.291587e-01
##  [410,]  0.6361732601  1.176050e+00 -1.442021e+00 -0.8456624750 -
1.856503e-01
##  [411,]  0.7962858435 -3.012544e-01 -1.018097e+00  0.0182820957 -
6.306996e-01
##  [412,]  1.1329420888 -1.366145e+00 -3.388761e-01  3.3392410734 -
1.261165e+00
##  [413,]  1.1435053355 -9.029239e-01  6.975190e-01  2.4920755915 -
1.710967e+00
##  [414,] -9.2886078220  2.156861e-02  2.042098e+00  0.0649259369
5.677884e-01
##  [415,]  0.1092110269 -3.582216e+00 -4.564577e+00 -3.2582504474
3.728765e-01
##  [416,]  0.4881258249  1.100377e+00 -6.214060e-01 -1.3380518018 -
4.976753e-01
##  [417,]  0.8522730181  9.403412e-01  1.267837e+00  2.1829886164 -
1.010033e+00
##  [418,] -7.7886405359 -7.416223e-01  9.016180e-01 -0.6958844218 -
2.123712e+00
##  [419,] -2.1381291453  2.810222e+00  2.562280e+00 -0.3820275595
1.902255e+00
##  [420,]  0.7204932815  1.012446e+00  1.577275e-01 -1.2745660690 -
5.930048e-01
##  [421,] -3.8810868716  3.597768e-01 -4.185373e-01  0.4240918995 -
2.098334e+00
##  [422,]  0.9182861781  4.840775e-01  7.602803e-01  0.2896020193 -
5.694553e-01
##  [423,] -2.1186202678  2.771152e+00  2.475761e+00 -0.4605564652
1.856399e+00
##  [424,] -1.7714505118 -2.987140e+00 -9.122198e-01  1.7158601338 -
```

```
2.696996e+00
##  [425,] -9.3844099274  3.502662e-01  2.252919e+00  0.3376038706
6.451411e-01
##  [426,]  0.4927497653  1.787190e+00  5.569361e-01 -0.7002227820 -
5.057789e-01
##  [427,]  0.6582725713  1.013615e+00  5.737633e-01 -0.1966696939 -
7.956173e-01
##  [428,] -0.2156220873  1.997574e+00  1.615200e+00  0.7509622309
1.060585e+00
##  [429,]  0.5244063147  1.753628e+00  5.634399e-01 -0.4829070919 -
5.953207e-01
##  [430,]  0.3547486468  5.525521e-01 -7.844091e-01  1.2287465288 -
1.012077e+00
##  [431,]  0.4283112066  9.653674e-01 -1.507631e+00 -0.4168491188 -
1.163956e+00
##  [432,] -8.1945629322 -6.079210e-01  1.007876e+00  0.3448994969 -
9.978226e-01
##  [433,]  0.4169387818  9.551088e-01  3.575680e-01 -0.5806011505 -
2.497267e-01
##  [434,]  0.6419325362  1.532861e+00  1.116269e+00  1.5062387183 -
9.287379e-01
##  [435,] -2.6856832781  7.277824e-01 -6.935375e-01 -1.4105409720 -
1.138577e+00
##  [436,]  0.6042552262  1.352864e+00 -4.211022e-01 -1.0207941903 -
1.243273e+00
##  [437,]  0.5282945665  8.374443e-01 -7.331684e-01 -1.1116187051 -
7.418930e-01
##  [438,]  0.0525345779  1.672826e+00  5.967502e-02 -1.2284039470
8.046208e-01
##  [439,]  0.6566052285  1.394327e+00  1.111570e+00  1.5118917571 -
9.593912e-01
##  [440,]  0.6680610260 -6.049735e-01  9.862082e-01  0.5976915291 -
8.332240e-02
##  [441,]  0.8884314864 -6.631407e-01  1.208940e+00  0.1805800675 -
8.970204e-02
##  [442,]  0.8928203964 -6.178318e-01  1.441311e+00  0.4015743245 -
1.378225e-01
##  [443,] -1.2162916741  6.221719e-01 -2.572398e+00  0.0066611384 -
9.206711e-01
##  [444,] -7.7870200962 -7.921822e-01  9.505991e-01 -0.6785333591 -
2.077996e+00
##  [445,]  0.9035336813 -5.903067e-01  1.340868e+00  0.2550408187 -
1.550808e-01
##  [446,]  0.3781920835  1.024626e+00 -3.066010e-01 -0.0492305865 -
6.481713e-01
##  [447,]  1.0215470827 -6.972365e-01  8.604520e-01  2.6150310996 -
1.908217e+00
##  [448,]  0.3008884889  1.547091e+00 -1.990325e+00 -0.7043337468 -
3.018645e-01
##  [449,]  0.3794929855  1.735147e+00 -1.846374e+00 -0.9761019847
```

```
1.863645e-01
##  [450,]  0.6792678023  1.352618e+00  1.068184e+00  1.5182825952 -
9.889900e-01
##  [451,] -0.5070566913  2.857926e+00 -9.914476e-01 -1.0920288868
2.243293e+00
##  [452,]  0.4528221898 -2.327933e+00  1.346531e+00 -1.3731055358
1.186207e+00
##  [453,] -0.1356971741  2.226407e+00  8.007027e-01 -1.6183865913
1.601096e+00
##  [454,]  0.6855831700 -5.171322e-02 -1.167023e-01 -0.2690730832 -
9.957187e-01
##  [455,]  0.8462518357 -4.703260e-02  3.891051e-01  1.6323149901 -
1.244822e+00
##  [456,]  0.7178056058 -1.445644e-01  6.213797e-01  0.2185929400 -
9.146738e-01
##  [457,]  0.7136578726  8.683590e-01  1.856359e-01 -1.3847938685 -
5.501908e-01
##  [458,]  0.4811562635  1.865766e+00  6.098318e-01 -0.5431216428 -
5.179843e-01
##  [459,]  0.6147710121  1.308596e+00  1.273362e-01 -1.0542047077 -
7.978829e-01
##  [460,] -0.0146077733  1.727898e+00 -3.611839e+00  2.9410828127
2.586094e+00
##  [461,]  0.2984188106  8.612269e-01 -6.848919e-01 -0.1708139511 -
7.764041e-01
##  [462,]  0.6901019739  4.318151e-01 -1.733040e+00 -0.6449215440 -
7.839448e-01
##  [463,]  0.9226198898  5.298742e-01  7.496574e-01  0.2585467363 -
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##  [464,]  0.5113780284  1.152058e+00 -2.796201e+00 -2.3421059290
2.287285e-01
##  [465,] -9.3920999918  3.601719e-01  2.300490e+00  0.3772090021
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##  [466,] -1.0896010220  6.966371e-01 -2.026742e+00 -0.2650100403 -
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##  [467,]  0.6695626739  1.394661e+00  1.074798e+00  1.4166885485 -
9.387700e-01
##  [468,]  0.6987655885  4.464055e-01 -1.247597e-01 -0.3095011061 -
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##  [469,] -5.3874691808  6.305819e-01  1.166872e+00  1.2357955605
9.091501e-01
##  [470,] -1.7852682376 -2.933947e+00 -7.188485e-01  1.7086771097 -
2.696005e+00
##  [471,]  0.7202173740 -9.458503e-02  7.800690e-01  0.2694829589 -
9.747233e-01
##  [472,]  0.6871877551 -4.581099e-02 -1.265522e-01 -0.2734814234 -
9.789873e-01
##  [473,] -5.3994017255  1.044934e+00  5.688600e-01 -0.3353867942
1.229726e+00
##  [474,]  0.6918470560 -7.428714e-02 -1.803555e-01 -0.4613042062 -
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9.419014e-01
##  [475,]  0.7420414915  4.375250e-01  7.888537e-02 -0.4004324896 -
8.468538e-01
##  [476,]  1.0223087499 -7.857358e-01  6.170099e-01  2.4670768711 -
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##  [477,]  0.7341701688  6.370332e-01  3.208381e-01 -0.0394452266 -
9.471711e-01
##  [478,] -0.7224153673  3.901044e-02 -7.521378e-01  0.4994896542 -
1.624076e+00
##  [479,]  0.5635345110  1.594561e+00 -3.496192e-01 -1.6137720498 -
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##  [480,]  0.8782472098 -8.021883e-01 -1.429850e+00 -1.7629959911
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##  [481,]  0.4450006056  2.205781e+00 -1.095797e+00 -0.5059517536 -
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##  [482,] -7.7970188286 -1.554968e-01 -7.703503e-01 -0.4891824086 -
2.031506e+00
##  [483,]  0.5338219293  1.637203e+00 -1.102129e+00  1.3864481537 -
7.526072e-01
##  [484,]  0.2722479586  1.005338e+00 -1.128314e+00  0.2038754621
2.980561e-01
##  [485,]  0.3829948033  1.755678e+00 -1.048514e+00 -0.5454146072
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##  [486,]  0.9464849523 -8.704982e-01 -4.116087e-01 -0.2008322919
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##  [487,]  0.5055704172  1.754699e+00 -6.531345e-01 -1.1250714287
3.423227e-01
##  [488,]  0.4493985607  2.248183e+00 -5.029613e-01  0.5331108712 -
4.225286e-01
##  [489,]  0.6740517960  1.038989e+00 -1.007924e+00  0.9024337921 -
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##  [490,] -8.7059588973  5.859394e-01 -2.186379e-01 -0.1683126084 -
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##  [491,]  0.8244711789  2.647498e-01 -9.332656e-01  1.1071144310 -
9.056137e-01
##  [492,]  0.5650660033  1.340923e+00 -1.576643e+00 -1.1623922338 -
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##  [493,]  0.3764025458  2.579242e-01 -2.382105e+00  2.5667189851 -
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##  [494,] -0.7906547089  1.690294e-01 -4.336920e+00  0.8270278713
2.835255e-01
##  [495,] -0.0125606595  7.983854e-01 -1.849966e+00 -0.4752975621
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##  [496,] -0.7364257325 -1.843755e+00 -4.881298e+00 -0.2826841147
9.095476e-01
##  [497,]  0.6119433687  1.802432e+00 -7.975714e-01  0.1987758322 -
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##  [498,]  0.4434223261  2.119956e+00 -8.082655e-01 -0.6957291364 -
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##  [500,]  0.3082018878 -1.129746e-01 -1.342932e+00  0.8576466781 -
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##  [501,]  0.3596966242  1.267903e+00 -1.151326e+00 -1.5015197666
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##  [502,]  0.6838184096  1.000617e+00 -3.996941e-01 -1.5841763091 -
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##  [503,] -8.1580697029 -7.649546e-01  1.062060e+00  0.4019420080 -
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##  [504,]  0.8910878753 -5.459277e-01  1.359296e+00  0.2637784333 -
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##  [505,]  0.7261232487  5.784522e-01  3.580051e-01 -0.1659619422 -
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##  [506,]  0.7677657060  1.409872e+00  9.025207e-01  1.6657797365 -
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##  [507,]  0.5831042056  8.672079e-01 -1.655323e+00  0.7996352198 -
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##  [508,]  0.2607798691  1.152036e+00 -2.587647e+00 -0.9035641917
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##  [509,] -0.1103195050  2.142794e+00  7.874542e-01 -1.5411887326
1.563477e+00
##  [510,]  0.9113066690  4.980561e-01  8.148639e-01  0.2532456766 -
4.768382e-01
##  [511,]  0.6760533567  1.485511e+00 -6.459095e-01  0.5429326466 -
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##  [512,]  0.0300433599  1.034057e+00  6.554230e-01  0.2272186595
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##  [515,]  0.8223402487  8.872321e-01  1.323361e-01 -0.3034295897 -
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##  [519,]  0.0005212353  1.159447e+00 -4.262977e+00 -1.3827127982
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##  [525,]  0.7100978337  1.560582e+00 -6.742447e-01  0.9226060049 -
3.119764e-01
##  [526,]  0.3568802548  1.086284e+00 -2.566866e+00  0.2462054092 -
6.797054e-02
##  [527,] -5.3760284389  6.103479e-01  1.111113e+00  1.1220990242
9.242691e-01
##  [528,]  0.6190797434  3.455910e-01 -6.732118e-01  1.3221083005 -
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##  [529,] -0.1571046161  2.282708e+00  8.780086e-01 -1.5865896222
1.675121e+00
##  [530,]  0.6147625598 -2.560197e-01  2.273430e-01  0.4989862984 -
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##  [531,]  0.0093997844  1.785480e+00  8.141054e-01 -0.6525116999
1.198599e+00
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7.741046e-02
##  [534,]  0.5827860845  1.307595e+00 -1.057951e+00 -1.2090775394
1.658811e-01
##  [535,]  0.4646088016  1.539601e+00 -1.236087e+00 -0.7367930686
1.873940e-01
##  [536,] -7.8564835920  3.516235e-02 -8.459031e-01 -0.6902133256 -
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##  [537,] -7.7487585690 -7.311961e-01 -7.185269e-01 -0.9497203503 -
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##  [538,]  0.9189444478 -1.000775e+00 -1.058340e+00 -1.8518460090
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##  [539,]  0.7129654506  5.672582e-01  2.439245e-01 -0.0601394211 -
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##  [540,]  0.9042520780 -2.437302e-02  1.549327e-01  0.7880507530 -
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##  [541,] -1.7961808709 -2.812319e+00 -7.562274e-01  1.7900849360 -
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##  [542,] -1.2102502735  7.165443e-01 -2.201559e+00  0.1492808043 -
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##  [543,]  1.0066232400 -1.305173e+00  2.309781e-02 -2.2913526581
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##  [544,]  0.7319869266  8.821619e-01  6.106436e-02  0.4438030102 -
1.441475e+00
##  [545,] -7.7340038461 -9.873161e-01  6.656804e-01 -1.1673021305 -
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##  [546,] -0.2711845429  2.076350e+00 -1.259983e-01 -0.3549483202
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##  [547,]  0.0449948749  1.003364e+00  8.383389e-01  0.2567876250
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##  [548,]  0.9130109255 -7.355515e-01  1.429128e+00  0.3720029763 -
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##  [549,]  0.7872767063 -6.266712e-02  5.557710e-01 -0.2222150316 -
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6.297791e-01
##  [550,] -7.7180348848 -1.051405e+00  6.447289e-01 -1.2053857530 -
2.138414e+00
##  [551,]  0.6924319681  4.235884e-01 -3.750310e-01 -0.5243126666 -
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##  [552,]  0.7180563865 -1.737627e-01  6.197059e-01  0.1814078212 -
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##  [553,] -2.1149829999  2.737123e+00  2.595922e+00 -0.3102446471
1.929363e+00
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##  [555,]  0.5110430617  1.016770e+00  8.441593e-02 -0.1830554684 -
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##  [556,]  0.7232667021  7.667950e-01  5.004530e-02 -1.6672535763 -
5.531090e-01
##  [557,]  0.9062099433 -2.407547e-02  2.207069e-01  0.8105321632 -
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##  [558,]  0.6979644720  5.986623e-01 -8.494330e-01 -0.5459477382 -
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##  [559,]  0.8612628351 -2.686168e-01  2.632331e-01  1.6245159607 -
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##  [560,] -0.4487959975  1.474378e+00 -1.747473e+00  0.6319618749
1.721597e+00
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##  [564,]  0.7073130153  1.045211e+00  1.933441e-01 -1.2233561009 -
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##  [566,] -2.3326890429  8.160717e-01 -4.452550e-01 -0.9684934171 -
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##  [568,]  0.5417715864  4.755634e-01 -5.405143e-01 -0.8872874193 -
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##  [569,]  0.8340188666  7.620005e-01 -1.912790e-02 -0.4386490328 -
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##  [570,]  0.8419234204  7.881486e-01  3.284440e-01 -0.0046680467 -
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##  [571,]  0.4184846820  2.256529e+00  1.076744e+00  0.7739650668 -
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##  [572,]  0.3496316688  5.559648e-01 -1.541577e+00  1.4985437018 -
2.969464e-01
##  [573,] -3.3408490744  3.333349e-01 -3.029244e+00  3.2718424056
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3.598097e-01
##  [575,]  0.2032343134  2.454176e+00 -1.159868e+00 -0.1741249893 -
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##  [576,]  0.5809680642  1.450054e+00 -5.112760e-01 -0.6600841728
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##  [577,]  0.5055592511  1.776399e+00 -8.399494e-01 -0.4757643791 -
2.276672e-01
##  [578,]  0.5522138161  8.103738e-01 -1.306503e+00 -0.5096551176
1.000164e-01
##  [579,] -1.9608042725  2.423313e+00  5.821707e-01 -0.6087293372
2.140989e+00
##  [580,]  0.6221618185  4.804727e-01 -9.974710e-01  0.5415364487 -
3.099291e-01
##  [581,]  0.6217270832  1.041859e+00 -1.050130e+00 -0.7052696122
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##  [582,]  0.7089450175 -2.655203e-01 -1.336720e+00  0.1736674486
5.116774e-01
##  [583,]  0.4002089392  1.322977e+00 -1.626686e+00 -0.0296685634 -
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##  [584,] -0.0440030142  2.001110e+00 -1.081855e-01  1.3227849962
1.343762e+00
##  [585,]  0.8048499503  6.994089e-01 -6.670189e-01  1.0596511535 -
7.004033e-01
##  [586,] -0.3738105834  1.152152e+00 -1.299660e+00  1.0966593300
1.540535e+00
##  [587,]  0.4403791906  2.109425e+00 -1.261491e+00 -1.4000227036
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##  [588,]  0.1119782360 -1.664004e-01 -2.676843e+00  2.2748897958 -
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##  [589,]  0.1423524227  9.306810e-01 -2.843340e+00  1.0964818988 -
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##  [590,] -3.3510148309  4.179548e-01 -2.811272e+00  3.3187913406
3.541635e+00
##  [591,] -0.7233382932  1.121133e+00 -2.985019e+00  3.2252326259 -
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##  [592,]  0.7061321864  9.517702e-01  1.118021e+00  0.9686807854 -
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##  [593,]  0.7412129193  8.422975e-01 -4.363493e-01 -1.2629040338 -
7.946051e-01
##  [594,]  0.8079665217  9.452286e-01  1.117218e+00  1.9461519786 -
8.810337e-01
##  [595,] -1.2579749188 -1.413536e-01 -3.361875e+00  2.2645789181 -
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##  [596,]  1.0110192346 -1.328884e+00  5.301668e-02 -2.0816979333
2.888234e-02
##  [597,] -7.7469061794 -8.584528e-01  8.485309e-01 -0.7058639452 -
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##  [598,]  0.4570225116  1.516587e+00 -5.290657e-01 -1.1827411659 -
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##  [599,]  0.8894178595 -8.391440e-03  2.895671e-02  0.8475588062 -
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1.459967e+00
##  [600,]  0.0232145381  1.892737e+00  1.190231e+00  1.1889006616
6.978214e-01
##  [601,] -2.4379698516  7.042663e-01 -9.002796e-01 -0.8752093312 -
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##  [602,]  0.7695160269  2.684503e-01  3.017087e-01 -0.8885130001 -
7.239642e-01
##  [603,]  0.0436375955  1.008082e+00  5.997815e-01  0.1348281901
5.424889e-01
##  [604,] -8.6224163562  2.693880e-01  9.334402e-01 -0.4365051265 -
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##  [605,]  0.4809320063  2.203255e+00  9.464232e-01  0.6510281311 -
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##  [606,]  0.7519694699  7.768154e-01  8.055618e-01  1.0329738682 -
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##  [607,] -1.1831725631  5.187587e-01 -2.080353e+00  0.3611147279 -
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##  [608,]  0.6110436716  1.404280e+00 -9.095540e-01  0.4757999707 -
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##  [609,] -9.2387564439 -1.133933e-01  5.820866e-01 -0.0559054253
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##  [611,]  0.2822442444  2.542183e+00 -1.929971e+00 -3.1995024935
1.465989e-01
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##  [613,]  1.0379851822 -7.674929e-01  8.409598e-01  2.6865814508 -
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##  [614,] -0.1374998440  2.232134e+00  8.313790e-01 -1.5493014580
1.614034e+00
##  [615,]  0.8156096048  7.027870e-01  7.464540e-01  1.2017064284 -
1.163332e+00
##  [616,]  0.6286198599  1.488181e+00 -9.106675e-01 -0.0562611763 -
3.868952e-01
##  [617,] -0.4068711817  3.027600e+00  7.638460e-01 -1.2336069539
1.734981e+00
##  [618,]  0.5156947146  1.053937e+00 -6.425681e-01 -1.2287421492 -
5.375298e-01
##  [619,] -3.8950185151  3.186692e-01 -3.360509e-01  0.3597001744 -
1.981963e+00
##  [620,]  0.4354971401  8.785227e-01 -1.235147e+00 -0.9030317700 -
5.354097e-01
##  [621,]  0.8842042819  3.357448e-03  4.527907e-01  0.7903330223 -
1.391216e+00
##  [622,]  0.7251399293  9.638014e-01  1.497727e-01 -1.3467716264 -
5.496012e-01
##  [623,]  0.7141982856  1.272098e+00  2.118566e-01 -0.2313659919 -
9.990793e-01
##  [624,]  0.8148554949  5.911346e-01 -1.071166e+00  1.6592234961 -
```

```
8.411308e-01
##  [625,]  0.6879598744  7.993916e-01 -1.071628e+00 -0.1263900092 -
6.262943e-01
##  [626,]  0.7642623281  7.815723e-01  3.122560e-01  0.7402117175 -
1.508826e+00
##  [627,]  0.9265732201  3.037664e-01  1.220630e-01  1.3392970161 -
1.493433e+00
##  [628,] -0.2193541545  2.003633e+00  1.701929e+00  0.8360271428
1.127677e+00
##  [629,]  0.7059564504 -1.267862e-01 -8.278013e-01 -0.0700938344
1.906227e-01
##  [630,]  0.7369444547  5.089506e-01  2.068747e-01 -0.0944849894 -
8.378539e-01
##  [631,]  0.7126148518  8.423889e-01  1.390772e-01 -1.0141958393 -
7.610503e-01
##  [632,]  0.3563601162  1.353389e+00 -2.240238e-01 -0.2721952418 -
7.017729e-01
##  [633,]  0.6528590882  1.334648e+00  4.889127e-01  0.2939492614 -
1.050836e+00
##  [634,] -7.4101902632 -2.484851e+00 -2.948054e-01 -0.7168027450 -
1.348964e+00
##  [635,]  0.5989940809  1.972700e+00  5.252709e-01 -0.2015346116 -
6.242601e-01
##  [636,]  0.0280836492  1.864309e+00  1.248147e+00  1.2425987330
7.328736e-01
##  [637,] -0.1261454036  2.178666e+00  8.014369e-01 -1.5313448508
1.574669e+00
##  [638,] -0.1519430264  2.207737e+00  8.750950e-01 -1.5533522679
1.648080e+00
##  [639,]  0.7689985341  4.209097e-01  2.638720e-01 -0.8706805771 -
7.267433e-01
##  [640,]  0.0442722381  1.795082e+00  1.155424e+00  1.0371159707
7.364239e-01
##  [641,]  0.4203706030  1.593368e+00 -1.368558e+00 -0.5023899558 -
1.546329e-01
##  [642,]  0.2394704818  9.340239e-01 -2.878252e+00 -2.3691867562
1.026450e-01
##  [643,] -5.3995930741  6.974687e-01  1.158803e+00  1.1105422441
1.001188e+00
##  [644,]  1.1622130359 -9.540054e-01  7.236724e-01  2.4828968959 -
1.647921e+00
##  [645,] -9.2725004493 -5.468199e-02  2.073766e+00  0.0653638442
6.311371e-01
##  [646,]  0.6384608184  1.229518e+00  3.293100e-01  0.1183047039 -
9.739890e-01
##  [647,]  0.6052215108  1.426688e+00 -7.126722e-01 -0.2492637012 -
1.216329e-01
##  [648,]  0.9279440789  3.181517e-01 -1.876209e-01  1.1175228669 -
1.502868e+00
##  [649,] -2.4108391565  6.867906e-01 -8.807575e-01 -0.6147085181 -
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```
1.516415e+00
##  [650,]  0.6865437931  1.051396e+00  1.068632e+00  0.7750184404 -
6.556917e-01
##  [651,]  0.8359451068  8.546069e-01  2.710395e-01 -0.1580660119 -
3.944884e-01
##  [652,]  0.7519729477  4.499681e-01  1.828617e-01 -0.6312248324 -
9.530047e-01
##  [653,]  0.4488590468 -2.360632e+00  1.469789e+00 -1.2277647110
1.256467e+00
##  [654,] -7.7080774481 -1.076049e+00  6.960636e-01 -1.1040501935 -
2.113049e+00
##  [655,]  0.4173994870  7.504559e-01 -1.168861e+00 -0.4578734268 -
6.912471e-01
##  [656,]  0.4793809072  1.909625e+00 -1.221064e+00 -0.8338779002 -
2.194089e-01
##  [657,]  0.5432889290  1.607320e+00 -1.402022e+00 -1.2129420908
4.829394e-02
##  [658,]  0.0414067119  1.157816e+00 -1.833875e+00 -0.2835230231
5.253583e-01
##  [659,]  0.3733546916  5.461903e-01 -2.140393e+00  2.5304019234 -
4.304729e-01
##  [660,] -1.3265923476  2.400539e+00  1.135131e-01 -0.9682752483
2.844135e-01
##  [661,]  0.4708746795  2.088094e+00 -8.401836e-01 -0.7561166384 -
1.996045e-02
##  [662,]  0.6159083761  1.485884e+00 -8.784910e-01 -0.3789462117 -
1.921028e-01
##  [663,]  0.6704973600  9.425851e-01 -1.778122e+00 -0.4266662175 -
5.684121e-01
##  [664,]  0.5679315510  1.339049e+00 -8.992895e-01  0.1270859985
2.049294e-01
##  [665,]  0.6986221243  8.516758e-01 -8.057169e-01 -0.3584583281 -
1.597527e-01
##  [666,] -2.5452787475  1.953604e+00 -8.114434e-01  0.0109951173
2.585086e+00
##  [667,] -2.0394906308  9.041927e-01 -1.626454e+00 -1.0802234590
9.885530e-01
##  [668,]  0.3669244863  1.307052e+00 -1.470190e+00  1.7349635932 -
4.368195e-01
##  [669,] -7.5939604119 -1.375225e+00 -5.182661e-01 -0.6113754009 -
1.658348e+00
##  [670,]  0.6324035900  1.003246e+00 -5.028379e-01 -0.1417937426 -
4.334728e-02
##  [671,]  0.5767494866  1.322130e+00 -9.706702e-01 -0.1604360615 -
3.358496e-01
##  [672,]  0.6655665029  6.303883e-01 -1.373440e+00 -1.3818316828
9.932883e-02
##  [673,] -2.2335918991 -7.103945e-02 -2.415119e+00  0.0149687407 -
7.786174e-01
##  [674,]  0.6174868432  1.478461e+00 -1.005030e+00 -0.2257526345 -
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```
1.971659e-01
##  [675,] -1.2351349261  1.670281e-01 -6.116187e+00  3.6057415437
3.021569e+00
##  [676,] -0.8888118843  1.362557e+00 -6.178176e+00  0.7815071809
3.595477e+00
##  [677,] -0.0804615373  5.103686e-01 -3.705082e+00  1.9458507097
2.857502e+00
##  [678,] -0.0516391545  2.459257e+00 -3.715627e+00 -2.5712529893
8.670927e-01
##  [679,]  0.2243854882  1.528787e-02 -2.431946e+00  0.4436908503
2.482610e-01
##  [680,] -0.0810416579  5.411575e-01 -7.819125e-01 -0.2192385585
7.941689e-01
##  [681,]  0.4317784149  2.351700e+00 -2.882437e-02 -1.3166613254 -
3.497977e-01
##  [682,]  0.5840200421  1.450433e+00 -4.363298e-01 -1.7702571732 -
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##  [683,]  0.4436088052  1.329077e-01 -3.224290e-01  0.6607057254 -
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##  [684,]  1.1602322957 -1.006092e+00  7.125502e-01  2.3698144383 -
1.607782e+00
##  [685,]  0.5051299476  1.052179e+00  3.528873e-02 -0.3825845652 -
6.681642e-01
##  [686,] -1.8045832123  9.153286e-01  1.176445e-01 -1.2179194908
3.619739e-01
##  [687,] -0.2838553669  1.470944e+00 -4.752683e-01  1.2178911989
1.665163e+00
##  [688,] -7.4637988464 -1.763630e+00  4.725456e-01 -0.9549513860 -
2.313871e+00
##  [689,]  0.7129770079  4.622750e-01  2.169251e-01 -0.3028276221 -
7.530916e-01
##  [690,] -0.1546393515  2.253691e+00  8.981364e-01 -1.4602943048
1.639406e+00
##  [691,]  0.6866130421  4.293870e-01 -4.398658e-01 -0.7054681687 -
8.820443e-01
##  [692,] -0.6582022098  1.033657e-01 -4.543053e-01 -1.2185441080
3.979656e-01
##  [693,]  0.5006471552  1.855475e+00  4.935120e-01 -0.6494953729 -
5.512251e-01
##  [694,]  1.2040854347 -1.172685e+00  5.227670e-01  2.5043099503 -
1.654368e+00
##  [695,]  0.5002622269  1.105426e+00 -1.352517e+00 -2.3856615069 -
1.236543e-01
##  [696,]  0.9616151839 -9.396120e-02  6.011538e-01  1.1616589226 -
1.137098e+00
##  [697,]  0.7493544367  3.973449e-01  3.575136e-01 -0.8689606731 -
6.418326e-01
##  [698,]  0.5096990704  1.846672e+00  6.046327e-01 -0.4127318537 -
5.399890e-01
##  [699,]  0.6532668104  8.858563e-01  8.199191e-01 -0.2160482823 -
```

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5.307002e-01
##  [700,]  0.5714653861  1.456557e+00 -1.214603e+00 -1.0017358914
1.378024e-01
##  [701,]  0.6637186493  9.633798e-01  6.635126e-01 -0.4608594493 -
5.288655e-01
##  [702,]  0.2104150286  2.535663e+00  1.189849e-03 -0.7026167213 -
3.261156e-01
##  [703,] -8.6493597723  3.469237e-01  1.034457e+00 -0.3319193915 -
1.565800e+00
##  [704,]  0.7532323021  4.528181e-01  1.419395e-01 -0.7624566315 -
9.345436e-01
##  [705,]  0.5055586029  2.167352e+00  8.632887e-01  0.6234894006 -
7.878804e-01
##  [706,] -0.2491393783  1.407032e+00  7.121627e-01  0.9373883486
1.173068e+00
##  [707,]  0.5679778437  1.859224e+00  2.034827e-01 -0.6470354919 -
8.661255e-01
##  [708,]  0.0867733770  2.272175e+00 -2.323126e+00 -3.0715498925
2.945073e-01
##  [709,]  0.6150937782  1.478433e+00 -1.602758e-01 -1.4143319441 -
4.350044e-01
##  [710,]  0.3990709940  2.271691e+00  1.023358e+00  0.5450869966 -
7.368158e-01
##  [711,] -3.9053102339  4.540052e-01 -3.125770e-01  0.3977222266 -
1.930577e+00
##  [712,] -0.0250917963  1.503099e+00  1.311152e+00  0.9626281299
9.591104e-01
##  [713,] -1.7848994917 -2.936573e+00 -7.059370e-01  1.7063548898 -
2.651535e+00
##  [714,]  0.7167879677  9.362257e-01  1.069877e+00  0.9352341102 -
7.303683e-01
##  [715,]  0.7734178334 -4.569065e-01  3.175968e-01 -0.4783188393 -
3.055347e-01
##  [716,]  0.9190260754 -1.956383e-02  4.253347e-01  1.0177162394 -
1.492020e+00
##  [717,] -9.4206078114  4.646964e-01  2.381537e+00  0.4771473147
7.376609e-01
##  [718,]  0.4303054799 -2.209788e+00  1.448169e+00 -1.2346589666
1.245626e+00
##  [719,]  0.5299584860  1.399384e+00  5.230594e-01  0.1098513850 -
2.056365e-01
##  [720,]  0.4360569131 -2.204569e+00  1.374640e+00 -1.4138947890
1.275199e+00
##  [721,]  0.4578009875  3.560350e-01 -5.182945e-01  2.3626060946 -
1.434269e+00
##  [722,]  0.3922658613  1.014991e+00 -9.105689e-01 -0.7978727399 -
4.600493e-01
##  [723,]  0.7685884261  7.915450e-01 -2.519524e-01 -1.2740438422 -
7.580882e-01
##  [724,] -1.2790174420  1.996351e+00  1.682141e-01 -1.2088088298
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4.456576e-01
##  [725,]  1.0576105532 -8.412628e-01  6.054819e-01  2.4710917830 -
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##  [726,] -5.3924958952  6.845809e-01  1.213341e+00  1.1514361217
1.040867e+00
##  [727,]  1.0080182729 -9.444370e-01  8.848858e-01 -0.4140451383 -
2.987608e-01
##  [728,]  0.7599883166  5.316137e-01  2.222308e-02 -0.4894802277 -
1.183484e+00
##  [729,]  0.7534129118  7.924829e-01 -2.293049e-01 -1.2198364042 -
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##  [730,] -0.0421655133  1.484993e+00  1.119940e+00  0.7683466146
1.036458e+00
##  [731,]  0.6129571392  1.388855e+00  4.474720e-01 -1.4087089250 -
2.116358e-01
##  [732,]  0.8385208915  2.677763e-01 -3.772197e-01 -1.2370066740 -
5.229250e-01
##  [733,]  0.7752476491  2.889537e-01 -1.174337e-01 -1.6263595202 -
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##  [734,]  1.0106600774 -1.271105e+00  1.925306e-01 -2.1458314474
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##  [735,] -7.7129922133 -1.094522e+00  6.918851e-01 -1.1833431039 -
2.084443e+00
##  [736,]  0.3769005679  2.939273e-01 -9.997238e-01  2.5967715071 -
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##  [737,] -7.4666674899 -1.766561e+00  3.849021e-01 -1.1585258482 -
2.319107e+00
##  [738,]  0.0470616675  1.847354e+00  1.203557e+00  1.2014032552
7.349991e-01
##  [739,]  0.3889870015  2.316173e+00  1.048703e+00  0.5310384354 -
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##  [740,]  0.0577959331  2.022130e-01 -2.418420e+00  0.2822252750
5.621824e-01
##  [741,]  0.7268593348  1.364883e+00  7.704473e-01  0.4158954299 -
6.665128e-01
##  [742,]  0.7151953237  9.563587e-01 -4.007660e-01 -1.3770906408 -
7.019331e-01
##  [743,]  0.6559510187  1.141128e+00  8.050500e-02  1.3362123781 -
1.127591e+00
##  [744,]  0.8049618633  1.325158e+00  7.043806e-01  1.7504517927 -
1.256346e+00
##  [745,]  0.6257953158  1.337853e+00  1.450447e-01 -1.0307972708 -
7.413467e-01
##  [746,]  0.7221322923  1.161961e+00 -6.286433e-01  0.8264267361 -
3.043311e-01
##  [747,]  0.7066387378  1.327327e+00  5.741563e-01  0.1595961274 -
5.575176e-01
##  [748,] -8.4624454625 -3.151856e-02 -1.261479e-01 -0.1948194847 -
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##  [750,]  0.4740681716 -2.424869e+00  1.375461e+00 -1.3628943279
1.242560e+00
##  [751,]  0.7172732417  8.881006e-01  1.075305e+00  0.8148161424 -
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##  [752,] -2.4753115495  9.313729e-01 -1.346301e-01 -1.2993120986 -
1.171260e+00
##  [753,]  0.6191334513  1.916590e+00  5.562181e-01  0.0019434567 -
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##  [754,]  0.9431699008  3.303620e-01  8.254020e-01  0.3257415413 -
4.854153e-01
##  [755,]  0.7594811460  6.937637e-01 -6.097289e-01 -1.3655370728 -
6.992146e-01
##  [756,]  0.7680376951  7.152110e-01  7.199846e-02  0.5106703475 -
1.453483e+00
##  [757,]  0.7939485097  7.068586e-01  7.474434e-01  1.0305173316 -
1.081328e+00
##  [758,]  0.7356509345 -1.700417e-01  7.031400e-01  0.3886717509 -
8.809058e-01
##  [759,]  0.4711195472  1.949683e+00 -6.648688e-01 -0.2977508150 -
1.702579e-01
##  [760,]  0.8602478163 -1.654485e-01  3.966109e-01  1.5510584322 -
1.173438e+00
##  [761,]  0.6604406002  1.201013e+00  3.471181e-01  0.3079862562 -
1.021648e+00
##  [762,]  0.4681718352  3.100901e-01 -5.814806e-01  2.1050136103 -
1.362267e+00
##  [763,] -3.8865093334  3.319201e-01 -2.864873e-01  0.5029915906 -
1.965080e+00
##  [764,]  1.0768751544 -9.173431e-01  6.658741e-01  2.7191316957 -
1.905550e+00
##  [765,] -7.4712988407 -1.765152e+00  4.028367e-01 -1.1460737899 -
2.301394e+00
##  [766,]  0.8161762442  1.211116e+00  6.797665e-01  1.6990282641 -
1.270541e+00
##  [767,]  0.4298289759  8.316959e-01 -3.111482e-01 -0.0213334403 -
6.182838e-01
##  [768,]  0.6758986584  1.184303e+00  4.729648e-01  0.2990260099 -
1.083047e+00
##  [769,]  0.5769338914  1.338853e+00  2.202938e-01 -0.9377058848 -
2.922746e-01
##  [770,] -3.8785173074  3.080002e-01 -3.112033e-01  0.5454735387 -
2.016354e+00
##  [771,]  0.8848516528 -2.838671e-01  1.600562e-01  1.5190615907 -
1.206931e+00
##  [772,] -7.6930275696 -1.162794e+00  6.247592e-01 -1.2597740046 -
2.105479e+00
##  [773,]  0.5255083173  9.578550e-01  1.275536e-01 -0.1998899547 -
6.357913e-01
##  [774,] -0.4099060716  1.229539e+00 -1.023526e+00  0.7456479339
```

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8.513981e-01
##  [775,]  0.5484957881  1.359107e+00 -1.024987e+00 -0.5542195626 -
2.017487e-01
##  [776,] -0.0429504789 -4.642289e-01 -4.137208e+00  1.7610883703 -
7.188220e-01
##  [777,]  0.4859515154  2.185414e+00  9.278117e-01  0.5328603055 -
6.752725e-01
##  [778,] -7.4728431008 -1.764257e+00  4.775625e-01 -1.0205694084 -
2.278370e+00
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1.944049e+00
##  [780,]  0.6438133639  1.253293e+00  3.079310e-01  0.1536261877 -
1.007534e+00
##  [781,]  0.4879311231  1.107558e+00 -1.281116e+00 -2.3865250911 -
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##  [782,]  0.7157312659  7.435172e-01  6.417569e-01 -0.2470473214 -
5.841160e-01
##  [783,] -7.7106306917 -1.097469e+00  6.706291e-01 -1.2011302352 -
2.090670e+00
##  [784,]  0.2127884773 -4.171071e-01 -1.470994e+00  1.9163628967 -
1.155982e+00
##  [785,]  0.7729465529  4.759693e-01 -3.090585e-02 -0.6027236851 -
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##  [786,] -7.4500457667 -1.818765e+00  4.625199e-01 -0.9809529703 -
2.301435e+00
##  [787,] -1.7929548715 -2.921092e+00 -6.742202e-01  1.7394337054 -
2.631718e+00
##  [788,]  0.2434092535  1.709228e+00 -2.578859e+00  0.2941263757 -
1.181675e-01
##  [789,]  0.4664118779  1.962533e+00  5.548242e-01 -0.6090624530 -
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##  [790,] -0.7093337067  1.848724e-01  1.112661e+00 -1.0104371585
2.993272e-02
##  [791,] -2.4485870238  1.741519e+00  4.759385e-01 -0.1784161820
1.965940e+00
##  [792,]  0.6516596271 -1.417137e-01 -6.298528e-02  1.8354510149 -
1.133736e+00
##  [793,]  0.6228835823  1.325651e+00  3.917319e-01  0.3024736639 -
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##  [794,]  0.0035680276  1.861673e+00  9.733317e-01  0.7989481930
8.668675e-01
##  [795,]  0.4133386113  2.331102e+00 -8.653723e-01 -1.0940031102
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##  [796,]  0.4821160043  1.165576e+00 -5.746141e-01  0.8066447461 -
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##  [797,]  0.7766942695  3.753760e-01 -1.510164e+00  0.6024246152 -
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##  [798,] -0.8332122483  9.303196e-01 -4.526005e+00  0.0158758913
9.095429e-01
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##  [801,]  0.6166511698  1.158561e+00  3.056319e-01 -0.7305014200 -
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##  [802,]  0.9039650001  4.941270e-02  2.368048e-01  0.8782984913 -
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##  [803,]  0.9010520718  3.354717e-01 -6.928658e-02  1.1769719429 -
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##  [804,]  0.6329863825  1.161321e+00  5.990551e-01  0.0574358692 -
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##  [805,]  0.0582612848  1.824999e+00  1.168083e+00  1.2291084935
6.876275e-01
##  [806,]  1.0447920167 -7.982035e-01  5.051838e-01  2.2689901006 -
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##  [807,]  0.7755769341  1.035772e+00  5.275571e-01  0.6244418618 -
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##  [808,]  0.6620690741  1.421635e+00  5.597780e-01  0.0314208773 -
7.452807e-01
##  [809,]  1.0594241653 -8.046960e-01  6.851449e-01  2.7315984846 -
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##  [810,]  0.5650512331  1.748413e+00 -9.070094e-01 -0.0638366224 -
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##  [811,]  0.7914129652  1.221276e+00  6.022586e-01  1.3747371394 -
1.209831e+00
##  [812,] -8.6396015577  3.801769e-01  9.578065e-01 -0.3730229342 -
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##  [813,]  0.3991794948  9.534444e-01 -3.206334e-01 -0.0971178402 -
5.964678e-01
##  [814,]  0.6485545163  9.714832e-01  2.920042e-01 -1.4850223625 -
1.694550e-01
##  [815,]  0.7447150200  7.250049e-01  5.196845e-01 -0.2487830614 -
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##  [816,]  0.6036494054  1.979441e+00  5.100375e-01 -0.1972463263 -
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##  [817,] -0.0417815244  1.402860e+00  1.149648e+00  0.7531062820
1.064953e+00
##  [818,] -9.3972609499  4.089132e-01  2.301791e+00  0.3987926541
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##  [819,]  0.5902341901  1.264647e+00  5.947470e-01 -0.0645998855 -
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##  [820,]  0.6318680037  1.295991e+00 -5.009063e-01 -1.1110445941 -
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##  [822,] -1.5069575957  1.440075e+00 -3.806582e+00 -0.6417755993
2.253085e+00
##  [823,]  0.6297893349  9.915032e-01  3.310094e-01 -1.5636179032 -
9.730353e-02
##  [824,]  0.4488171779 -2.285711e+00  1.385367e+00 -1.3576394928
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1.259516e+00
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1.527396e-01
##  [827,]  0.7044751751  9.330206e-01 -6.083768e-01 -1.6229185885 -
6.059166e-01
##  [828,]  0.6607901320  1.687821e+00  1.181007e+00  1.4414345166 -
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##  [829,]  1.0322260339 -7.773112e-01  8.502014e-01  2.6194636199 -
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##  [830,] -9.4108431845  4.240868e-01  2.381253e+00  0.4637409694
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##  [831,]  0.5390450225  1.260311e+00  2.774329e-01  1.2844271570 -
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##  [833,]  0.6884716548 -8.235846e-02 -9.272435e-02 -0.3791275579 -
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##  [834,]  0.8026813738  6.409101e-01 -1.810020e-01 -0.4107813922 -
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##  [835,]  0.8415355361  1.226703e+00  6.270088e-01  1.7627812898 -
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##  [836,]  0.7321688973  1.326353e+00  8.531736e-01  0.5692574313 -
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##  [837,]  0.7707441641  6.607033e-01 -4.109115e-01 -1.1957894841 -
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##  [838,]  0.9951851228 -1.009116e+00  8.002803e-01 -0.4348056573 -
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##  [844,] -0.7270058160  2.011751e-01  1.160293e+00 -1.0851021483
1.133573e-01
##  [845,]  0.6873260240  4.358704e-01 -1.467699e-01 -0.5370414708 -
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##  [848,]  0.7644997593  3.973035e-01 -3.494206e-01 -1.6648226758 -
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##  [850,] -1.0861369855  6.438274e-01 -1.941785e+00 -0.1831379360 -
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##  [855,]  0.4995573526  9.943672e-01 -1.265070e+00  0.2192441007 -
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##  [856,]  0.4115310880  1.190436e+00 -1.205310e-01  1.4230306162 -
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##  [857,]  0.9670753914  2.611813e-01  5.717593e-01  0.2513385233 -
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##  [858,] -7.6883266826 -1.153750e+00  6.090680e-01 -1.2650634596 -
2.113345e+00
##  [859,]  0.7318138762  2.858028e-01 -4.349648e-01 -0.6058331558 -
8.877949e-01
##  [860,]  0.5820005090  1.329631e+00  2.390580e-01 -0.9746981854 -
2.439832e-01
##  [861,]  1.0289645252 -8.397266e-01  5.693847e-01  2.3263817836 -
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1.410114e+00
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##  [864,]  0.6091570493  1.354470e+00  4.645055e-01 -1.4734229220 -
1.626356e-01
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##  [866,] -1.2038535368  5.012794e-01 -2.339662e+00  0.0379371839 -
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##  [873,] -0.2133566877  4.582930e-02 -3.345827e+00  0.5458797443 -
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##  [892,]  0.6990393944  1.009118e+00 -4.301237e-01 -1.4475308442 -
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##  [894,]  0.0196852769 -4.483851e-01 -4.041490e+00  2.9093491415 -
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##  [896,]  0.7830061025 -4.904451e-01  3.839633e-02 -0.0564550050
1.510025e-02
##  [897,]  0.9437271645 -1.038586e+00 -2.948051e-01 -2.0937840847
1.373260e-01
##  [898,] -2.4495328062  1.755009e+00  4.237685e-01 -0.2699109792
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##  [899,] -5.3785944638  9.770506e-01  6.029753e-01 -0.3318824976
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3.055946e-01
##  [903,]  0.7682012875  3.403042e-01  3.320900e-01 -0.8147618373 -
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##  [904,] -1.0799195022  6.295274e-01 -1.968504e+00 -0.1157101903 -
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##  [906,] -0.5588064576 -5.521796e-01 -3.626942e+00 -0.4656065819
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8.163670e-01
##  [918,]  0.7277774463  2.693273e-01 -1.436967e+00 -0.9678851503 -
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##  [919,]  0.7647989212  5.271751e-01 -4.447408e-01  0.4259990671 -
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##  [920,] -0.8935029953  1.670921e+00  1.299390e+00  1.4269407584
2.877412e+00
##  [921,]  0.5409879829  1.041112e+00 -6.781192e-01  0.3654004971
1.358726e-01
##  [922,] -3.8346035136 -4.107233e-02 -1.972094e+00 -0.2526492549 -
1.450447e+00
##  [923,]  0.6461315854  1.819541e-02 -1.440963e+00  1.0159815300
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##  [924,]  0.7960030180  2.417887e-01 -8.147100e-01 -0.4023660089
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##  [927,]  0.5288063563  1.455307e+00 -9.575356e-01  1.0179666948 -
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##  [928,]  0.6538053247  1.294112e+00  4.487890e-01 -0.5541955479 -
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##  [929,] -7.6591542750 -5.925270e-01  1.383096e-01 -1.0469366662 -
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##  [930,]  0.9892844759 -1.114830e+00  2.586753e-01 -2.0589849900
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7.230370e-01
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##  [938,]  0.3878137075  2.267575e+00 -6.539554e-01 -0.8142983840 -
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##  [939,]  0.4409890897  1.027907e+00 -3.437008e-01  1.3891468984 -
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##  [940,] -1.1007394923  6.303808e-01 -2.118741e+00 -0.2235208624 -
8.593887e-01
##  [941,] -1.1048995642  3.077083e+00  2.955287e-01 -0.6519230043
3.292518e+00
##  [942,]  0.7465020780 -1.232371e-01 -1.538706e+00 -0.7901716292 -
2.771265e-01
##  [943,]  0.5093204096  1.271961e+00 -1.209858e+00 -1.0994723805 -
8.078411e-01
##  [944,]  0.3090527158  2.421144e+00 -1.568958e+00 -2.8191008338
1.670012e-01
##  [945,]  0.3889505687  8.416968e-01 -2.580919e-01 -0.1430412529 -
5.277113e-01
##  [946,]  0.7680499203  6.600003e-01 -7.974136e-01 -0.8610398752 -
1.186732e+00
##  [947,] -9.2611117200 -8.817193e-02  2.068431e+00  0.0523803600
6.604726e-01
##  [948,]  0.7842045980  5.791078e-01 -8.030027e-01 -0.9524766152 -
1.138300e+00
##  [949,]  0.7125032491  7.697307e-01  5.133700e-01 -0.5011350445 -
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5.688483e-01
##  [950,]  0.6173602346  6.485844e-01  2.813576e-02  0.0578897048 -
6.888439e-01
##  [951,]  0.7736639023  9.800949e-01  6.128327e-01  0.7364822475 -
8.400427e-01
##  [952,] -2.2389880025 -4.590967e-02 -7.979785e-01  0.1228840336 -
1.198624e+00
##  [953,]  0.9544313206  3.650581e-01  5.524130e-01  0.1878536773 -
4.716462e-01
##  [954,]  0.5498925364  8.105028e-01 -2.093052e-01 -0.4095497363 -
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##  [955,]  0.0456382884  2.577798e+00 -2.120370e+00 -2.9717006300
3.005752e-01
##  [956,]  0.5708192592  1.306577e+00 -1.047220e+00 -0.4109662553 -
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##  [957,]  0.7047075486  7.930263e-01 -1.201713e+00 -0.3574642379 -
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##  [958,]  0.8622548134  6.178739e-01 -9.157045e-01  0.9790077022 -
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##  [959,]  0.7187600268  7.665050e-01  5.147643e-01 -0.4245898784 -
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##  [960,]  0.6811030254  1.227290e+00  2.495951e-01 -0.3104741427 -
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##  [961,]  0.5194745731  9.880268e-01 -5.955180e-01 -1.2297599669 -
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##  [962,]  0.3744250462  2.283377e-01 -9.962748e-01  2.4686737953 -
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##  [963,]  0.6616332592  7.988745e-01  8.613076e-01 -0.2145932702 -
4.638979e-01
##  [964,]  0.7816169145  2.962426e-01 -3.623203e-01 -1.8541950220 -
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##  [965,]  0.7567616325  4.137859e-01  2.307688e-01 -1.0768593242 -
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##  [966,]  0.7420910045  1.559363e+00  1.203498e+00  2.4559397528 -
1.183546e+00
##  [967,]  0.7385460658 -1.244047e-01  8.843346e-01  0.5041385663 -
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##  [968,] -0.2364660267  1.310580e+00  7.714912e-01  1.0705570612
1.181355e+00
##  [969,]  0.8302443033  8.078451e-01  2.667108e-01 -0.1744560191 -
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##  [970,] -5.3896622841  1.027797e+00  5.694313e-01 -0.3889923602
1.316104e+00
##  [971,]  0.8515140487 -8.773213e-02 -4.587973e-01 -1.4185555332 -
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##  [972,]  0.6350914654  1.327706e+00  7.415171e-02 -1.1313160016 -
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##  [973,]  0.5800730968  7.734161e-01  4.059206e-02  0.0285013233 -
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##  [974,] -5.3793960516  6.248225e-01  1.200890e+00  1.1797209883
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1.034916e+00
##  [975,] -3.7100734797 -3.910094e-01 -1.048428e+00 -0.7725567219 -
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##  [976,]  0.6416510587  1.285983e+00  5.403302e-01  0.2831912640 -
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##  [977,]  0.5577135430  1.392992e+00  5.644367e-01 -1.8240101041
3.729795e-01
##  [978,]  0.5809195565  6.765609e-02 -2.503117e+00 -0.1153653592 -
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##  [979,]  0.1633665640  1.706257e+00 -2.145148e+00 -0.2199377249 -
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##  [980,] -7.8757088832  1.928766e-01 -8.589758e-01 -0.6365712779 -
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##  [981,] -0.0243057726  3.311704e-01 -2.794467e+00  1.2268104107 -
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##  [982,] -0.0183522422  1.355671e+00  1.137172e+00  0.7973279952
1.058577e+00
##  [983,] -1.7481592612  7.642341e-01  1.011568e-01 -1.1403430973
3.605023e-01
##  [984,]  0.9422804757  1.660740e-01 -8.054892e-02  1.1377722901 -
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##  [985,]  0.6353895426  1.694810e+00  4.990211e-01  0.0268455755 -
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##  [986,]  0.4144846730  9.193374e-01 -3.629933e-01 -0.0223838968 -
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##  [987,] -5.3734364223  5.723764e-01  1.195463e+00  1.1286397533
1.057441e+00
##  [988,] -7.7684730149 -1.275650e-01  1.523655e-01 -1.0084309470 -
2.660914e+00
##  [989,]  0.8567440338 -2.127734e-01  2.632971e-01  0.4706150515 -
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##  [990,]  0.6478365871  1.090779e+00  2.964296e-01 -0.7003806654 -
7.972453e-01
##  [991,]  0.7140485844  1.201598e+00  1.864946e-01 -0.4291859734 -
9.075738e-01
##  [992,] -5.3869674166  1.008095e+00  6.216644e-01 -0.3677931211
1.360008e+00
##  [993,]  0.7730325404  5.277628e-01  6.474599e-02 -0.3496977222 -
1.177234e+00
##  [994,]  0.4790493905  4.487505e-01 -8.916944e-01 -1.2795459902 -
5.651068e-01
##  [995,]  0.8389450256 -1.274846e-01 -4.444069e-01 -1.4394787178 -
7.878015e-01
##  [996,]  0.7205282543  1.357599e+00  7.781216e-01  0.2728554406 -
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##  [997,]  1.1550968782 -9.960526e-01  7.555037e-01  2.5010985984 -
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##  [998,]  1.0835155913 -8.639567e-01  8.644861e-01  2.7551666289 -
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##  [999,]  0.6029024013  1.103924e+00 -1.035538e+00 -0.5496639385
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4.035111e-02
## [1000,]  0.4444358530  2.625875e+00 -6.735369e-01 -0.5507919390
1.927337e-01
## [1001,]  0.0562436808  1.715777e+00  1.122666e+00  1.0186477060
7.275187e-01
## [1002,]  0.4159600226  9.064440e-01 -9.419855e-01 -0.8194933364 -
4.546851e-01
## [1003,]  0.7760207967 -2.752428e-01  3.370058e-01 -0.2538313497 -
3.315739e-01
## [1004,]  1.0232188279 -1.068507e+00  9.645016e-01 -0.3521826511 -
2.454052e-01
## [1005,]  0.6967552910  9.150284e-01 -5.660816e-01 -1.6172821689 -
5.449456e-01
## [1006,]  0.3667674702  2.147169e-01 -7.535004e-01  0.6343886022 -
8.922065e-01
## [1007,]  1.1681485735 -1.034423e+00  5.439523e-01  2.4349807116 -
1.574373e+00
## [1008,] -2.0011423986  7.188187e-01 -2.877379e-01 -1.2127089951
5.956045e-01
## [1009,] -2.2262926054 -2.088523e-01 -9.231554e-01  0.1694823015 -
1.177466e+00
## [1010,]  0.7654749358  4.254750e-01 -1.128850e-01 -1.6297555787 -
4.911622e-01
## [1011,] -3.6873423929 -5.045395e-01 -1.029243e+00 -0.6620120163 -
2.130324e+00
## [1012,]  0.8162624083  9.379080e-01  7.624961e-01  0.8130901848 -
8.848736e-01
## [1013,]  0.8718558615 -8.847236e-02  2.556759e-01 -0.8929324299 -
4.632990e-01
## [1014,]  0.9143232965  2.934066e-01  1.087201e-02  1.3139567745 -
1.376617e+00
## [1015,]  0.7295555428 -1.933262e-01  9.444677e-01  0.3884648093 -
8.176982e-01
## [1016,]  0.7594637602  5.932697e-01  1.003507e-01 -0.3529424329 -
1.135605e+00
## [1017,]  0.7500992228 -3.319254e-01 -3.941909e-01  0.5917414281 -
4.363382e-01
## [1018,]  0.5300060817  1.046891e+00 -2.699278e+00 -2.1422467904
2.705912e-01
## [1019,]  0.3935613742  2.350833e+00  5.759386e-01 -1.1207278004 -
2.294147e-01
## [1020,]  0.8963087881 -3.461261e-01  7.943609e-01 -0.4900621996 -
3.154243e-01
## [1021,]  0.5052061946  2.026860e+00  2.962022e-01 -1.0345342209 -
2.938925e-01
## [1022,]  0.6292454859  1.215267e+00 -3.934062e-01 -1.0924892230 -
1.128940e+00
## [1023,]  0.5347088111  1.863302e+00  4.360797e-01 -1.0592480955 -
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## [1024,]  0.8856658014 -6.112931e-01  1.487767e+00  0.3371126708 -
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2.583346e-02
## [1025,]  0.3780063140  1.404691e-01 -9.216097e-01  2.5089264614 -
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## [1026,]  0.5634652949  9.412748e-01 -1.013222e+00  0.1101757638
1.894165e-01
## [1027,]  0.8001141811  7.185444e-01  3.171049e-01  0.8099040346 -
1.490483e+00
## [1028,]  0.5129301694  2.503024e+00 -9.838830e-01 -0.1489935384 -
6.706012e-02
## [1029,]  0.5760181419  1.557646e+00  4.213652e-01 -1.5766797912 -
1.419133e-01
## [1030,]  0.6143955811  1.359050e+00  2.914385e-01 -0.0223896010 -
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## [1031,] -2.6791038523  7.892917e-01 -6.729144e-01 -1.3228012819 -
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## [1032,] -1.1835846906  4.879958e-01 -2.065790e+00  0.3326129414 -
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## [1033,]  0.6568054902  1.328548e+00  4.130737e-01 -0.4946538203 -
6.394513e-01
## [1034,]  0.7719277664  6.729923e-01  6.629362e-01 -0.3926218417 -
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## [1035,] -0.2265422816  2.800728e+00 -2.647032e-01 -0.6975977329
2.273043e+00
## [1036,]  0.4148592991  9.094412e-01 -1.035717e+00 -1.1253027071 -
3.847161e-01
## [1037,]  0.6214577606  1.871628e+00  5.651008e-01 -0.1166765087 -
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## [1038,]  0.7720600174  4.749920e-01  3.352832e-02 -0.5135829636 -
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## [1039,]  0.6632365297  9.660062e-01  2.692489e-01 -0.7750902350 -
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## [1040,] -0.7404681218  2.805763e-01  1.250602e+00 -0.9196834419
1.514084e-01
## [1041,]  0.6814895647 -1.442350e-02 -8.566220e-02 -0.3340851407 -
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## [1042,]  0.2041879700 -4.487644e-01 -1.348512e+00  2.0844748401 -
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## [1043,] -0.8187976982  1.487910e+00  2.392631e+00  1.1121200651
2.314042e+00
## [1044,]  0.6642431120  1.135583e-01 -1.634579e+00 -0.4105089590 -
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## [1045,]  0.3667302600  2.001983e-01 -8.345325e-01  2.6910363292 -
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## [1046,]  0.4712553503  2.694069e-01 -5.180140e-01  2.2121017090 -
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## [1047,]  0.6494624703  1.062138e+00  4.884335e-02 -0.9059569260 -
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## [1048,] -9.3742170050  2.940887e-01  2.332785e+00  0.3844855558
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## [1049,]  0.3124489354  1.676990e+00 -1.932373e+00  1.5509076008 -
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4.255226e-01
## [1050,]  0.6250251476  1.273268e+00  6.537160e-02 -1.3345681054 -
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## [1051,]  0.5252251349  1.304897e+00 -3.355681e-01 -0.9560254047 -
6.757147e-01
## [1052,]  0.8038584011 -3.680562e-02  3.766231e-01 -0.5208628798 -
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## [1053,]  0.6667445809  1.146714e+00  3.142865e-01  1.4686513370 -
1.109899e+00
## [1054,]  0.6566318430  1.376719e+00  9.753985e-01 -0.1825701468 -
1.275145e-01
## [1055,]  0.7156291090  1.642116e+00  1.296353e+00  2.6137218011 -
1.167252e+00
## [1056,]  0.5273398882  1.936745e+00  5.381645e-01 -0.7985346587 -
3.581837e-01
## [1057,]  0.5837575268  1.503961e+00 -3.854033e-01 -1.7052794660 -
2.948786e-01
## [1058,]  0.7406683124 -2.235711e-01 -3.356042e-01  0.7661025895 -
4.512381e-01
## [1059,] -0.8210455848  1.491411e+00  2.413985e+00  1.1923692279
2.291471e+00
## [1060,]  0.8376033448  1.179695e+00  6.683219e-01  1.6109208870 -
1.180652e+00
## [1061,]  0.8954428837 -5.534036e-02  2.726493e-01 -0.5415896271 -
5.941493e-01
## [1062,]  0.5718227096  4.587562e-01 -1.591653e+00  0.0230221418 -
3.219108e-01
## [1063,]  0.8992459485 -6.772409e-01 -5.345850e-01 -1.3480800409
7.876559e-01
## [1064,]  0.0747332024  1.050733e+00 -1.872329e+00  1.7287955732 -
4.404452e-01
## [1065,]  0.8158032211  2.982788e-01 -7.978028e-01  1.0563863296 -
6.848390e-01
## [1066,]  0.5171628581  1.394616e+00 -2.014730e+00 -1.7740777961
2.631291e-01
## [1067,]  0.5016156634 -1.529142e-01 -1.982926e+00  1.1446952177 -
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## [1068,]  0.5932074883  1.999447e+00  5.058666e-01 -0.2599108902 -
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## [1069,]  0.7046832405  1.223669e+00  1.846713e-01 -0.4899956111 -
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## [1070,]  0.7161329342  7.660021e-01  3.434771e-01 -0.3980769540 -
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## [1071,]  0.5805497935  1.292863e+00  2.213184e-01 -0.9778875015 -
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## [1072,] -0.0362805701  1.307763e+00 -1.670192e-01  1.9948581296 -
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## [1073,]  0.8271113313  9.783887e-01 -6.079093e-01 -1.9070917757 -
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## [1074,]  0.0024736114  1.365783e+00  1.366704e+00  1.0563958065
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## [1075,]  0.5881753494  1.252626e+00  4.674003e-01  0.1305193864 -
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## [1076,] -2.1875230041  1.278936e+00 -1.203135e+00 -0.1261105945
1.264974e+00
## [1077,]  0.6766071370  1.268324e+00  4.626385e-01 -0.2188839111 -
7.277973e-01
## [1078,]  0.4292018189  2.244486e+00  1.113704e+00  0.8154226359 -
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## [1079,]  1.0145317985 -1.347634e+00  8.052165e-02 -2.1540061078
1.533689e-01
## [1080,]  0.7457007917 -2.980582e-01  6.315779e-01  0.1619748273 -
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## [1081,]  0.7453741653  1.293928e+00  8.407272e-01  0.4925516755 -
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## [1082,]  0.7456285892 -1.073492e-01 -6.004616e-01 -0.9027561915 -
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## [1083,]  0.5250813556  1.406847e+00 -2.207669e+00 -0.0161577116 -
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## [1084,] -0.7246289687  2.159932e-01  1.100618e+00 -1.2487008491
1.534285e-01
## [1085,]  0.5782593609  1.222484e+00  2.307719e-01 -0.7386933926 -
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## [1086,]  0.8006349654  4.033493e-01  2.901077e-02 -0.4047001779 -
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## [1087,]  0.0234191301  1.526826e-01 -1.481446e+00  0.8775997180 -
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## [1088,] -2.2240024554 -7.996111e-02 -7.935547e-01  0.0937788168 -
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## [1089,]  0.7928018712  7.027860e-01  6.122175e-02  0.6167104340 -
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## [1090,]  0.5371830173  9.404528e-01 -7.969744e-01 -1.2835967310 -
4.257009e-01
## [1091,]  0.5119121126  1.025387e+00  8.342584e-01  0.3750797782 -
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## [1092,] -0.7091004101  1.868762e-01  1.147494e+00 -1.0501596973
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## [1093,]  0.7645576796  2.816035e-01 -2.831596e-01 -1.7123534912 -
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## [1094,] -5.3674731257  5.250652e-01  1.288705e+00  1.2770758826
1.077529e+00
## [1095,]  0.7863082099  5.854399e-01 -4.106380e-01 -0.5550501266 -
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## [1096,]  0.5251344547  9.588235e-01  4.629124e-02 -0.3998591737 -
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## [1097,]  0.6857935961  7.947201e-01  2.569252e-01 -0.3234526610 -
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## [1098,]  0.7999762698  6.157033e-01  7.580737e-01  0.9744048618 -
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```
5.235093e-01
## [1100,]  0.7401269538  8.429189e-01 -4.908139e-01 -1.5226228347 -
6.597258e-01
## [1101,]  0.5120153184  1.279597e+00 -3.456467e-01 -1.0696117884 -
6.505724e-01
## [1102,]  0.5457328394  1.548151e+00  3.938269e-01 -1.0042143134 -
2.505138e-01
## [1103,]  0.1623315796 -1.450565e-01 -1.804872e-01 -0.9781075619 -
1.044686e-02
## [1104,]  0.7220072242  6.702584e-01  3.415468e-01 -0.4555387331 -
6.775064e-01
## [1105,]  0.7879168537  6.635782e-01  1.058391e-01  0.5199006942 -
1.369234e+00
## [1106,] -0.7197044990  2.335580e-01  1.209265e+00 -0.9255545195
1.145874e-01
## [1107,]  0.5721992237  1.303736e+00  5.077337e-01  0.1178477579 -
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## [1108,]  0.5737994689  1.359776e+00  7.710974e-01 -1.7654294596
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## [1109,]  0.7688321289  4.619845e-01  3.364424e-01 -0.7739012124 -
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## [1110,]  0.6007378543  1.350032e+00 -3.474300e-01 -1.0772224311 -
1.075145e+00
## [1111,]  0.3206541024  5.775521e-01 -2.277707e+00  2.7380398167 -
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## [1112,] -0.5103860571 -1.435049e+00 -1.788002e+00  0.9645363936 -
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## [1113,]  0.5176761693  1.596786e+00 -1.421978e+00 -0.5171656614 -
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## [1114,]  0.4317190324  2.234871e+00  9.538949e-01  0.4927829952 -
7.226974e-01
## [1115,]  0.8932724632 -7.391913e-01  1.140371e+00 -1.2629661013
3.921071e-01
## [1116,]  0.2197220085  9.138852e-01 -6.111090e-01 -1.4863761731 -
2.122527e-02
## [1117,]  0.5406241069  1.460652e+00  2.254549e-01 -1.0936057727 -
1.936305e-01
## [1118,]  0.6122582843  1.155656e+00  1.102104e+00 -0.1333144156 -
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## [1119,]  0.9087515669 -7.521991e-01  8.184544e-01 -1.3870069671
3.230337e-01
## [1120,]  0.7159510045 -4.647242e-02  9.567189e-01  0.4820543228 -
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## [1121,]  0.7867023339  2.097278e-01  3.804640e-01 -0.7879497314 -
6.294912e-01
## [1122,]  0.8093281160  9.185226e-01  7.710133e-01  0.7929271660 -
8.725465e-01
## [1123,] -0.7132885623  1.738365e-01  1.100784e+00 -1.1487354747
1.149242e-01
## [1124,] -1.1653194888  4.201415e-01 -2.398054e+00 -0.0337315913 -
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8.453950e-01
## [1125,]  0.6798406686  1.555805e+00  1.259249e+00  1.4858155887 -
7.190438e-01
## [1126,]  0.1983279865  2.346675e+00  3.200448e-01 -0.1949948118 -
3.178606e-01
## [1127,]  0.5494102812  2.272132e+00  2.673944e-01 -0.4950535640 -
4.845733e-01
## [1128,] -1.0499384210  5.259133e-01 -1.731586e+00 -0.0426905080 -
9.057627e-01
## [1129,]  0.4949512369  4.895704e-01 -8.965164e-02  0.9768578404 -
7.197773e-01
## [1130,]  1.1954893220 -1.065771e+00  7.289254e-01  2.4492003392 -
1.558757e+00
## [1131,] -0.0417454120 -6.086444e-03 -3.533813e+00  0.6149174120 -
1.207753e-02
## [1132,]  0.6649722538  5.159272e-01 -1.567541e+00  0.8109505472 -
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## [1133,]  0.5620098756  1.622611e+00  4.250985e-01 -0.5372557115 -
6.958883e-01
## [1134,]  0.7436672505  3.340331e-01 -1.625887e+00 -0.5652473139
8.595136e-02
## [1135,]  0.9602193970 -9.383100e-02  3.085801e-01  0.6668463712 -
1.382888e+00
## [1136,] -0.4507912874  1.206257e+00  2.242799e-01  0.8679166784
1.337319e+00
## [1137,]  1.1931249886 -1.109485e+00  5.871593e-01  2.5401833240 -
1.560485e+00
## [1138,] -9.3747150767  3.319270e-01  2.285470e+00  0.3629256530
7.421111e-01
## [1139,]  0.7214904372  1.293055e+00  6.356920e-01  0.3179622127 -
5.294445e-01
## [1140,]  0.5158254575  1.957145e+00 -9.890654e-01 -0.4314038863 -
2.950193e-01
## [1141,]  0.6136401586  4.069776e-01 -1.677612e+00 -0.9387848665
4.298731e-01
## [1142,]  0.5048698586  2.059330e+00 -9.650460e-01 -0.2303163536
5.293233e-02
## [1143,] -0.4368210765  1.202076e+00 -1.760670e+00  1.5096065644
1.618967e+00
## [1144,]  0.5707702383  1.984300e+00 -9.379020e-01  0.2479590263 -
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## [1145,] -9.6660960949 -3.931064e-01 -1.188709e+00  1.7027727643
4.180376e+00
## [1146,] -0.5227718443 -1.628435e+00 -8.856200e-02 -2.2204117691
1.184747e+00
## [1147,]  0.4635447228  1.934636e+00 -1.810556e+00 -1.9601597835
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## [1148,]  0.8156250198  2.957839e-01 -9.848587e-01  0.0509769600 -
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## [1149,]  0.7015260106  1.587523e+00 -4.540365e-01  1.1324027897 -
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3.800124e-01
## [1150,]  0.3113927527  2.287877e+00 -1.142690e+00 -0.8527856927
3.289554e-01
## [1151,]  0.5510114830  1.303522e+00 -1.485559e+00 -0.0698033248
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## [1152,]  0.5890532475  1.635822e+00 -3.723244e-01  0.7082085231 -
2.867314e-01
## [1153,] -3.7267542819 -9.255615e-01 -2.010536e+00 -0.0139988420 -
1.690900e+00
## [1154,]  0.7938061479  2.600908e-01 -9.076678e-01  0.0090412633
1.838062e-01
## [1155,] -4.6268840333  9.143635e-01 -9.975700e-01  0.1718559197
7.264580e-01
## [1156,]  0.7037056651  8.513922e-01 -1.130434e+00  2.1410545573 -
8.732981e-01
## [1157,] -8.5886852862 -1.251069e-01 -6.289884e-02 -0.3063280686 -
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## [1158,]  0.8204827422  8.274317e-02 -8.082149e-01  0.1890991481 -
4.684883e-01
## [1159,]  0.7756256473  1.798274e-01 -1.258119e+00  0.0654260940 -
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## [1160,]  0.7554516000  4.603269e-01 -9.741543e-01  0.0214810219 -
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## [1161,]  0.8488871525 -1.363527e+00 -2.167114e-01  0.3320650920
4.970633e-01
## [1162,]  0.6460671864 -9.949169e-02 -1.372158e+00  1.0176011581 -
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## [1163,]  0.6215823105  1.452106e+00 -1.100013e+00  1.4093466844 -
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## [1164,] -0.0256471328  2.339193e+00  2.666136e-01  1.9058285371
1.609125e+00
## [1165,]  0.7708856159  5.507417e-01 -4.886757e-01  1.0606427711 -
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## [1166,]  0.4805191000  1.887170e+00 -4.691574e-01  0.0038405527 -
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## [1167,]  1.0184130484 -2.392735e+00 -7.533525e-01  1.5498117898 -
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## [1168,]  1.2016879234 -2.630782e+00 -1.069834e+00  0.0288018068 -
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## [1169,]  0.3734852511  1.199425e+00 -1.312741e+00  0.2725545491
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## [1170,]  0.6554230605  7.496672e-01 -1.067558e+00 -1.3857674906
2.756390e-01
## [1171,]  0.6985468346  9.467351e-01 -6.606297e-01 -0.2778006524
2.110606e-01
## [1172,]  0.6541884101  4.661010e-03 -5.330398e-01  1.0269078438
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## [1173,]  0.8168430148  2.080057e-01 -7.787202e-01  0.0074983608
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## [1174,]  0.4933917087  1.204211e+00 -8.746069e-01  2.9460808722 -
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5.440427e-01
## [1175,] -0.1463394370  1.811789e+00 -3.597008e+00  0.5560784175
3.675986e+00
## [1176,] -0.4622981798  1.284774e+00 -3.793895e+00  1.0115053450
1.378399e-01
## [1177,]  0.2483528680  2.044285e+00 -1.591751e+00  0.4016471730 -
2.530282e-02
## [1178,] -0.8370699654 -4.826187e-02 -2.926355e+00 -0.6693873899 -
6.033328e-01
## [1179,]  0.4351028668  2.261674e+00 -1.288909e+00 -1.7561987040
5.225062e-01
## [1180,]  0.4496301630  1.670006e+00 -1.350795e+00 -0.5177936771
2.038686e-01
## [1181,]  0.8603060452  3.393426e-01 -4.755781e-01  0.7773183407 -
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## [1182,] -8.1675678095 -9.123441e-01 -2.471795e+00  1.0680259051
1.301224e+00
## [1183,]  0.7990175825  4.550442e-02 -1.310701e+00 -1.2013649885
3.839702e-01
## [1184,]  0.8914668575 -8.220845e-01 -5.781311e-01 -0.6605380240
3.377376e-01
## [1185,] -0.5316182106  1.244547e+00 -1.193533e+00  0.8548425952
1.260406e+00
## [1186,]  0.1633585709  1.694100e-01 -2.578243e+00  1.8762818375 -
7.258768e-01
## [1187,] -1.0530303614  2.434565e+00 -1.963606e+00 -0.6153464278
1.618478e+00
## [1188,]  1.0732550669 -5.137253e-01 -8.356714e-02  2.4952083221 -
5.106220e-01
## [1189,]  0.6040035370  1.195244e+00 -4.606693e-01  0.4900529374 -
3.240834e-01
## [1190,]  0.4806416557  1.825794e+00 -1.330762e+00 -2.1480246568
8.679032e-01
## [1191,] -1.5358205209 -1.276223e+00 -5.611004e+00  4.2993434966 -
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## [1192,]  0.1132728233 -6.621992e-01 -3.390356e+00  0.7044427631 -
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## [1193,] -1.8055731597 -8.478867e-02 -7.580061e+00  0.5674514943
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## [1194,]  0.0112256891  2.256376e+00 -1.646676e+00 -1.3425067502
8.459904e-01
## [1195,]  0.6963634039  1.655718e+00 -4.613425e-01  1.9150973368 -
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## [1196,] -2.0540316266  1.870798e-01 -3.371752e+00 -0.2729827587
4.241253e-01
## [1197,] -1.3631020623 -1.024125e-01 -4.587854e+00  2.0706740330
1.625437e+00
## [1198,]  0.0279714095  1.481449e+00  2.186476e-01  1.4766927102
1.798970e+00
## [1199,] -1.0321208867  5.478309e-01 -4.450348e+00  2.8012222723
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4.668587e+00
## [1200,]  0.3161233768 -1.328790e-01 -2.601494e+00  0.8947037494
1.915241e-01
## [1201,]  0.5878990682  1.222372e+00 -7.261842e-01 -0.9946901467
2.318661e-01
## [1202,]  0.3096008048  7.540307e-01 -1.399335e+00 -0.4374643756
8.927944e-01
## [1203,]  0.4760044575  1.902011e+00 -3.910850e-01  0.0872625918
1.750424e-01
## [1204,]  0.9783103096 -1.693815e+00  6.945298e-01 -0.0999282800 -
1.884100e-01
## [1205,]  0.5153198371  1.278747e+00 -7.715938e-01 -1.2861057684 -
3.463090e-01
## [1206,]  1.0436299963 -2.431477e+00  5.363427e-01  1.5212516545 -
1.067312e+00
## [1207,]  0.5971214671  1.434885e+00 -1.938489e+00 -0.7984975278
1.473653e-01
## [1208,]  0.8852258491  7.999123e-02 -3.029114e-01  0.1300338925 -
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## [1209,]  0.7742082935 -3.868332e-01  3.229367e-01 -0.4590263864 -
2.489594e-01
## [1210,] -9.2475974822 -1.045646e-01  2.012511e+00  0.0066634896
6.495997e-01
## [1211,]  0.6155169788  1.928951e+00  5.488909e-01 -0.0985619041 -
5.935765e-01
## [1212,]  0.9096519300 -7.073365e-01  1.053880e+00 -1.2859646536
3.378894e-01
## [1213,]  0.7023537826  1.017405e+00  3.350045e-01  1.5539985582 -
1.113270e+00
## [1214,]  0.9110782792 -4.656620e-03  2.657855e-01 -0.1927101199 -
5.590243e-01
## [1215,]  0.5230638517  2.387147e+00  4.375696e-01 -0.9351472697 -
3.078386e-01
## [1216,]  0.4963806056 -1.062254e-01 -1.153849e+00 -0.1969983682 -
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## [1217,] -1.2615860662  2.591028e+00  1.459484e-02 -0.1352816877
3.330832e+00
## [1218,]  0.7842178694  3.239041e-01  3.687893e-01 -0.0015268574 -
1.014199e+00
## [1219,]  0.7667680003  3.662854e-01 -1.037757e-01 -1.6747655468 -
4.570678e-01
## [1220,]  0.9966620128 -1.308136e+00  7.611344e-02 -2.2380389242
1.895857e-01
## [1221,]  0.3671139944  2.322684e-01 -8.457984e-01  2.6615156344 -
1.310727e+00
## [1222,]  0.6090061722  4.178716e-01 -6.742714e-01  2.4464978631 -
1.180639e+00
## [1223,] -1.2021177113 -1.077941e-01 -4.162887e+00  0.1131062164 -
3.841974e-01
## [1224,] -3.7275432708 -9.578720e-01 -7.037127e-01 -0.1877672488 -
```

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2.135077e+00
## [1225,]  0.6472096462  1.455815e+00  9.335779e-01 -0.2808021731 -
1.017797e-01
## [1226,]  0.6227008637  6.754107e-01 -6.765996e-05  0.0842029389 -
7.112535e-01
## [1227,]  0.6116822360  1.336454e+00  8.246168e-02 -1.3107837444 -
6.537040e-01
## [1228,]  0.6981019242  7.595434e-01  8.286554e-01 -0.2198684672 -
4.379190e-01
## [1229,]  0.5830485053  5.171144e-01  2.579800e-01  0.9412943798 -
9.083107e-01
## [1230,]  1.0084080885 -1.086151e+00  8.041103e-01 -0.4864558410 -
1.166331e-01
## [1231,]  0.6029610699  7.220038e-01  9.432387e-03 -0.0511538468 -
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## [1232,]  0.6133211367  1.309101e+00  1.735935e-01 -1.7779345312 -
9.465290e-02
## [1233,]  0.5397674993  1.582688e+00  4.646087e-01 -0.8698934495 -
2.290864e-01
## [1234,]  0.9166462087 -1.153052e-01  4.390776e-02 -0.4464634911 -
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## [1235,]  1.2468892889 -2.778923e+00  2.702197e-01 -0.2206893116 -
1.141316e+00
## [1236,] -9.2762112464 -3.039446e-02  2.114791e+00  0.1094103742
7.013982e-01
## [1237,]  0.2889317606  1.440965e+00 -1.482354e+00 -0.7308995568
2.664601e-01
## [1238,] -8.6211404831  2.812378e-01  9.984277e-01 -0.3746664948 -
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## [1239,]  0.9543789187 -2.159476e-01  9.974616e-01  0.6079061225 -
5.917137e-01
## [1240,] -2.2323275097 -9.819709e-02 -6.831604e-01  0.2907816652 -
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## [1241,]  0.0973318646 -7.752613e-01 -2.963800e+00  2.4053156681 -
1.058394e+00
## [1242,]  0.8525704862 -1.454602e-01 -2.397790e-01 -1.3625212489 -
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## [1243,]  0.6121638224  1.178235e+00  5.244230e-01 -0.2602996598 -
5.404355e-01
## [1244,] -3.7005284678 -3.858599e-01 -1.063483e+00 -0.7575643222 -
2.086778e+00
## [1245,]  0.8753095988  1.229457e-01  3.729683e-02  0.5902963628 -
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## [1246,]  0.8237899160 -3.973438e-02 -2.003908e-01 -1.3118026585 -
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## [1247,]  0.3895165482  7.621829e-01 -2.359153e+00  0.7947936427 -
1.612203e-01
## [1248,]  0.8812526255 -7.133759e-02  7.004703e-02 -0.7198800729 -
9.474314e-01
## [1249,] -3.6873439044 -5.542985e-01 -1.020145e+00 -0.8123846124 -
```

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2.029326e+00
## [1250,]  0.3779401976 -9.750509e-02 -1.468500e+00 -0.1495036401 -
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## [1251,]  0.7371831568  9.880620e-01 -7.500927e-01  0.2438837733 -
2.990786e-01
## [1252,]  0.0700944075  1.353323e+00  2.514770e-01  1.7735201752 -
7.408433e-01
## [1253,]  0.3542542100  1.345356e+00 -7.177152e-02 -0.0555303071 -
5.970617e-01
## [1254,] -1.9782799669  1.077678e+00  1.994655e-01 -0.8731849982
6.741007e-01
## [1255,]  0.6606320562  8.330714e-01  8.008641e-01 -0.3767118751 -
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## [1256,]  0.6021876269  1.580674e-02 -1.301736e+00 -1.1263182370 -
3.457746e-01
## [1257,] -8.5128257642 -3.858178e-01  1.057887e+00 -0.5786985067 -
1.362195e+00
## [1258,]  0.7428712913  1.254265e+00  5.253118e-01  0.1750982860 -
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## [1259,]  0.5371939928  2.309821e+00  4.601674e-01 -0.8080361022 -
3.591044e-01
## [1260,]  0.6749523819  1.138564e+00 -5.387085e-01 -0.9900258138 -
1.092025e+00
## [1261,]  0.5511096005  1.632301e+00  1.196158e+00  0.8461740063 -
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## [1262,]  0.7412212913  1.258336e+00  6.022095e-01  0.4031984331 -
5.947631e-01
## [1263,]  0.8533233199  1.553335e-02 -4.195803e-01 -0.9793823888 -
5.213931e-01
## [1264,]  0.8147087093 -2.626528e-01  1.764567e-01  0.3861897691 -
7.977278e-01
## [1265,]  0.9433189976 -1.080973e-01  4.062818e-01  0.8848305359 -
1.388397e+00
## [1266,]  0.8749082317 -1.159665e-01 -1.339976e-02 -1.0829701026 -
8.752883e-01
## [1267,] -0.8136691900  1.506842e+00  2.331355e+00  1.0242350795
2.316735e+00
## [1268,]  0.8236912062 -7.324089e-02 -1.531192e+00  0.5675370257 -
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## [1269,]  0.8725190449  5.153511e-01 -2.094749e-01 -2.5177073898 -
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## [1270,]  0.5003250048  1.107257e+00  4.053296e-01 -0.1673360493 -
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## [1271,]  0.7997236036  9.176275e-01  7.915843e-01  0.6951382460 -
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## [1272,]  0.6773571271  1.329079e+00  9.947220e-01 -0.0388094560 -
1.420990e-01
## [1273,] -0.7981510493  1.359064e+00  2.437614e+00  1.2767086698
2.275526e+00
## [1274,]  0.5353754509  1.430998e+00  2.844106e-01 -0.8193945463 -
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3.437747e-01
## [1275,]  0.5745636007  1.400198e+00  1.609636e-01 -1.1435133302 -
2.050504e-01
## [1276,] -4.6636630927  9.593894e-01  4.667699e-01  0.1986294721
3.340824e-01
## [1277,]  0.6539421702  1.030508e+00  1.664995e-02 -0.9398695071 -
7.490023e-01
## [1278,]  0.6598822559  8.405786e-01  3.419947e-01 -0.8019859533 -
4.898191e-01
## [1279,]  0.8964228163 -2.597014e-01 -3.141781e-01 -0.5758211108 -
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## [1280,]  0.7807733756  3.142853e-01  3.476989e-01 -0.8139952872 -
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## [1281,]  0.6836312841  5.051600e-01 -1.034475e+00 -0.2391955798 -
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## [1282,]  0.7470700296  1.270744e+00  5.713081e-01  0.3353983870 -
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## [1283,]  0.9006966865 -4.102032e-02  2.031394e-01  0.6627523305 -
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## [1284,]  0.7916577309  2.208015e-01 -3.372533e-01 -1.7129892113 -
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## [1285,]  0.3866621951  3.951635e-01 -9.394808e-01  2.5417190142 -
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## [1286,]  0.6585217249  8.953477e-01  8.171458e-01 -0.2359046525 -
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## [1287,]  0.7050005755  7.768692e-01  4.387797e-01 -0.2955512632 -
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## [1288,]  0.4947833780  9.884993e-01 -1.985637e+00 -0.5948955321 -
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## [1289,] -0.2302207243  1.325766e+00  6.822399e-01  0.8884164423
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## [1290,]  0.6508429422  1.299682e+00  2.227833e-02 -1.2545123193 -
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## [1291,]  0.6661003747  8.337968e-01  1.469529e-01 -0.8331998239 -
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## [1292,]  0.9778059233 -1.801917e-01  2.265679e-01  0.4134013334 -
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## [1293,]  0.7554093074  8.567618e-01 -2.056565e-01 -1.1716078792 -
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## [1294,]  0.7903005657  4.102080e-01  8.817946e-01  1.0350409492 -
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## [1295,]  0.8060684244  6.408745e-01  8.793203e-01  1.2711098224 -
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## [1296,] -7.7794983737 -1.018403e-01  2.257796e-01 -0.9415129924 -
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## [1297,]  0.9362307084 -4.057757e-01 -6.365503e-01 -0.0030885506 -
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## [1298,]  0.0596623065 -2.518651e-01 -2.344738e+00  0.3383328225 -
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## [1299,]  0.6049362032  2.006400e+00  5.822241e-01 -0.0635491451 -
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5.689250e-01
## [1300,]  0.5145695510  1.122345e+00  3.583814e-01 -0.2444377148 -
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## [1302,]  0.5705334625  1.075553e+00  4.317191e-02  1.1620936758 -
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## [1303,]  0.8771157853  2.987332e-03 -4.862313e-01 -0.9688455946 -
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## [1304,]  0.7158146403  1.063191e+00 -1.043080e+00 -1.4213814523 -
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## [1305,]  0.6053917166  1.253331e+00  3.431256e-01 -0.7340566299 -
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## [1306,]  0.5209350930  1.508617e+00  1.109804e+00  2.8403647479 -
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## [1307,]  0.0022820401  1.321473e+00  1.137097e+00  0.8574480644
1.068205e+00
## [1308,]  0.7684680255  4.952788e-01  4.423761e-03 -0.5837429434 -
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## [1309,]  0.7646192134  1.206165e+00  8.206754e-01  0.4729633588 -
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## [1310,]  1.2616513021 -2.839917e+00  5.055088e-02 -0.3968480782 -
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## [1311,]  0.7234168752  9.413958e-01 -2.531686e-01 -1.5377053454 -
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## [1312,] -0.7921795498  1.342903e+00  2.414171e+00  1.1834564292
2.310250e+00
## [1313,]  0.5415433606  1.673291e+00  1.226524e+00  0.8821405465 -
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## [1314,] -0.9360027529  5.814439e-01 -3.523788e+00 -0.2787700997 -
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## [1316,]  0.6078981466  1.455246e+00 -1.167043e-01 -1.5433213569 -
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## [1317,]  0.5798046245  1.297591e+00  5.896155e-01 -0.1849686225 -
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## [1318,]  0.7080333481  5.429751e-01 -1.840834e+00 -2.6514486912 -
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## [1320,]  0.6874420344  4.470598e-01 -1.437829e+00 -0.5542227812 -
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## [1323,]  0.4993250409  1.330334e+00 -1.824753e+00 -0.4208892858 -
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1.146621e+00
## [1325,]  0.6737827336  1.414009e+00  9.163015e-01 -0.1260456515 -
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2.143561e+00
## [1327,]  0.6407770982  1.868291e+00  5.394244e-01 -0.0532325165 -
6.026997e-01
## [1328,]  0.8681104682 -5.957034e-02 -1.998926e-01 -1.0728172790 -
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## [1329,]  0.8616460778 -4.613863e-02  3.939466e-01  0.0187682327 -
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## [1331,]  0.5865810696  1.429721e+00  6.280649e-01  0.1756573586 -
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## [1332,]  0.7791505472  6.337706e-01  1.433510e-01  0.5993290516 -
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## [1333,] -8.6126172239  2.417213e-01  9.816311e-01 -0.4024636469 -
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## [1334,]  0.6983296470  1.586907e+00  1.253604e+00  1.5144867670 -
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## [1335,]  0.7385560514  1.081244e+00  1.963311e-01 -0.4105981246 -
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## [1338,] -0.8402668461  3.076167e-01 -2.284084e+00 -0.5742092413 -
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## [1339,] -7.4625853012 -1.817020e+00  4.712011e-01 -1.1078242734 -
2.201968e+00
## [1340,]  0.8080551592  6.567912e-01  8.452652e-01  1.1508601047 -
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## [1341,]  0.6218341180  1.953011e+00  4.895589e-01 -0.1696027939 -
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## [1342,]  0.2487588101  7.835054e-01 -1.633567e+00 -0.2299345124 -
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## [1343,]  0.7896350082  6.178229e-01 -5.897353e-01 -0.9006673120 -
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## [1344,]  0.6791384915  1.539906e+00  1.294944e+00  1.5063299159 -
6.768520e-01
## [1345,]  0.6396326874  1.151852e+00  2.573471e-01 -0.8111700270 -
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## [1346,]  0.8329178252  4.085472e-02 -5.229932e-01 -1.0061673063 -
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## [1349,]  0.9161817340 -6.060511e-02  2.960288e-01  0.9053903191 -
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1.324412e+00
## [1350,]  0.7201053548  2.245450e-02 -1.990034e+00 -0.4742170149 -
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## [1351,]  0.5087388053  2.082995e+00 -1.865937e+00 -0.7302911985
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## [1352,]  0.6784953496  1.214276e+00  2.473253e-01 -0.5117216987 -
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## [1353,]  1.0434782211 -1.322948e+00  2.592810e-01 -2.0207786539
1.186584e-01
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## [1355,]  0.5434691960  1.850237e+00  3.089438e-01 -1.0007088113 -
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## [1356,]  0.4146668739  1.256764e+00 -5.414874e-02 -1.4829324251 -
2.679201e-02
## [1357,]  0.1437423121  1.809133e-01 -1.179335e+00  0.7335349571 -
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6.857693e-01
## [1359,]  0.8583470493 -5.696695e-02  2.500207e-02 -0.9971886047 -
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## [1360,] -0.4558478740 -1.575610e+00 -3.097425e-01  1.0124894155 -
1.285673e+00
## [1361,] -0.7290365160  2.688904e-01  1.228874e+00 -0.9422365371
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## [1362,]  0.7958013137  2.117267e-01 -4.419842e-01 -2.0143964085 -
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## [1363,]  0.6135864376  1.530200e+00  5.815743e-01 -0.2383111922 -
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## [1364,] -3.7333467227 -1.009677e+00 -7.212574e-01 -0.2945197157 -
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## [1365,]  0.5941737017  1.236620e+00  4.320713e-01 -0.5820866933 -
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## [1366,]  0.5679375746  1.390769e+00  2.209382e-01 -0.9823358274 -
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## [1367,]  0.4071526347 -2.699588e-01 -1.681413e+00 -0.1691911576 -
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## [1368,]  0.6828473781  1.140291e+00  2.916157e-01 -0.4105655423 -
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## [1369,]  0.7493562355  4.658751e-01  2.372074e-01 -1.6929315660 -
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## [1370,]  0.8018037912  8.478239e-01  6.375800e-01  0.7282879177 -
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## [1371,]  1.0460099076 -1.185109e+00  1.055206e+00 -0.2553128109 -
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## [1372,]  0.2970935337  1.389317e+00 -1.230672e-01 -0.8294406637 -
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## [1373,] -0.7336022644  1.607633e-01  1.160499e+00 -1.1890943181
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## [1374,]  1.0202067645 -1.101427e+00  8.148798e-01 -0.4005232501 -
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1.434278e-01
## [1375,]  0.4935614572  1.188632e+00  4.453421e-01 -0.0678887591 -
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## [1376,]  0.5233598920  1.588153e+00  2.449270e-01 -1.3186345024 -
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## [1377,]  0.5763029607  1.217475e+00  5.970619e-01  0.2616488379 -
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## [1378,]  0.6927688880  1.084662e+00  3.999415e-01 -0.6479754002 -
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## [1379,]  0.5593951886  1.431617e+00 -3.948321e-01 -0.2129501445
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## [1380,]  0.8728067838 -1.166081e+00 -2.096288e+00 -1.8235415722
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## [1381,]  0.2233850964  1.482311e+00 -2.606363e+00 -1.3741908488
5.836174e-01
## [1382,]  0.7409268682  3.760746e-01  4.070890e-01 -0.1878261085 -
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## [1383,]  0.5287197570  1.656236e+00 -1.159761e+00 -1.1289862539
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## [1384,]  0.8136388161  5.017466e-01 -5.613501e-01 -0.7532749873 -
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## [1385,]  0.7304888039  5.086110e-01 -2.198051e-01  2.0263875487 -
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## [1386,]  1.2624313979 -2.783963e+00  8.245681e-02 -0.2373530094 -
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## [1387,]  0.6458168282 -3.219234e-01  3.675111e-01 -0.4609864457 -
1.353673e-01
## [1388,]  0.7620721308 -3.207169e-01  4.364029e-01 -0.1798694859 -
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## [1389,] -3.7028030165 -4.039059e-01 -1.084932e+00 -0.8814098045 -
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## [1390,]  0.8996088036 -1.391349e-01 -3.334695e-01 -0.4689894669 -
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## [1391,] -0.8248175991  3.267518e-01 -2.405192e+00 -0.4234871452 -
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## [1392,]  1.2384978780 -2.568927e+00  1.572569e-01 -0.0301229335
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## [1393,]  0.9047894775 -2.533175e-02  6.533712e-02 -0.4124898651 -
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## [1394,]  0.9394839367 -2.018112e-01  1.130021e+00  0.7536355795 -
5.256548e-01
## [1395,] -8.4880716312 -4.129045e-01  9.592158e-01 -0.6576568765 -
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## [1396,] -0.0683892962  6.887359e-01 -5.694334e-02 -0.4442234959
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## [1397,]  0.7199472981  1.594415e+00 -3.213556e-01  2.1621304643 -
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## [1398,]  0.3882357365 -2.199532e-01 -1.681620e+00 -0.2690304449 -
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3.802292e-01
## [1400,]  0.7079401541  1.063252e+00 -3.942445e-02  0.8350231169 -
1.080912e+00
## [1401,]  1.0307177763 -1.134394e+00  1.015981e+00 -0.4101782951 -
1.247784e-01
## [1402,] -8.5097918369 -3.706772e-01  1.068187e+00 -0.5601284299 -
1.350689e+00
## [1403,]  0.8786602346 -1.714394e-01 -4.217342e-01 -1.2861544811 -
7.893690e-01
## [1404,]  0.6625394561  8.985048e-01  1.440959e-01 -0.7981950203 -
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## [1405,]  0.4414011146  4.799326e-01 -1.408856e+00  2.2569556007 -
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## [1406,] -9.6608804901 -4.127262e-01 -1.178442e+00  1.7054390675
4.207848e+00
## [1407,]  0.4663107745  7.145676e-01 -1.596820e+00 -0.8118901155
3.209138e-01
## [1408,]  0.6011311439  8.650322e-01 -2.038183e+00 -1.4190964628
3.397972e-02
## [1409,]  0.7215163628  6.998703e-01  4.706260e-01 -0.6351709955 -
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## [1410,]  0.8120278712  6.168178e-01  4.404610e-01 -0.4788207344 -
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## [1411,] -0.5173149145 -1.719984e+00  1.265592e+00 -2.3757944247
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## [1412,]  0.8083920354  5.669239e-01  8.338377e-01  1.0171887886 -
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## [1413,]  0.8020844500  6.393129e-01  5.890703e-01 -0.4392123121 -
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## [1414,]  0.6542955700  9.949720e-01  1.007566e+00  0.1505364570 -
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## [1415,]  0.5990947158  1.251737e+00  1.739307e-01 -1.0895091418 -
2.157883e-01
## [1416,]  0.6098936471  1.140656e+00 -1.095447e+00  0.0997871948 -
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## [1417,] -4.7006745323  1.124425e+00  5.166400e-01  0.1174335451
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## [1418,]  0.8528641135  8.247171e-02 -8.079863e-02 -1.0913155755 -
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## [1419,]  0.4908395154  1.153572e+00 -1.274939e+00 -2.3424182343 -
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## [1420,]  0.6393435628  1.343455e+00  4.065790e-01 -1.5769553909 -
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## [1421,]  0.0054744724  1.158501e+00 -1.424678e-01  2.0811244184 -
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## [1422,] -7.4415951217 -1.897181e+00  4.800387e-01 -1.0622081939 -
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## [1423,]  0.6136898482  1.947537e+00  5.755349e-01 -0.1984049910 -
4.866514e-01
## [1424,]  0.8988362056  1.932814e-02 -2.215307e-01  0.4041757885 -
```

```
1.200049e+00
## [1425,]  0.5996258737  3.069627e-01 -1.345085e+00  0.4451870151
1.553325e-01
## [1426,] -3.7126054525 -4.256918e-01 -9.664277e-01 -0.6629808230 -
2.022889e+00
## [1427,] -9.2601634371 -1.132735e-01  2.143460e+00  0.1039865487
7.505423e-01
## [1428,]  0.4943948487  1.146514e+00  3.624900e-01 -0.2399016156 -
3.581713e-01
## [1429,]  0.5799732308  1.640651e+00  5.500628e-01 -0.3669647827 -
6.848839e-01
## [1430,] -1.1301543512  3.128534e+00  1.811305e+00 -0.5156101130
2.943293e+00
## [1431,] -0.8290414088  1.501861e+00  2.439725e+00  1.1641775002
2.364134e+00
## [1432,]  0.5649214817  1.349365e+00  1.250833e+00  2.8393552162 -
9.296285e-01
## [1433,]  0.6297963406  1.233989e+00  7.783216e-01 -0.3846991388 -
3.989201e-01
## [1434,] -7.7757983035 -1.260033e-01  2.242645e-01 -0.9522395643 -
2.579194e+00
## [1435,]  0.4649185290  1.254913e+00  3.514846e-01 -0.3868502051 -
2.954769e-01
## [1436,]  0.6573131113  1.050295e+00  7.420072e-01 -0.4702920552 -
4.105239e-01
## [1437,]  0.8903915834 -3.352424e-01  7.749369e-01 -0.5682192918 -
2.735252e-01
## [1438,]  0.7025836894  1.278722e+00  1.593055e-01 -0.5325950933 -
8.382441e-01
## [1439,]  0.5691874367  1.076515e+00 -7.025821e-01 -0.7575011827 -
7.004922e-01
## [1440,]  0.4274797498  2.248311e+00  1.067161e+00  0.6063354330 -
6.238448e-01
## [1441,]  0.8967619923 -3.878223e-02  3.375865e-01 -0.3053677049 -
4.328686e-01
## [1442,]  0.7645757190  1.072358e+00  2.531644e-01 -0.1846337456 -
8.936605e-01
## [1443,]  0.4471708857  3.977980e-01 -7.475598e-01 -0.9243712526 -
2.878607e-01
## [1444,]  0.7928458508  6.760184e-01  6.147582e-01 -0.4294609953 -
4.458022e-01
## [1445,]  0.6732520844  1.637457e+00  1.266566e+00  1.4618061360 -
6.699434e-01
## [1446,]  0.8950480548 -2.058519e-01  3.927705e-01  0.0130809460 -
9.923501e-01
## [1447,]  0.9041029680  6.898672e-02  3.907802e-01 -0.0445794018 -
4.545015e-01
## [1448,]  0.8607500729  1.798891e-01 -2.401879e-01  0.3054665554 -
1.170216e+00
## [1449,]  0.6555215466  1.668671e+00  1.276751e+00  1.4081192742 -
```

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6.443177e-01
## [1450,]  0.8888612293  2.122767e-02 -1.436212e-01  0.5440674401 -
1.195540e+00
## [1451,]  0.7254508341  1.147200e+00  1.461105e-01 -0.6182051862 -
8.206153e-01
## [1452,]  0.5606040853  1.132426e+00 -2.865934e-01 -0.8252651852 -
6.545222e-01
## [1453,]  0.3374492970 -2.522334e-01  9.688915e-02  0.8946979246 -
6.672310e-01
## [1454,]  0.5522100792  8.829114e-01  6.356936e-01  0.5657341357 -
5.165956e-01
## [1455,]  0.6808055841  1.328168e+00 -5.354791e-01  0.5811603707 -
2.457422e-01
## [1456,]  0.5046101728  6.220106e-01 -2.449585e+00  0.1947535941 -
3.488915e-01
## [1457,]  1.0154207825 -1.593691e+00 -8.612211e-01  0.3635795726 -
5.600758e-01
## [1458,]  0.3717010647  2.197122e+00 -1.312574e+00 -0.0449539731 -
2.095827e-01
## [1459,]  0.7525240333  3.913567e-01 -1.039249e+00 -0.6205154619 -
4.880358e-02
## [1460,]  0.8514051786 -5.496542e-02 -3.757954e-01  0.5970186210 -
1.950603e-01
## [1461,]  0.8104701449 -1.814398e-01 -9.134975e-01 -0.9032009172
1.865391e-01
## [1462,]  0.8195059472  9.293718e-01 -6.704051e-01  1.0204690467 -
7.382339e-02
## [1463,] -0.1393698526  7.004919e-01 -2.903738e+00 -0.3374949611
2.645521e-01
## [1464,]  1.0035296773 -1.058891e+00 -1.269645e+00  1.2243324300 -
1.560779e+00
## [1465,] -0.1968695347 -8.052761e-01 -2.865998e+00 -0.7936670307
1.218928e+00
## [1466,]  0.5836478694  1.561166e+00 -6.891952e-01 -0.6325762972
1.796497e-01
## [1467,]  0.2443576290 -1.031464e-01 -3.554664e+00  1.1121546787 -
2.928058e-01
## [1468,] -7.7746543149 -4.274002e-01 -7.292867e-01 -0.7693190533 -
1.787781e+00
## [1469,]  0.9136057760 -8.222334e-01 -1.117266e+00 -0.9967094462
2.305807e-01
## [1470,]  0.2349615876  5.590084e-01 -1.544670e+00 -1.0286795447
8.782518e-01
## [1471,]  1.1333560482 -2.341860e+00  1.320910e+00  1.5290268196 -
1.027608e+00
## [1472,] -0.4822438631 -1.593822e+00 -4.727873e-01  0.7637280875 -
1.156755e+00
## [1473,]  0.6603918076  1.033634e+00  1.057562e+00  0.4681633231 -
5.807767e-01
## [1474,]  0.8677553730 -8.033615e-02  9.786247e-01  0.6903856728 -
```

```
7.157020e-01
## [1475,]  0.6063623255  5.794658e-01 -2.057199e-01 -0.2765764854 -
5.478127e-01
## [1476,]  0.4277168377  1.198268e+00 -6.608179e-01 -0.4840224041 -
6.442214e-01
## [1477,]  0.8938549273 -8.319538e-02 -5.377365e-01 -1.0592121698 -
5.636936e-01
## [1478,]  0.5347397329  1.785171e+00  3.280774e-01 -1.1297599295 -
1.918922e-01
## [1479,]  0.7490227718  3.825019e-01  5.866495e-01 -0.5238226292 -
5.026337e-01
## [1480,]  0.6170630014  1.152461e+00  3.901907e-01 -0.2544636159 -
6.890670e-01
## [1481,]  0.6460804441  1.889366e-02 -4.317848e-01  0.2790003270 -
8.100682e-01
## [1482,]  0.8511478146 -2.848696e-01  5.149777e-01 -0.9983606265 -
3.639083e-01
## [1483,]  0.9162610514 -7.032692e-02  3.173006e-01 -0.2342084766 -
4.594465e-01
## [1484,] -0.2409068213  1.271692e+00 -3.756108e+00 -0.9296328896
6.812428e-01
## [1485,] -0.0190702039  1.357781e+00  1.253958e+00  0.9601081956
1.143417e+00
## [1486,]  0.5150854790  1.078747e+00  9.360906e-01  0.6524314739 -
1.762416e-01
## [1487,]  0.4664936722  9.359712e-01 -2.997469e-01  1.4409416386 -
8.752277e-01
## [1488,] -3.7059094855 -4.911229e-01 -9.983585e-01 -0.8186608370 -
1.979313e+00
## [1489,] -4.6702520958  9.772795e-01  5.487301e-01  0.2780844787
3.928097e-01
## [1490,] -0.3838690616  1.150300e+00  4.853580e-01  0.4576467821
7.715027e-01
## [1491,]  0.7102853072  4.780043e-01 -1.265596e-02 -0.2286915685 -
4.218270e-01
## [1492,]  0.7265856947  7.722072e-01  5.264508e-01 -0.4690781069 -
5.290333e-01
## [1493,]  0.4511525870  1.245488e+00  6.883777e-01  3.1402587784 -
8.916662e-01
## [1494,] -1.9410548254  2.425950e+00  4.194133e-01 -0.4895988643
2.221397e+00
## [1495,]  0.8089763422 -2.205300e-01  1.119695e-01  0.2097606040 -
7.576235e-01
## [1496,]  0.5117737617  2.364691e+00  5.167446e-01 -0.7838820166 -
3.115301e-01
## [1497,]  0.7353099478  4.269298e-01  5.897821e-01 -0.5465968908 -
4.797082e-01
## [1498,]  0.8301383142 -1.538800e-02 -3.873252e-01 -1.3978885601 -
6.916971e-01
## [1499,] -0.8019284194  1.401973e+00  2.406409e+00  1.1839808938
```

```
2.318339e+00
## [1500,]  0.6816307258  9.612389e-01  4.304312e-01 -1.1743277053 -
3.151629e-01
## [1501,]  0.6054848988  6.760398e-01 -2.212034e-01 -0.1363297257 -
6.265439e-01
## [1502,]  0.6177642099  5.928044e-01  6.974846e-02 -0.0102105113 -
5.764059e-01
## [1503,]  0.8631995439 -3.270099e-01  2.144066e-01 -1.1935643203 -
3.639134e-01
## [1504,]  0.8037498414  5.975848e-01  7.396332e-01  0.9525265714 -
1.017472e+00
## [1505,] -1.9415811144  9.017311e-01  1.628999e-01 -0.8967260949
6.661702e-01
## [1506,]  0.7855923878  6.686257e-01  3.700064e-01 -0.6556117941 -
3.856335e-01
## [1507,]  0.7545382254  1.489797e+00  1.327817e+00  2.6173866701 -
1.089588e+00
## [1508,] -9.6824513595 -3.445073e-01  2.074248e-01  1.7507337646
3.741085e+00
## [1509,]  0.6773514362  1.189730e+00  4.202416e-01 -0.6815336468 -
5.428764e-01
## [1510,]  0.6980463474  1.154643e+00  4.612929e-01 -0.4499290455 -
6.009686e-01
## [1511,]  0.6816386234  7.198792e-01  1.199810e+00  0.5972783177 -
4.395378e-01
## [1512,]  0.5397721654  2.222507e+00  5.290378e-01 -0.7669558849 -
3.105818e-01
## [1513,]  1.2481043665 -2.766024e+00  3.403411e-01 -0.1520395249 -
1.086642e+00
## [1514,]  0.5038920334  1.120443e+00  8.063412e-01  0.3742480276 -
1.803318e-01
## [1515,]  0.5367313165  1.283562e+00 -3.033152e-01 -0.8339637162 -
6.621059e-01
## [1516,]  0.5378582042  1.877464e+00  5.927140e-01 -0.8249832053 -
2.522567e-01
## [1517,] -0.8326105525  2.019042e-01 -2.482932e+00 -0.7260584156 -
1.384165e+00
## [1518,]  0.8123266973  6.198015e-01  3.667146e-01 -0.6577452414 -
3.730780e-01
## [1519,]  0.9179705579 -1.484187e-01  1.079269e-01 -0.4168624454 -
3.870234e-01
## [1520,]  0.6976856019  1.508572e+00  1.198114e+00  1.3167284956 -
6.527260e-01
## [1521,]  0.6471940505  1.076857e+00  5.757478e-02 -0.8288923225 -
7.511121e-01
## [1522,]  0.6703386753  1.720345e+00  1.214326e+00  1.4148170591 -
6.703041e-01
## [1523,]  0.9709511641 -4.934912e-01 -3.353113e-01  0.2433346936 -
1.285551e+00
## [1524,]  0.5797689539  1.592288e+00  1.248207e+00  1.0154976923 -
```

```
6.046355e-01
## [1525,]  0.9685394836 -1.146851e+00 -7.905225e-01 -0.0859709941 -
1.590130e-01
## [1526,]  0.6697957817  1.157987e+00  4.937737e-01 -0.4905115056 -
5.765431e-01
## [1527,]  0.0850717293  2.013212e+00 -4.397334e-01 -1.4880638806
3.348763e-01
## [1528,]  0.8838293659  3.098278e-02 -2.384712e-01  0.1973476801 -
1.121142e+00
## [1529,]  0.8061363823  7.619813e-01  6.621301e-01 -0.2598459041 -
4.393183e-01
## [1530,]  1.2737347801 -2.810514e+00  3.296360e-01 -0.1058999488 -
1.086208e+00
## [1531,]  0.7660361716  2.889265e-01 -6.598685e-01 -0.4318847402 -
7.724767e-01
## [1532,] -4.6931264759  9.996290e-01  4.990246e-01  0.0997629035
4.132882e-01
## [1533,]  0.5806125356  1.229550e+00  1.035665e+00  2.7425645748 -
8.947849e-01
## [1534,]  0.5580531045  1.448308e+00  4.515694e-01 -0.9193379942 -
2.074766e-01
## [1535,]  0.9558102519 -1.612499e+00  7.429809e-01 -0.1727298430 -
7.986097e-02
## [1536,]  0.5999811822  1.248565e+00  1.989249e-01 -1.1484670352 -
1.416955e-01
## [1537,]  0.5903160443  1.353796e+00  5.180272e-01 -0.7720141444 -
1.904347e-01
## [1538,] -0.8285244758  1.509531e+00  2.472593e+00  1.1871463620
2.394850e+00
## [1539,]  0.7422008014  5.010934e-01  3.483059e-01 -0.2103638118 -
9.155739e-01
## [1540,]  0.5330310158  3.435243e-01 -8.770419e-01  1.9983743376 -
1.074930e+00
## [1541,]  0.7807406770  1.101100e+00  5.162864e-01  0.9040860936 -
9.662925e-01
## [1542,]  0.8401912246  9.361691e-02 -1.800449e-01 -0.9157040895 -
6.977095e-01
## [1543,]  0.9893029821 -1.805741e+00  7.436821e-01 -0.0697245000 -
1.451780e-01
## [1544,]  0.5965024793  1.225358e+00  5.580146e-01 -0.3313990737 -
4.534240e-01
## [1545,]  0.7244349876  1.087185e+00 -5.504922e-02  1.0203383666 -
1.159669e+00
## [1546,]  0.0750052728  1.735604e+00  1.173851e+00  1.1383517846
7.924899e-01
## [1547,]  0.2506464692  1.829507e+00 -2.095501e+00 -1.4215770260
4.839373e-01
## [1548,]  0.0642685880  6.195409e-01 -4.757898e+00 -1.8711745447
7.600038e-01
## [1549,]  0.0520350964 -2.859699e-01 -2.517321e+00  0.0931154352 -
```

```
5.370443e-01
## [1550,]  0.4766151799  1.281349e+00  9.151941e-01  3.4396819008 -
9.709553e-01
## [1551,]  0.7545835266  3.213160e-01  2.947979e-01 -0.7132870730 -
5.101870e-01
## [1552,]  0.9045066768 -7.868216e-01  9.038388e-01 -1.3076996667
4.004899e-01
## [1553,]  0.3817968486  3.704472e-01 -1.756517e-01  1.3735031141 -
6.268196e-01
## [1554,] -9.6576207372 -4.249886e-01 -1.172026e+00  1.7071055070
4.225018e+00
## [1555,]  0.8023285134  2.432416e-01  3.280728e-01 -0.8286700657 -
6.094291e-01
## [1556,] -9.2613682409 -9.715012e-02  2.136253e+00  0.1050333658
7.524913e-01
## [1557,]  0.8549991518  2.816367e-02  7.001920e-02 -0.8322621111 -
8.702543e-01
## [1558,]  0.0771021104  1.640654e+00  1.006973e+00  1.0993599715
8.209512e-01
## [1559,] -2.3241785536  1.729493e+00  9.101501e-01 -0.3618284523
1.993064e+00
## [1560,]  0.8605179623  1.350836e-02 -3.033327e-01 -1.0794469900 -
7.499890e-01
## [1561,]  0.6999638161  7.363537e-01  8.114858e-01 -0.2213810879 -
4.456178e-01
## [1562,]  0.5876353483  1.370394e+00  2.326573e-01 -0.9649700965 -
1.935535e-01
## [1563,]  0.8866682067 -1.847592e-02 -4.697620e-01  0.0729753238 -
1.106949e+00
## [1564,]  1.0498474084 -1.547591e+00  1.253217e+00 -0.2775178918 -
8.252605e-02
## [1565,]  0.8355369961  1.118835e+00  2.707105e-01  0.4981422460 -
1.127605e+00
## [1566,]  0.6736337046  1.183968e+00  5.267275e-01 -0.5241362684 -
4.982395e-01
## [1567,]  0.6607077074  1.187426e+00  1.221331e-01 -1.1472556168 -
6.468581e-01
## [1568,] -4.6624321985  1.002442e+00  4.876563e-01  0.2894160581
3.481628e-01
## [1569,] -0.0577814023  2.435549e+00  1.956341e+00  2.1056434346
1.197223e+00
## [1570,]  0.3625741374  1.405565e+00  3.957622e-01  1.7100981996 -
4.878902e-01
## [1571,] -0.7199745155  1.489202e-01  1.285513e+00 -0.8880097459
1.889987e-01
## [1572,]  1.0691231772 -1.815779e+00  3.079280e-01  0.0415911762 -
1.061669e+00
## [1573,] -0.7153233133  1.983444e-01  1.191913e+00 -0.9906422890
1.714203e-01
## [1574,]  0.6762197752  7.975416e-01  1.837594e-01 -0.8067467276 -
```

```
4.108245e-01
## [1575,]  0.5244854798  1.501811e+00  6.122492e-01 -0.5937266856 -
2.845511e-01
## [1576,]  0.3983443791  1.034778e+00  2.550651e-02  0.2036168917 -
3.418234e-01
## [1577,]  0.8048441527  8.763405e-01  8.140342e-01  0.6794332093 -
7.378735e-01
## [1578,]  0.7452095730 -3.708503e-01  6.809871e-01  0.8266173172 -
3.752618e-01
## [1579,]  0.8172184867  8.827376e-01  7.972711e-01  0.6922683306 -
7.461282e-01
## [1580,]  0.9227782252 -7.589809e-01  1.138161e+00 -1.1202975560
3.785103e-01
## [1581,]  0.4888707521  1.136447e+00  2.647486e-01  0.1297567651 -
6.500644e-01
## [1582,]  0.6918387297  1.164977e+00  4.480821e-01 -0.5432160762 -
5.694982e-01
## [1583,]  0.7869784426  7.758397e-01  5.832116e-01 -0.4911761934 -
4.295881e-01
## [1584,]  0.9226636755 -2.968435e-01 -2.959984e-01  0.3240908556 -
1.298853e+00
## [1585,]  0.6501267837  1.114235e+00  2.640185e-01 -0.8007749804 -
7.427681e-01
## [1586,]  0.6748780946  5.767717e-01 -3.721456e-02 -0.4322671006 -
3.508542e-01
## [1587,]  0.5013366037  2.488710e+00 -5.090505e-01  0.1263309919
7.903214e-02
## [1588,]  0.6148693276  1.806689e+00 -5.075778e-01 -0.2171410897
2.785295e-01
## [1589,] -7.6845195444 -9.698277e-01 -6.168288e-01 -0.8102769560 -
1.622959e+00
## [1590,] -0.4910871216 -2.229314e-01 -4.025873e+00 -0.0336771885
3.002671e-01
## [1591,]  0.8237878027  6.444958e-02 -2.076323e-01 -0.7512613174 -
1.080560e+00
## [1592,] -3.7178183401 -9.201657e-01 -7.444577e-01 -0.2005426301 -
2.120009e+00
## [1593,]  0.5499955822  2.380401e+00  5.315082e-01 -0.1998030277 -
5.045046e-01
## [1594,]  0.8805804757 -3.172201e-01  2.849441e-01  0.5762429972 -
4.510535e-01
## [1595,] -0.8284080179  1.501580e+00  2.452220e+00  1.1986681243
2.371095e+00
## [1596,]  0.5388030061  9.462729e-01  7.352222e-01  0.6474858952 -
4.267563e-01
## [1597,]  0.3153758967  2.292566e+00  3.629805e-01  0.2514371776 -
4.935539e-01
## [1598,] -1.9937795543  7.217087e-01 -2.710908e-01 -1.1918417876
6.512810e-01
## [1599,]  0.4852717058 -9.797216e-02 -1.429403e+00  0.4205620273 -
```

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8.074381e-01
## [1600,]  0.8928773906 -9.437394e-02  8.037877e-02 -0.5482873291 -
3.631556e-01
## [1601,] -1.2913611206  2.265781e-01 -4.531831e+00  3.6066127078
2.834531e+00
## [1602,]  0.9697209100  5.369533e-01 -7.349562e-01 -2.2097158621 -
8.809053e-01
## [1603,]  0.5166467520  1.067870e+00  7.888531e-01  0.3339008081 -
1.638663e-01
## [1604,]  0.9207668007 -8.016997e-02  5.149785e-01 -0.5511906758 -
4.697741e-01
## [1605,]  0.4017519890  2.452269e+00  6.890181e-01 -0.2390268915 -
4.763457e-01
## [1606,] -0.2767584930  2.036421e+00 -1.762093e-01 -0.4697866389
1.175941e+00
## [1607,]  0.5658639566  1.389466e+00 -1.739988e+00 -1.7346451547
4.474418e-01
## [1608,]  0.6201957606  4.509788e-01 -1.465180e+00  1.1082640378 -
4.737863e-01
## [1609,]  0.8979135231 -7.252553e-02  3.921660e-01 -0.3113885337 -
3.190113e-01
## [1610,] -0.7096150507  2.987165e-01 -2.065647e+00 -0.8254368432 -
1.445438e+00
## [1611,]  0.7489640383  1.490356e+00  1.353535e+00  2.6287070842 -
1.055422e+00
## [1612,]  0.7697011191  1.469814e+00  1.252342e+00  2.5976211979 -
1.145388e+00
## [1613,]  0.8670016702  7.018929e-02 -2.935021e-01 -0.7126061153 -
1.136728e+00
## [1614,]  0.7743110131  5.220254e-01  8.129768e-01  0.9277285742 -
1.005293e+00
## [1615,]  1.0821101796 -1.685005e+00  1.163400e+00 -0.4208951405 -
9.071681e-02
## [1616,]  0.8701847706 -5.372164e-02  3.297421e-01 -0.2091616204 -
9.270761e-01
## [1617,] -2.4327463929  1.655695e+00  5.411307e-01 -0.0115043921
2.006009e+00
## [1618,]  0.8553325451  1.073140e+00  2.874458e-01  0.6045269589 -
1.150184e+00
## [1619,] -1.0281957338  6.416359e-02 -3.481623e+00  1.8050039304
1.560194e+00
## [1620,]  0.8623273493  2.850520e-03 -3.215505e-01 -1.1776588324 -
7.028711e-01
## [1621,]  0.8098075320  9.687786e-01  7.621261e-01  0.7047130913 -
7.852671e-01
## [1622,]  0.9057308989 -5.019098e-03  6.283304e-01 -0.0525459777 -
3.837631e-01
## [1623,]  0.1250191020  1.282746e+00 -1.683766e+00 -1.4462040115
3.751266e-02
## [1624,]  0.5946639388  9.374159e-01 -1.892772e+00  0.0418698508
```

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4.420928e-03
## [1625,]  0.3192632639  1.302859e+00  1.301400e-01 -0.5954353144 -
1.731485e-01
## [1626,]  0.9827024664 -1.091936e-01  2.565213e-01  0.6360306933 -
1.383436e+00
## [1627,] -0.1582170093  1.660892e+00  8.152375e-01 -0.8945437973
5.534401e-01
## [1628,] -9.2551727091 -9.562142e-02  2.095865e+00  0.0760986911
7.367896e-01
## [1629,] -1.9840979440  6.651582e-01 -3.029012e-01 -1.1914600889
6.189978e-01
## [1630,]  0.9585890271 -3.763458e-01 -3.580781e-01  0.2740929520 -
1.295491e+00
## [1631,]  0.5200610359  1.739011e+00 -1.090876e+00 -1.7922455774
7.799917e-01
## [1632,]  0.0113268086  6.766731e-01 -2.235416e+00 -0.7012674711
4.488134e-01
## [1633,]  0.8292852490  5.144267e-01 -8.258331e-01  1.0402063490 -
3.570584e-01
## [1634,]  0.5984033314 -1.704572e+00 -2.911751e+00 -1.0263726963 -
1.645957e+00
## [1635,] -8.4875366644 -4.604714e-01  1.026199e+00 -0.6243995179 -
1.336118e+00
## [1636,]  0.7207360545  6.953186e-01  5.924416e-01 -0.3967029971 -
5.082855e-01
## [1637,]  0.7876491030  4.703957e-01  8.572904e-01  0.9110100574 -
9.273528e-01
## [1638,]  0.4250689798  1.344744e+00  7.009787e-01  2.9357228564 -
7.583519e-01
## [1639,]  0.8117134423  8.415637e-01  8.220454e-01  0.6611302542 -
7.153365e-01
## [1640,]  0.7812948968  2.497776e-01 -3.254285e-01 -1.8268429627 -
3.857100e-01
## [1641,]  0.5999123136  1.123727e+00  3.919522e-01 -0.4223461527 -
3.864115e-01
## [1642,]  0.4374798742  9.542653e-01 -3.222010e-02  0.1532290823 -
3.302234e-01
## [1643,]  0.7666421403 -2.989223e-01 -1.776328e-01  0.8360541113 -
4.805874e-01
## [1644,]  0.9185567052 -1.084484e-01  3.163539e-01 -0.3320268719 -
4.036349e-01
## [1645,] -3.6799598361 -1.136921e+00 -6.957022e-01 -0.0978848906 -
2.130985e+00
## [1646,] -1.6726217974 -4.867096e-01 -2.553164e+00 -1.6437820904 -
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## [1647,]  0.8807909907 -3.400842e-01  8.273679e-01 -0.6229552271 -
1.820263e-01
## [1648,]  0.6638487609  9.887789e-01  2.744000e-01 -0.8633311278 -
6.889454e-01
## [1649,]  0.8747578599 -1.066846e-01  1.321406e-01 -0.7280244415 -
```

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8.580969e-01
## [1650,]  0.2334770936 -7.745805e-01 -2.557119e+00  2.1795964310 -
1.048139e+00
## [1651,] -0.8227002127  1.469843e+00  2.468414e+00  1.2175551261
2.382829e+00
## [1652,]  0.2911086411  2.351788e+00  3.174704e-01  0.1040318528 -
4.812224e-01
## [1653,] -0.1298360044  1.580617e+00  7.347645e-01 -1.0351448509
5.535569e-01
## [1654,]  0.6960397630  1.176286e+00  2.718555e-01 -0.4284000361 -
5.586865e-01
## [1655,]  0.9586707745 -1.207796e-01  3.227229e-01  0.5618944401 -
1.301963e+00
## [1656,]  0.9644377037 -4.603061e-01 -3.141596e-01  0.2799617863 -
1.270172e+00
## [1657,]  0.9318136694 -1.654296e-01  3.227479e-01 -0.4772879015 -
5.150155e-01
## [1658,] -0.4773023954 -1.589941e+00 -5.420634e-01  0.7028481508 -
1.174095e+00
## [1659,] -0.1638765485  1.734224e+00  7.922586e-01 -0.8898192929
5.310722e-01
## [1660,]  0.7886477037  1.014893e+00  8.882970e-01  1.9749842519 -
1.316815e+00
## [1661,] -0.0033946966  1.365963e+00  1.212880e+00  0.9884216076
1.120944e+00
## [1662,]  0.9524119238  5.749875e-01  2.518125e-01  0.5341389735 -
7.165495e-01
## [1663,] -3.6989888237 -4.915440e-01 -9.874899e-01 -0.7053861550 -
2.020849e+00
## [1664,]  0.7448973025 -2.133683e-01 -1.314220e-01  0.8877426248 -
4.581760e-01
## [1665,] -0.3919932331 -1.379147e+00  9.842056e-02  0.4965190986 -
1.179234e+00
## [1666,]  0.6646022755  1.137111e+00 -4.117882e-01  0.6396247018 -
2.269829e-01
## [1667,]  0.6430783623  7.436201e-01 -1.127020e+00 -0.6592124780 -
4.095500e-04
## [1668,]  0.8198597295  1.191835e+00  3.968900e-01  0.6896965350 -
1.075477e+00
## [1669,]  0.8394841676  6.152143e-01  2.725479e-01 -0.2408799728 -
8.525704e-01
## [1670,]  0.8086488365 -2.420671e-01  1.964473e-01  0.4253800574 -
7.591145e-01
## [1671,]  1.0108966533 -5.686999e-01 -6.483189e-01 -2.0445418930 -
3.005784e-01
## [1672,]  0.7114996223  1.174728e+00  3.207214e-01 -0.1964672470 -
6.066522e-01
## [1673,] -2.4504429456  1.729607e+00  5.922105e-01 -0.0586725775
2.097540e+00
## [1674,]  0.8245190611 -1.114910e-01 -2.670986e+00 -0.2453046165
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8.798230e-02
## [1675,] -7.4357426619 -1.845618e+00  5.527204e-01 -0.8447793350 -
2.187040e+00
## [1676,]  0.8382746969  7.812386e-01  8.683140e-01  1.8467626375 -
1.264606e+00
## [1677,]  0.6818966072  1.603968e+00  1.308301e+00  1.5409631580 -
6.318452e-01
## [1678,] -0.4842636078 -1.592059e+00 -4.529289e-01  0.7258128959 -
1.091453e+00
## [1679,]  0.6444123692  1.191414e+00 -1.040269e+00 -0.8347809864
1.398528e-01
## [1680,]  0.6944699923  1.174951e+00 -6.733434e-01  0.1042050339 -
1.252734e-01
## [1681,]  0.7962168633  9.494766e-01  6.813890e-01  1.8693186134 -
1.270821e+00
## [1682,]  0.6028454390  1.506758e+00  4.728024e-01 -0.5391864802 -
6.616603e-01
## [1683,]  0.7737966345 -2.526027e-01 -5.328279e-01 -0.7528218926 -
7.558823e-01
## [1684,]  0.5997622484  2.136216e+00  6.182512e-01 -0.2039998044 -
4.467770e-01
## [1685,]  1.2883652294 -2.746399e+00  1.322472e+00 -0.2871575628
1.762677e-01
## [1686,]  0.8396210674 -1.483353e-01  2.006629e-02  0.3094982118 -
3.946112e-01
## [1687,]  0.8680362324 -1.504471e-01  9.332568e-01  0.4654677622 -
6.459088e-01
## [1688,] -8.0573625750 -1.275708e+00 -1.538537e+00  0.4847805291
7.183683e-01
## [1689,]  0.8019818986  2.400847e-01 -1.107961e-01 -1.6864422628 -
4.206105e-01
## [1690,] -0.7005465214  1.452675e-01  1.293225e+00 -0.8616375001
2.291529e-01
## [1691,] -0.4820349180 -1.541752e+00 -2.046757e-01  0.9883383189 -
1.167590e+00
## [1692,]  0.8915386457 -1.718982e-01 -1.179756e-01 -0.9632134444 -
7.806922e-01
## [1693,]  0.7946182213  4.758546e-01  8.228063e-01  0.9158531387 -
9.628836e-01
## [1694,]  0.9056282718 -6.713730e-02  2.658646e-01 -0.7187724451 -
4.605578e-01
## [1695,] -7.4526668220 -1.849215e+00  5.504101e-01 -0.9867304675 -
2.140063e+00
## [1696,]  0.5729958702  1.358799e+00  3.350062e-01 -0.8826280718 -
1.178571e-01
## [1697,]  0.8323181402  1.185337e+00  4.041565e-01  0.7364118471 -
1.076629e+00
## [1698,]  0.4442883368  1.173014e+00 -1.722886e-01 -0.5002405238 -
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## [1699,]  0.7123871797  7.798482e-01  6.161264e-01 -0.4039010791 -
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4.497946e-01
## [1700,]  0.7454885107  1.127894e+00 -1.679303e-01  0.9106062414 -
1.179498e+00
## [1701,] -0.7379036334  3.640803e-01 -2.076579e+00 -1.0312553845 -
1.358240e+00
## [1702,]  0.0987420897  1.373701e+00  4.642387e-01  1.8540664081 -
6.858423e-01
## [1703,]  0.8175284934  7.808113e-01  6.960595e-01  1.7864844977 -
1.226828e+00
## [1704,]  0.7388286360  1.480389e+00  9.637359e-01  1.9476921190 -
1.206195e+00
## [1705,] -0.3980966852  1.209153e+00  5.375037e-01  0.5839806089
7.744919e-01
## [1706,]  0.5706028105  1.317236e+00  6.403767e-01  0.3011499149 -
7.378363e-02
## [1707,]  0.8563342296 -2.085134e-01  3.884263e-01 -1.2052860576 -
3.496365e-01
## [1708,]  0.8714953606 -1.136043e-01  4.259582e-01 -0.0201589685 -
9.096298e-01
## [1709,]  0.9013070293  2.995505e-01 -2.740320e-01 -1.4071887017 -
6.273255e-01
## [1710,]  0.7225171493  1.185530e+00 -4.286663e-02  1.0723426859 -
1.141410e+00
## [1711,]  0.1843519872 -4.133701e-01 -2.039607e+00 -0.0402062080 -
5.479981e-01
## [1712,]  0.1841194256  1.028379e+00 -2.062805e+00  0.3861941632 -
5.792747e-02
## [1713,]  0.6419309648  9.838273e-01 -6.422715e-01 -0.9165692316
3.331383e-01
## [1714,]  0.8445656900 -4.162654e-01 -1.584639e+00  1.1001384204 -
6.427680e-01
## [1715,] -0.7350449154  1.088107e+00 -2.667944e+00  2.4420805158
4.972165e+00
## [1716,]  0.6189741786  9.958136e-01 -5.162211e-01  0.1934502976 -
2.208437e-01
## [1717,]  0.8841022707 -2.960204e-01 -1.534564e+00 -0.7186328781
3.681315e-01
## [1718,]  0.5749675412  1.484695e+00 -5.663153e-01 -0.2497526956
6.329158e-02
## [1719,] -0.8231928805 -2.708094e-01 -2.105775e+00  0.7274119986 -
3.137289e-01
## [1720,]  0.9153580697 -6.242545e-01 -1.248998e+00 -0.2565349107 -
5.332182e-02
## [1721,]  0.6977525446  5.062742e-01 -7.234376e-01 -0.7388293030
1.004520e-01
## [1722,]  0.1570366236 -1.167808e-01 -2.233771e+00  0.3636997779
7.428646e-02
## [1723,] -0.4848964695 -2.296036e+00 -2.158834e+00 -0.3706171904
6.208176e-02
## [1724,]  0.6128510250  1.339124e+00 -5.897623e-01  0.5271194230 -
```

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1.890425e-01
## [1725,] -1.9285586788  2.135096e+00  8.444200e-01 -0.8744930750
2.397347e+00
## [1726,]  0.7625088179  8.820456e-02 -8.294124e-01 -0.8973206566
2.838421e-01
## [1727,]  0.6772169061  8.666746e-01 -1.065887e+00 -1.2017095496
4.900203e-01
## [1728,]  0.7286027071  1.300892e+00 -3.567974e-01  1.1141129125 -
2.616859e-01
## [1729,]  0.5391956792  1.281034e+00 -1.486541e+00 -1.6012106289
5.534002e-01
## [1730,]  0.4924025570 -2.960980e-01 -1.828892e+00  0.3869058483
1.105312e-01
## [1731,]  0.5666970196  1.528059e+00 -5.851503e-01 -0.2903037183
6.287614e-02
## [1732,]  0.8904689861 -4.572725e-01 -1.134734e+00  0.1954794873 -
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## [1733,] -0.2409721793  1.650885e+00 -5.761923e-01 -0.4804439902
1.120930e+00
## [1734,]  0.8658465959  1.835365e-01 -1.367974e+00  0.1199190861 -
1.502326e-02
## [1735,]  0.6991726833  3.088444e-01 -1.224436e+00 -0.3527735949 -
9.442665e-02
## [1736,] -8.3085896499 -5.200031e-01  9.012937e-02  0.2971061903 -
7.311685e-03
## [1737,]  0.3742487124 -4.924029e-01 -2.335469e+00 -0.1263582986
3.312835e-02
## [1738,]  0.7967833343  3.957335e-01 -1.532429e-01  0.2728454020
2.904869e-01
## [1739,] -1.2365655622  7.265033e-01 -4.631167e+00  5.5133991532
4.821257e+00
## [1740,]  0.2936487037  4.716557e-01 -1.630379e+00 -0.5312273142
3.911317e-01
## [1741,]  0.5030790252  1.634513e+00 -6.180097e-01 -0.2788045833
1.388782e-01
## [1742,]  0.9092467886 -3.438984e-01 -6.052370e-01 -0.4725832673
2.229676e-01
## [1743,] -2.3389090667  4.628930e-01 -2.341976e+00 -0.2351881391 -
9.627262e-01
## [1744,]  0.8186501540 -3.612438e-01 -8.227617e-01 -1.2113500438
6.519843e-01
## [1745,]  0.1424603112  9.003513e-01 -2.778682e+00  1.6313006051
3.392091e+00
## [1746,] -1.1169035637 -1.443925e-01 -3.658443e+00  0.8742432831 -
5.173305e-01
## [1747,]  0.6043900249  7.487154e-02 -1.454102e+00  1.3493274512 -
5.436574e-01
## [1748,]  0.3921278076  2.011878e+00 -1.803500e+00 -0.5478511040 -
3.784084e-02
## [1749,]  0.3511303567  4.760699e-01 -2.301875e+00  3.3915464626 -
```

```
2.728872e-01
## [1750,]  0.4034973360  1.273799e+00 -7.632201e-01 -0.5645584349
7.356461e-01
## [1751,]  0.4693855493  1.436495e+00 -1.403991e+00 -0.3332242771
3.538678e-02
## [1752,]  0.8717656449 -7.464910e-02 -2.371449e-01 -1.0335381573 -
6.963686e-01
## [1753,]  0.5750618751 -4.839365e-03 -9.622701e-01  0.5392256432 -
9.935020e-01
## [1754,]  0.5849182804  1.382396e+00  1.206693e+00  1.0085193215 -
6.609191e-01
## [1755,]  0.8880228113 -7.196212e-02  6.533814e-01 -0.1495541535 -
3.486921e-01
## [1756,] -0.7861924241  1.365110e+00  2.361478e+00  1.0992216907
2.341326e+00
## [1757,]  1.0233905320 -8.481193e-01  3.199902e-02 -0.2116287208 -
1.052594e+00
## [1758,]  0.7223517679  4.691499e-01  1.316828e-01 -1.6302878017 -
2.038081e-01
## [1759,]  0.7444640563 -1.995723e-01 -3.200233e-01  0.6523571515 -
1.177220e+00
## [1760,] -1.1382907957  2.302701e+00  1.252479e+00 -0.3936761688
2.730915e+00
## [1761,]  0.9582481441  2.618933e-01 -2.298700e-01 -0.6516423437 -
1.278373e+00
## [1762,]  0.8264558043 -1.489965e-01  3.810628e-02  0.2069149064 -
3.302498e-01
## [1763,]  0.8327108938  7.484512e-01  7.908553e-01  0.6959394215 -
7.628066e-01
## [1764,]  0.4080786785  1.099619e+00  6.494157e-02  0.3136872408 -
3.118365e-01
## [1765,]  0.6163437315  6.155978e-01  7.311706e-03 -0.1640342649 -
5.457848e-01
## [1766,] -0.5485213724 -1.574881e+00  1.274592e+00 -2.4223867918
8.466416e-01
## [1767,]  0.5182462472  1.725297e+00  1.289342e+00  0.9017917701 -
5.236898e-01
## [1768,]  0.6147335017 -7.192261e-01 -8.113792e-01 -0.0050347613 -
5.040557e-01
## [1769,]  0.6332857535  1.022147e+00  8.334049e-01  0.2910813267 -
7.262078e-01
## [1770,] -2.1823133814  1.032094e-01 -1.323199e+00 -0.6154766482 -
1.765728e+00
## [1771,] -0.7882837692 -3.698137e-01 -7.053206e-01  0.5624468366 -
8.681736e-01
## [1772,]  0.5820220376  1.391954e+00  7.531704e-01 -0.3857318669 -
3.930533e-01
## [1773,]  0.9843132967 -1.716449e-01  3.428969e-01  0.7143591104 -
1.327982e+00
## [1774,]  0.5631007995  1.506999e+00  8.169652e-01 -0.3259047115 -
```

```
3.389676e-01
## [1775,] -3.6855978121 -5.005445e-01 -9.799742e-01 -0.6526597264 -
2.020486e+00
## [1776,]  0.4814055779  1.873233e+00 -9.891996e-01 -0.5336290257 -
8.198676e-02
## [1777,]  0.4801813082  2.439522e+00 -7.148252e-01 -0.1067778328 -
6.296886e-02
## [1778,]  0.3083564374  1.737187e+00 -1.692020e+00 -0.6728095687
1.713559e-01
## [1779,]  0.7490219487  3.350579e-01 -1.069692e+00 -0.2479671180 -
2.987563e-01
## [1780,]  0.6272877468  1.356224e+00 -5.831784e-02 -2.2996901625
2.401820e-01
## [1781,] -2.1629951341  2.709807e+00  3.041452e+00 -0.0448194576
2.332667e+00
## [1782,]  0.8439349588  7.545723e-02 -3.396785e-01 -1.2575597693 -
6.822420e-01
## [1783,]  0.7406217896  3.807349e-01  3.932202e-01 -0.6504461991 -
4.021101e-01
## [1784,]  0.6549655965  3.941435e-01 -5.513008e-01  2.4299077014 -
1.157071e+00
## [1785,]  0.6338819379  8.866440e-01  8.155090e-01  0.0596568581 -
6.666907e-01
## [1786,]  0.9135939628 -8.941200e-02  3.961222e-01 -0.2611050676 -
3.332579e-01
## [1787,]  0.9860823045 -7.036433e-01 -4.654088e-01 -1.1374348098 -
1.935102e-01
## [1788,] -3.6858443740 -1.124536e+00 -6.770076e-01 -0.0577584950 -
2.123775e+00
## [1789,]  0.6475167430 -5.053512e-01 -5.249951e-01 -0.2752092952 -
7.002876e-01
## [1790,] -7.7855354721 -1.939881e-01  1.916468e-01 -1.2098106029 -
2.487854e+00
## [1791,]  0.4206925087  2.573390e+00  8.413950e-01  0.0332836301 -
4.085731e-01
## [1792,]  0.6333614843  1.118114e+00  7.174203e-01 -0.6130379163 -
3.585612e-01
## [1793,]  0.6763161787  1.347980e+00  1.143207e+00  1.0493326758 -
5.826357e-01
## [1794,]  0.9892226633 -2.146553e-01  5.827646e-02  0.4730205157 -
1.304488e+00
## [1795,]  1.0620687079 -1.685623e+00  2.519384e-01  0.0096676421 -
1.060711e+00
## [1796,]  0.6582874500  9.872571e-01  3.056074e-01 -0.8731475672 -
4.203878e-01
## [1797,]  0.7219786699  1.965020e-01  8.437727e-02 -0.4559307441 -
5.619921e-01
## [1798,]  1.1686188863 -2.496245e+00  1.178408e+00  1.2757367850 -
1.020553e+00
## [1799,]  0.7326408676  4.763553e-01 -6.177647e-02 -1.6527332114 -
```

```
1.723223e-01
## [1800,]  0.8491491458 -4.695755e-01 -1.400569e+00 -0.7198602978 -
1.826042e-02
## [1801,]  0.8822767031 -1.394217e-01 -5.225380e-01  0.2554927451 -
1.009623e-01
## [1802,]  1.1753087641 -2.877117e+00  1.043415e+00  0.0687542680
2.829362e-01
## [1803,]  0.6957961809  1.047538e+00  8.242923e-01  0.5507865684 -
7.774656e-01
## [1804,]  0.7046331322  2.331492e-01 -2.100349e-02 -0.7455071888 -
5.344852e-01
## [1805,]  1.2676891906 -2.617399e+00  1.393041e+00 -0.2507520608
2.580712e-01
## [1806,]  0.8853491884 -2.111077e-02  2.801218e-01 -0.8007522601 -
4.091673e-01
## [1807,]  0.6322235386  1.445566e+00  8.613115e-02 -2.1308278707
1.128710e-01
## [1808,]  0.6874830323  1.508824e+00  1.243001e+00  1.3263505521 -
6.065706e-01
## [1809,]  0.7647930912  1.014234e+00  6.233750e-01  0.3030409347 -
7.490284e-01
## [1810,]  0.6408927104  1.096550e+00  7.981200e-01 -0.5044977527 -
3.175940e-01
## [1811,]  1.0435161273 -9.432373e-01 -2.577505e-01 -0.3607036695 -
1.066650e+00
## [1812,]  0.5233234276 -5.011265e-01 -8.024050e-01 -0.7136033070 -
5.186833e-01
## [1813,]  0.7726374606  7.168494e-01  6.756392e-01 -0.4922415156 -
3.290108e-01
## [1814,] -0.4617190377 -1.562760e+00 -3.576231e-01  0.8483425941 -
1.236718e+00
## [1815,]  0.8850419381  9.629957e-02  1.352642e-01  0.0170194201 -
4.730301e-01
## [1816,]  0.5008727063  1.816615e+00  5.587021e-01 -0.5153697696 -
5.650030e-01
## [1817,]  0.7472087750  4.183331e-01  4.047084e-01 -0.1956709329 -
8.629413e-01
## [1818,] -0.3424423214 -2.633155e+00 -1.035203e+00 -0.6985046008 -
6.556454e-01
## [1819,]  0.0417095109  1.174771e-01 -1.348098e+00  1.1613894790 -
7.254512e-01
## [1820,]  0.5536467473  1.373743e+00 -3.570617e-01 -1.0174653320 -
3.395858e-01
## [1821,] -0.4759970212 -1.472532e+00 -2.688385e-01  1.0055236077 -
1.215750e+00
## [1822,]  0.6837746866  6.497722e-01  1.239421e+00  0.5653814304 -
3.703445e-01
## [1823,]  0.9774539626 -1.660925e-01  1.109286e-02  0.4056707285 -
1.328752e+00
## [1824,] -4.6858724281  1.005981e+00  6.074267e-01  0.3139395916
```

```
4.628645e-01
## [1825,]  0.6877706292  5.091758e-01 -8.394083e-01 -0.9853662278
3.127340e-01
## [1826,] -0.9339254436  5.858718e-01 -1.476192e+00 -0.5264244152 -
2.969396e-01
## [1827,]  0.5629486566  8.189817e-01 -1.671542e+00  1.7765644875 -
2.127647e-01
## [1828,] -0.8234776955 -5.189577e-01 -3.066022e+00  3.4975252003 -
7.053421e-01
## [1829,]  1.0545645820 -1.706606e+00  5.209556e-01  0.0025057764 -
9.885182e-01
## [1830,]  0.5312155826  1.392371e+00  6.333454e-01 -0.6283727794 -
2.416705e-01
## [1831,]  1.2623753242 -2.845910e+00  3.260421e-01 -0.1555290396 -
1.072312e+00
## [1832,]  0.5327016838  2.374959e+00  5.489124e-01 -0.6949148793 -
2.653491e-01
## [1833,]  0.8965135727 -7.445864e-02  3.146812e-01 -0.7173299828 -
4.006922e-01
## [1834,] -0.2594324171 -2.613412e+00 -8.193390e-01 -1.2406287719 -
5.459342e-01
## [1835,]  0.8763302520  2.652117e-02 -3.792962e-02 -0.9089302084 -
7.115398e-01
## [1836,]  0.8542151292  1.129482e+00  2.578824e-01  0.5888338072 -
1.158401e+00
## [1837,]  0.6566347255  1.019188e+00  3.941192e-01 -0.5518431803 -
7.172528e-01
## [1838,] -0.8161151029  1.681137e-01 -2.494913e+00 -0.7703215422 -
1.345462e+00
## [1839,]  0.9037912911 -5.551003e-01  2.986447e-01 -0.2863667492 -
5.034731e-01
## [1840,]  1.0499302679 -2.508491e+00  7.417323e-01  1.4370938453 -
9.649223e-01
## [1841,]  0.4743438476 -7.596503e-01 -8.941081e-01 -0.0283107990 -
5.655025e-01
## [1842,] -7.5650811464 -1.332599e+00  3.553049e-01 -1.2276803302 -
2.252188e+00
## [1843,] -1.4895260179  1.425113e+00 -3.458803e+00  0.4491290855
1.489360e+00
## [1844,]  0.7862682145  3.207189e-01  3.324774e-01 -0.1269186808 -
9.440578e-01
## [1845,]  0.7693506529 -8.018338e-02  2.001989e-01  0.9198536151 -
1.059690e+00
## [1846,]  0.9973719809 -1.878384e+00  8.022083e-01 -0.0567848950 -
6.650268e-02
## [1847,]  0.7274154230  1.545181e+00  1.371396e+00  2.5286391179 -
9.947029e-01
## [1848,]  0.7383616753  5.260749e-01  5.690272e-02 -1.6672305075 -
2.323256e-01
## [1849,]  1.0688532741 -2.541063e+00  8.764536e-01  1.8023665837 -
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```
1.003835e+00
## [1850,]  0.6052149093  1.043760e+00 -4.414452e-01 -0.4500314707 -
7.213206e-01
## [1851,]  0.5923645062  1.507130e+00  5.710073e-01 -0.3960988511 -
6.312768e-01
## [1852,]  1.2912413553 -2.791789e+00  1.276851e+00 -0.5497432061
2.770659e-01
## [1853,]  0.4435544814  2.470604e+00  7.448093e-01 -0.0813523061 -
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## [1854,]  0.5146019562  1.460923e+00  3.514075e-01 -0.8408482518 -
2.265140e-01
## [1855,]  0.5783975326  1.464782e+00  1.192254e+00  0.9543095476 -
6.132442e-01
## [1856,] -2.1522782729  2.697105e+00  2.986945e+00 -0.0895090911
2.308542e+00
## [1857,] -1.0500369575  7.785460e-01  4.709383e-01 -1.1487428892
8.720990e-01
## [1858,]  1.0777160485 -1.857090e+00  6.010905e-01  0.2033541065 -
1.026056e+00
## [1859,]  1.1026010059 -1.942988e+00  2.715622e-01  0.0158903324 -
1.064825e+00
## [1860,]  0.7848621575  8.804264e-01  4.223084e-01 -0.1399797338 -
7.326754e-01
## [1861,] -0.7006134727  3.066877e-01 -1.927151e+00 -0.8723949542 -
1.450416e+00
## [1862,]  0.5373938837  1.359695e+00 -2.481940e-02 -0.5728822042 -
2.421130e-01
## [1863,] -0.8155336540  1.486686e+00  2.430627e+00  1.1076321213
2.423143e+00
## [1864,] -7.7708612755 -1.548800e-01  1.884479e-01 -1.0563991950 -
2.538312e+00
## [1865,]  0.7039797142  1.517251e+00  1.276285e+00  1.5294962078 -
6.517103e-01
## [1866,]  0.8718201727 -2.132772e-01 -4.783411e-01 -1.5310143899 -
7.022833e-01
## [1867,]  0.7763124584 -5.499239e-01 -1.252701e-01 -0.7022695995 -
6.220964e-01
## [1868,]  0.7388271743  1.051136e+00 -5.973306e-02  1.0074204668 -
1.131216e+00
## [1869,]  0.2308595430 -7.856751e-01 -2.499516e+00  2.3239170647 -
1.056229e+00
## [1870,] -0.2518975779 -2.613780e+00 -7.796131e-01 -1.1232808239 -
5.519922e-01
## [1871,]  0.1866619603  1.347020e+00  6.268161e-01  2.1464191243 -
7.406924e-01
## [1872,]  0.9202644246 -1.426817e-01  4.237387e-01 -0.7438329804 -
4.893959e-01
## [1873,]  0.5314023202  9.597634e-01  7.397750e-01  0.6369420577 -
4.106149e-01
## [1874,]  0.8566303240 -2.673043e-01  3.202622e-01 -1.1067507806 -
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```
2.885316e-01
## [1875,]  0.6404308014  1.043930e+00  1.129573e+00  0.3735888194 -
4.301445e-01
## [1876,]  0.7301522378  4.650484e-01  8.666177e-02 -1.7095078417 -
1.925650e-01
## [1877,]  0.9193963565 -4.589304e-01 -1.307224e+00 -0.3827724561 -
4.986390e-01
## [1878,] -4.6621144432  9.609736e-01  6.189378e-01  0.3873054518
4.526071e-01
## [1879,]  0.6112024695  1.019743e+00 -1.783462e+00 -1.2416744893 -
1.261262e-01
## [1880,]  0.5117074333  1.869200e+00 -8.004766e-01 -1.0552893753
2.827569e-01
## [1881,]  0.4767661799  1.169516e+00 -1.350421e+00 -0.7836936638
2.889044e-01
## [1882,] -0.0414985049  3.688188e-01 -1.803068e-01 -0.0391635130
1.074241e+00
## [1883,]  0.0416087850  5.539780e-01 -2.387864e+00 -0.7592801287
5.601285e-01
## [1884,]  0.1921346607  8.155484e-01 -2.356882e+00  2.2274743120 -
4.771050e-02
## [1885,]  0.7769450001  6.831931e-02 -5.394697e-01  0.2659090399 -
6.418456e-02
## [1886,] -0.1712625500 -1.184752e+00 -4.900775e+00  2.2114655398 -
2.890488e-01
## [1887,]  0.6495834328  8.285560e-01  8.466313e-01  0.1173101066 -
6.410313e-01
## [1888,]  0.3864316648 -7.650159e-02 -3.861321e-01  0.3088292318 -
4.585195e-01
## [1889,]  0.3972459669  9.711452e-02 -5.529465e-01  0.6175483461 -
8.206656e-01
## [1890,]  0.3773156902 -1.756912e-01 -1.601550e+00 -0.1650375353 -
6.301429e-01
## [1891,]  0.8193736668  1.135574e-01  3.150101e-01 -1.0641328263 -
5.131173e-01
## [1892,]  0.3083901262  2.365419e+00  3.577335e-01  0.3033550535 -
5.054870e-01
## [1893,]  0.6084167385  1.111233e+00  5.713309e-01 -0.3407089753 -
4.277460e-01
## [1894,]  0.9002001259 -3.150243e-01 -1.396997e+00 -0.5545447759 -
4.865388e-01
## [1895,] -7.7594785365 -2.132644e-01  1.942301e-01 -1.0723533245 -
2.522454e+00
## [1896,] -0.1640919457  1.737262e+00  1.755798e-01  0.4061291055
1.931611e+00
## [1897,]  0.6410395148  3.748399e-01 -4.757627e-01  2.5218209272 -
1.143744e+00
## [1898,] -9.6632776936 -4.050543e-01  1.905762e-01  1.7201656930
3.772456e+00
## [1899,]  0.9455483824  5.320955e-01  3.112312e-01  0.5555150516 -
```

```
6.465912e-01
## [1900,]  1.0110399665 -7.751693e-01  1.904246e-03 -0.2201605281 -
1.063519e+00
## [1901,]  0.8627119911 -3.364993e-02 -2.128454e-01 -1.0813684925 -
6.249321e-01
## [1902,]  0.1504015326 -1.591842e-01 -3.661962e+00 -0.8905191955
4.644662e-01
## [1903,]  0.3106343297  1.132174e+00 -3.435649e+00 -2.0120548898
5.723696e-01
## [1904,]  0.8829627489 -1.676379e-01 -2.389330e-01 -1.2281230320 -
7.871061e-01
## [1905,]  0.7076628795  1.293159e+00  1.174523e+00  1.2490082993 -
6.231651e-01
## [1906,]  0.7519323232 -3.188443e-01 -1.048382e-01  0.7916580178 -
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## [1907,]  0.9749818678 -1.742749e+00  7.988138e-01 -0.0638218970 -
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## [1908,] -1.0093986856 -3.900585e-01 -2.139481e+00 -1.1803794047
8.346267e-03
## [1909,]  0.6995341724  8.640041e-01  4.592176e-01 -1.1851792674 -
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## [1910,]  0.6832388959  7.174130e-01  1.216477e+00  0.5518105828 -
3.593196e-01
## [1911,]  0.8789136878 -3.635026e-01  4.821099e-01 -1.0558816953 -
3.305960e-01
## [1912,] -0.8130016280  1.772257e-01 -2.399678e+00 -0.4256520434 -
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## [1913,]  0.4972843069  2.180912e+00 -1.203563e+00 -0.6649240351
1.221838e-01
## [1914,]  0.3659229740  9.807038e-01 -2.952267e+00 -1.7969531979
3.955911e-01
## [1915,]  0.7943692391  4.394666e-01  9.757844e-01  1.1760873919 -
9.223781e-01
## [1916,]  0.5346796162  3.620949e-01 -5.157750e-01  2.3307367716 -
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## [1917,]  0.6509057223  3.553544e-01 -4.064433e-01  2.6787702425 -
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## [1918,]  0.9617010610 -5.148208e-01 -1.447167e-01 -0.7328570158 -
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## [1919,]  0.8849335722 -2.544741e-01 -1.928421e-01 -1.2450955596 -
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## [1920,]  0.8935753991  9.036917e-02 -3.919641e-02  0.0959673607 -
4.806046e-01
## [1921,]  0.8406190434  1.152406e+00  3.166254e-01  0.6164613740 -
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## [1922,]  0.8583391669  5.829125e-02 -6.087958e-01 -0.9574774070 -
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## [1923,]  0.6115818344  1.156167e+00  5.044543e-01 -0.4187499400 -
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## [1924,]  1.2698775662 -2.752626e+00  1.477257e+00 -0.1558429230
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## [1925,]  0.8965895904 -2.895384e-01 -1.302505e+00 -0.4291317058 -
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## [1926,]  1.2722031646 -2.798696e+00  1.431650e-01 -0.1133025300 -
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## [1927,]  0.5492557248  2.275701e+00  4.689786e-01 -0.8297819020 -
2.810903e-01
## [1928,]  0.0848767773 -4.288215e-01 -2.383638e+00  0.3712427310 -
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## [1929,] -0.1745980164  1.800987e+00  1.512586e+00  0.3324860838
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## [1930,]  0.7307638973  6.423190e-01  1.032270e-01 -1.4930106132 -
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## [1931,]  0.7323071356  7.494572e-01 -8.365066e-02 -0.3620290081 -
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## [1932,]  0.8489516093 -2.761126e-01  5.846610e-01 -0.9022897503 -
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## [1933,]  0.8187949517  7.402112e-01  3.383451e-01 -0.2026147098 -
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## [1934,]  0.7347349097  1.532805e+00  1.304849e+00  2.4354012961 -
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## [1935,]  0.5759987732  2.317298e+00  5.546300e-01 -0.0742269764 -
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## [1936,]  0.7726914894 -2.002264e-01 -5.176160e-02  0.1037907104 -
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## [1937,]  0.9878424656 -1.805206e+00  8.032921e-01 -0.1515399422 -
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## [1938,]  0.8294641437 -3.270978e-03 -4.929920e-01 -1.0554783107 -
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## [1939,]  0.4115661813 -2.458851e-01 -3.698885e-01  0.3645109720 -
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## [1940,]  0.9620725418 -3.152357e-01  1.054075e+00  0.4779321218 -
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## [1941,]  0.6355422881  1.405787e+00  3.022517e-02 -2.3573915641
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## [1942,]  0.8201416200  5.680176e-01  6.817698e-01 -0.3485698317 -
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## [1943,]  0.3054729797  1.315402e+00 -5.128886e-02 -0.7124406902 -
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## [1944,]  0.1889826079  1.364001e+00  6.184198e-01  2.1426054532 -
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## [1945,]  0.6525524969  9.391037e-01 -2.039716e-01 -1.7978185901 -
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## [1946,]  0.5019815704  1.136413e+00  4.849221e-01 -0.0446743737 -
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## [1947,]  0.6319533041  1.057263e+00 -1.580486e-01 -1.6724719665 -
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## [1948,] -0.3151264169 -2.862269e+00 -1.267904e+00 -0.9032484787 -
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## [1949,]  0.9435884746 -8.134846e-01  2.915739e-01 -0.2944610355 -
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## [1950,]  0.8453555345  1.179230e+00  3.664381e-01  0.8112451497 -
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## [1951,]  0.8488039348 -1.320653e-01  4.897381e-01 -1.0308947002 -
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## [1952,]  0.9697935262  5.611326e-01  5.116488e-01  0.8071596044 -
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## [1953,]  0.9060603836 -8.106966e-01  9.098289e-01 -1.4008315620
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## [1954,]  0.5956850396  1.231908e+00  5.069310e-01 -0.5172367055 -
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## [1955,]  0.7086643437  9.839003e-01  8.449266e-01  0.4504489234 -
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## [1956,]  0.4779164528  1.109971e+00  4.750743e-01 -0.2170964765 -
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## [1957,]  0.8139227246  1.165548e+00  6.100484e-01  0.6417321261 -
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## [1958,]  0.8719937626 -2.228880e-01  2.131492e-01  0.4104922948 -
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## [1959,]  0.7128491576  6.116622e-01  1.203039e+00  0.5694083342 -
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## [1960,] -9.6812336238 -3.604591e-01  2.634294e-01  1.7909992012
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## [1961,] -9.6854737247 -3.493960e-01  2.781232e-01  1.8058698791
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## [1962,]  1.2840461149 -2.742957e+00  1.404063e+00 -0.2343570446
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## [1963,]  0.6623098666  1.292690e+00  9.402203e-01  0.2738021344 -
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## [1964,]  0.8272883915 -2.771221e-01 -1.203212e+00 -1.0142590798 -
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## [1965,] -3.6993774465 -1.002127e+00 -7.111422e-01 -0.1911060707 -
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## [1966,]  0.4117679015  8.298794e-01  3.103765e-01  0.0755890971 -
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## [1967,] -7.7107753444 -6.597791e-01 -6.381594e-01 -0.5666943553 -
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## [1968,]  0.7607869539 -1.246150e+00 -1.555250e+00  0.0248953690 -
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## [1969,]  0.8807067798 -3.307325e-02 -2.484851e-01 -1.0385700348 -
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## [1970,]  0.8514355724  5.441457e-01  3.901240e-01 -0.0001566740 -
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## [1971,]  0.7229495821  1.563091e+00  9.984049e-01  2.0370551506 -
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## [1972,]  0.5559069549  1.540231e+00  8.718671e-01 -0.1732485198 -
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## [1973,]  0.7436096513  1.069141e+00 -4.158692e-02  1.0407827010 -
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1.179045e+00
## [1975,]  0.9427671520 -2.492456e-01  6.393812e-01  0.1092524735 -
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## [1976,]  0.9523763399  5.715564e-01  5.192369e-01  0.7293924153 -
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## [1977,]  0.8817023802 -1.568204e-01  4.265975e-01 -0.0124428116 -
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## [1978,]  0.8634866957 -2.211421e-03 -2.144861e-01 -1.0408704929 -
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## [1979,]  0.4178470956 -5.212522e-01 -8.706519e-01 -0.0679593409 -
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## [1980,]  0.7270061113  6.912710e-01  3.347480e-01 -1.4335999447 -
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## [1981,]  0.5161696119  2.052902e+00  2.873459e-02 -0.8983527050 -
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## [1982,]  0.8177604568  4.200902e-02  1.011455e-01 -1.2771658706 -
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## [1983,]  0.9179533975  6.135577e-01  5.057710e-01  0.5081217630 -
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## [1984,]  0.7077279306  5.078939e-01 -1.102492e+00 -0.4327893129
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## [1985,]  0.1988977734  1.872150e-01 -2.611062e+00  2.2102411282
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## [1986,]  0.7640911851  1.459885e+00  1.367234e+00  2.6258999928 -
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## [1987,]  0.9724482702 -4.349699e-01 -3.016341e-01  0.3267205213 -
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## [1988,]  0.8359171587  1.171507e+00  3.213515e-01  0.6500820978 -
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## [1989,] -3.6875623110 -5.800953e-01 -9.445017e-01 -0.7584501397 -
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## [1990,]  0.7830383402 -4.879130e-01 -3.830388e-01  0.6214292224 -
3.822949e-01
## [1991,]  0.6807794461  8.743542e-01  2.923765e-01 -0.8316545078 -
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## [1992,]  0.5135980441  1.838944e+00 -3.089084e-01 -1.9471642191 -
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## [1993,]  1.2807817715 -2.820970e+00  3.395555e-01 -0.0946755398 -
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## [1994,]  0.8395984072 -1.986027e-01  2.861024e-01 -1.3292642857 -
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## [1998,] -3.6917796477 -1.107387e+00 -6.450934e-01 -0.0988730922 -
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## [2000,]  0.8887083855  1.239391e-01  1.493140e-01  0.0954697354 -
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## [2001,]  0.5805122877  1.333590e+00 -1.909080e+00 -1.3430204881
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## [2002,]  0.7707925972  2.161059e-01  3.411436e-01 -0.7005290740 -
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## [2003,]  0.5726587801  2.257063e+00  4.954860e-01 -0.3751905985 -
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## [2004,]  1.2736950880 -2.865525e+00  3.091277e-01 -0.1233157673 -
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## [2005,]  1.1733526574 -1.663887e+00  2.463422e-01 -0.4247366649 -
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## [2006,]  0.5839245069  1.385520e+00  8.000338e-01 -0.3523183004 -
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## [2007,]  0.9260380243 -2.250082e-02  7.943798e-01 -0.2096009956 -
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## [2008,]  0.3221960065  1.346065e+00  7.475292e-02 -0.6556979827 -
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## [2009,]  0.6464711745  1.234813e+00  4.717745e-01 -0.8123196731 -
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## [2010,]  0.7008096805 -3.719306e-01 -1.764683e-01  0.6221491826 -
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## [2011,]  0.4988791339  1.085677e+00  9.261749e-01  3.2615570724 -
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## [2012,]  0.9394496616  5.298400e-01  3.454469e-01  0.5460886299 -
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## [2013,]  0.6816036604  1.200018e+00  4.198622e-01 -0.6561568734 -
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## [2014,]  0.4184984614  2.815775e-01 -1.155295e+00  2.3643318561 -
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## [2015,]  0.6150087180  1.202976e+00  8.377999e-01 -0.4881933837 -
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## [2016,]  0.7285886900  4.796831e-01 -4.724786e-02  2.1150810504 -
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## [2017,]  0.4178445123  2.511659e+00  9.202993e-01  0.0936220134 -
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## [2018,]  0.6423650253  9.470029e-01 -7.544209e-01 -0.9331305838
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## [2019,]  0.0787462208  1.275263e+00  2.900765e-01  1.6121910314 -
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## [2020,] -0.8312595024  2.341505e-01 -2.428338e+00 -0.6288245926 -
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## [2021,]  0.7382355636  3.989223e-01  6.581879e-01 -0.5065453919 -
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## [2022,] -0.0262736395  2.385272e+00  1.940618e+00  2.0817279233
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## [2023,]  0.7198895680  7.640153e-01  1.394524e-01 -0.6957633754 -
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## [2026,]  0.6422711483  1.758226e+00  3.449936e-01 -0.2629409371 -
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## [2027,]  0.7502801467  3.937629e-01  6.693803e-01 -0.4250374056 -
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## [2028,]  0.6993142117  1.337994e+00  1.142432e+00  1.1453285078 -
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## [2029,]  0.6323767685  1.453237e+00  4.252050e-03 -1.0898521543 -
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## [2030,]  0.9007448859 -1.906505e-01 -2.767167e-01 -0.4582579194 -
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## [2031,]  0.6395852030  2.866254e-01 -6.662627e-01  2.4670265364 -
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## [2032,] -0.7863327956  1.337265e+00  2.472499e+00  1.1894397543
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## [2033,] -0.7320414364  4.465437e-01 -1.834239e+00 -0.8161759513 -
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## [2034,]  0.9279083413 -7.961673e-02  5.715377e-01 -0.0520643380 -
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## [2035,]  0.7418342092 -4.803674e-01 -7.163742e-02  0.9803860438 -
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## [2036,]  0.7519007036  1.442338e+00  9.445029e-01  1.9509230034 -
1.205464e+00
## [2037,]  1.1092410797 -1.391886e+00 -4.294006e-01 -1.8001928687 -
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## [2038,]  0.5836971817 -2.261425e-01 -1.997694e+00  1.5741894062 -
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## [2039,]  0.5124197130  1.084081e+00 -1.637885e+00 -0.1772338593 -
1.230404e-01
## [2040,]  0.5966492002  1.150906e+00 -1.193911e+00 -0.3954223264
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## [2041,]  0.5445874933  1.686656e+00 -3.799989e-01  0.7671547731 -
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## [2042,] -0.0771175138  6.350696e-01  3.917098e-01  0.8422151045
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## [2043,]  0.7189875959  6.887673e-01 -3.586544e-01  0.3014186517
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## [2044,] -3.1015676246  1.443262e+00 -1.505673e+00  0.1844640670
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## [2045,]  0.5475266830  1.697200e+00 -1.253855e+00  1.4045692135 -
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## [2046,] -1.6861448494  1.759170e+00 -5.137280e+00  0.5105138319
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## [2047,] -0.2748663016  1.543245e+00 -3.567662e+00  0.2066106837
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## [2048,] -0.0553877271  1.330349e+00 -2.864237e+00  1.6975376516
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## [2051,] -0.0268180149 -2.309213e+00 -5.270586e+00  0.6005249675
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## [2055,]  0.4741646185 -2.466947e+00 -3.618592e+00  0.4564860974 -
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## [2057,]  0.5223945921  2.115829e+00  1.582368e-01 -0.6145488147 -
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## [2061,] -0.0301795800  2.400216e+00  1.907848e+00  2.0759765310
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## [2062,] -8.3930957796 -1.350526e+00  1.867781e-01 -0.5647337427 -
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## [2065,]  0.7708244044  5.064158e-01  9.130775e-01  0.9619731927 -
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## [2067,] -8.4890247006 -4.837130e-01  1.081085e+00 -0.5907337345 -
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## [2068,]  0.7243398856  9.666367e-01  8.829841e-01  0.6691990778 -
7.301415e-01
## [2069,]  0.8006079651  7.476018e-01  6.371651e-01 -0.3575232575 -
3.968118e-01
## [2070,]  0.7431229627  4.452010e-01  3.477348e-01 -0.6594857296 -
4.221525e-01
## [2071,]  0.5484498563  2.457086e-01 -7.277681e-01  2.2494757478 -
1.008414e+00
## [2072,]  0.9553764871 -4.443000e-01 -3.713040e-01  0.1388546972 -
1.232303e+00
## [2073,] -8.8823213105 -5.636589e-01 -1.884651e+00  1.1231786838
3.235634e+00
## [2074,]  0.7617647699  4.054698e-01  4.603987e-01 -0.0152154236 -
```

```
8.549892e-01
## [2075,] -0.1706283687  1.778769e+00  1.854325e+00  0.6503816288
1.478796e+00
## [2076,] -0.0499575793  2.477462e+00 -1.805728e+00 -0.9956721402
6.820650e-01
## [2077,]  0.8955693949  9.584980e-02 -3.982541e-02  0.1380866527 -
4.946057e-01
## [2078,]  0.7353231674  1.385373e-01  7.721922e-02 -0.4907901041 -
5.284032e-01
## [2079,] -2.1421808107  2.683199e+00  2.948458e+00 -0.1217066126
2.303307e+00
## [2080,]  0.6725921483  1.217699e+00  4.721867e-01 -0.6163010484 -
5.162327e-01
## [2081,]  0.8071552371  5.255915e-01  4.453769e-01 -0.6751190869 -
2.535222e-01
## [2082,]  0.8033408614  4.499686e-01  9.014030e-01  1.0853778586 -
9.347630e-01
## [2083,]  0.9365578333 -3.757330e-01  6.248042e-01 -0.2284823503 -
5.356413e-01
## [2084,]  0.5238476599  3.677643e-01 -5.010100e-01  2.2976013061 -
9.941285e-01
## [2085,]  0.4304171774  1.540803e+00 -9.596184e-01 -0.0841920556
3.989959e-01
## [2086,]  0.5277419567  3.554579e-01 -7.820645e-01  2.0748118659 -
9.765725e-01
## [2087,] -0.1228876781  1.522736e+00  7.687495e-01 -0.9961165575
5.947722e-01
## [2088,]  1.2980291006 -3.010423e+00  1.109968e-01 -0.3302104468 -
9.782491e-01
## [2089,] -2.3690701056  2.590266e+00  2.544013e+00  0.0110683530
2.432928e+00
## [2090,]  0.7412282292  2.035532e-01  3.636585e-01 -0.2076770075 -
5.543154e-01
## [2091,]  0.9931135362 -5.372058e-01 -3.532361e-01  0.3059235579 -
1.277323e+00
## [2092,]  0.7217377223  4.478793e-01  1.067353e-01  0.7502561258 -
5.502622e-01
## [2093,]  0.8385990916  6.839029e-01  2.456413e-01 -0.3016213957 -
7.922789e-01
## [2094,]  0.2912083114  2.462567e+00  3.527084e-01  0.2384503702 -
4.529825e-01
## [2095,] -0.7258746780 -3.388324e-01 -1.653717e+00 -0.9385520332 -
1.146112e+00
## [2096,]  0.6857237592  5.771288e-01 -1.264307e+00 -1.0381703789
1.273555e-01
## [2097,]  0.6406839994 -7.415688e-01 -8.933125e-01 -0.1139520661 -
5.017319e-01
## [2098,]  0.3333521287  2.155569e+00  3.059474e-01  0.0956913882 -
4.624383e-01
## [2099,]  0.7455655980  6.083211e-01  6.321257e-02 -1.5851296357
```

```
5.563237e-04
## [2100,]  0.7557871670  5.599383e-01  4.055601e-01 -1.2560248653 -
1.659418e-02
## [2101,]  0.7017760652  2.168690e-01  9.209679e-02 -0.5971394956 -
4.799468e-01
## [2102,] -7.7626652556 -2.627808e-01  1.512779e-01 -1.2617023689 -
2.475902e+00
## [2103,] -0.0614016467  5.951802e-01  1.697408e+00  0.7586668900
5.041757e-01
## [2104,] -0.4552999334 -1.616402e+00 -2.465798e-01  1.0063431172 -
1.174486e+00
## [2105,]  0.6712725700  1.558172e-01 -1.299471e+00  0.6927653310 -
4.445194e-01
## [2106,]  0.6334545662 -8.062222e-01 -7.717941e-01  0.1146400026 -
5.082576e-01
## [2107,]  0.3833617901 -5.808217e-02 -4.032891e-01  0.3341230110 -
4.722678e-01
## [2108,] -8.3224062812 -1.584736e+00  1.334890e+00 -0.8044467327 -
8.914784e-01
## [2109,]  0.7863867720  4.572927e-01  9.174932e-01  1.0819331252 -
9.290536e-01
## [2110,]  0.7431820879  6.483783e-01  3.501961e-01 -1.3579898491 -
8.442557e-03
## [2111,]  0.6133586036  2.745757e-01  3.318719e-01  1.9534925286 -
5.983850e-01
## [2112,] -0.7952848557  1.735120e-01 -2.744844e-01 -0.8251273047 -
9.327769e-01
## [2113,] -3.6881052868 -1.047737e+00 -6.899780e-01 -0.1977583007 -
2.026182e+00
## [2114,] -2.1200581774  2.610484e+00  2.975255e+00 -0.0562462296
2.312715e+00
## [2115,]  0.5430379338  2.218753e+00  5.203363e-01 -0.8181056783 -
2.376004e-01
## [2116,]  0.4570734501  1.758989e+00  1.393587e+00  1.1258451355 -
5.888632e-01
## [2117,]  0.8146083646  9.019673e-02 -4.926624e-01 -1.0375516343 -
1.005645e+00
## [2118,]  0.5509762395  1.576624e+00 -1.396503e+00 -1.0281304747
4.685104e-01
## [2119,] -0.2403112908 -2.548211e+00 -6.209101e-01 -1.0607154060 -
5.844655e-01
## [2120,]  0.6808007047  8.558646e-01 -1.148012e-01 -0.8370807468 -
4.861639e-01
## [2121,] -8.4887165515 -4.656406e-01  1.073911e+00 -0.5875350015 -
1.269480e+00
## [2122,]  0.7604452821  3.116973e-01  6.847024e-01 -0.3385699320 -
4.375737e-01
## [2123,]  0.8878267717 -2.157519e-01  8.527949e-01  0.2191489091 -
5.733113e-01
## [2124,]  0.8281476007 -3.130794e-01  2.283095e-01  0.3806713493 -
```

```
6.686196e-01
## [2125,] -0.0560553482  2.383829e+00  1.790649e+00  1.9598178739
1.334647e+00
## [2126,]  0.7777303932  5.404332e-01  2.519721e-02 -1.5172562115 -
6.288172e-02
## [2127,] -3.6863588216 -1.081609e+00 -7.258105e-01 -0.2103232743 -
2.074768e+00
## [2128,]  0.7010701206  7.870342e-01  4.277760e-01 -0.6528590449 -
3.640349e-01
## [2129,]  0.8521225614  4.672511e-02 -4.197896e-01 -0.9674360257 -
4.543952e-01
## [2130,]  0.6214451350  1.126426e+00  8.168580e-01 -0.5681258362 -
2.517252e-01
## [2131,]  0.5732214862  1.441923e+00  8.044788e-01 -0.3678795025 -
3.193169e-01
## [2132,]  0.6222072999  1.871256e+00  5.618701e-01  0.1848096168 -
4.968551e-01
## [2133,] -0.1369802290  1.591241e+00  8.075879e-01 -0.9719685932
6.287067e-01
## [2134,]  0.6825494067  1.326055e+00  1.073006e+00  0.8982884855 -
5.566996e-01
## [2135,]  0.5667337193  1.393174e+00  8.722643e-01 -0.3284368320 -
2.693534e-01
## [2136,]  0.8965970332 -1.532149e+00 -8.239003e-01 -1.7664460268 -
2.608768e-01
## [2137,] -0.3669076492 -2.688110e+00 -1.154178e+00 -0.8660223555 -
4.916032e-01
## [2138,]  0.6260578149  1.211791e+00  6.906491e-01 -0.7231826174 -
2.877694e-01
## [2139,]  0.9105827747 -5.315694e-02 -9.199806e-02 -0.0426580340 -
4.742710e-01
## [2140,]  0.8777531050 -3.476168e-01  2.475844e-01 -1.1556545835 -
2.987473e-01
## [2141,]  0.6022160505  2.832539e-01 -1.169921e+00 -0.1890584667 -
8.527189e-01
## [2142,]  0.3254628883  1.369628e+00  7.708480e-01  1.7454117177 -
6.997288e-01
## [2143,]  0.9503613655 -7.131833e-01  2.995181e-01 -0.1168981726 -
5.666152e-01
## [2144,]  0.9606059740 -6.188572e-01 -8.282628e-01  0.0159368447
1.568282e-01
## [2145,]  0.3079511930 -3.429655e-01 -1.966618e+00  0.2867821664 -
6.231466e-01
## [2146,]  0.6430534779  8.198291e-01  8.105015e-01  0.0274706285 -
6.222717e-01
## [2147,]  0.8438386041 -4.595252e-02  4.673280e-01 -1.0830454222 -
3.032036e-01
## [2148,] -0.7121552378  2.753579e-01 -1.891390e+00 -0.9764321053 -
1.366439e+00
## [2149,]  0.6570752078  1.378283e+00  3.034906e-02 -2.3234195297
```

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1.962099e-01
## [2150,]  0.0175344275  5.270243e-01 -9.356315e-01 -0.7842008500
2.002222e-01
## [2151,] -0.2211044928  1.608855e+00 -1.293371e+00  0.7521998146 -
1.704596e-01
## [2152,]  0.6273133807  1.102702e+00 -1.185469e-01 -1.7165156942
1.322844e-02
## [2153,]  0.9760536291 -3.151047e-01  1.077698e+00  0.6677785940 -
4.712967e-01
## [2154,] -3.6650791179 -1.190901e+00 -6.996288e-01 -0.1741666797 -
2.050901e+00
## [2155,]  0.8185615714 -1.685343e-02 -4.383130e-01 -1.1074984091 -
9.230340e-01
## [2156,]  0.8923102423 -1.699289e-01  4.442207e-01 -0.9591883246 -
3.689810e-01
## [2157,] -3.0604820563  1.297204e+00 -2.073503e-01  0.1381657104
6.628200e-01
## [2158,]  0.8419459173 -3.838686e-01  6.516307e-02  0.4264173703 -
6.485924e-01
## [2159,]  0.9643511212  5.426922e-01  5.056472e-01  0.6719244618 -
6.728290e-01
## [2160,]  0.5237574894  3.228426e-01 -7.382385e-01  2.1295445035 -
9.538453e-01
## [2161,]  0.7788842149  5.608294e-01  9.451114e-01  0.0581485675 -
3.747321e-01
## [2162,]  0.9108232309 -2.866519e-03  8.261765e-01 -0.1599534199 -
3.448070e-01
## [2163,]  0.8015876285  3.323020e-01  8.446431e-01  0.8352954961 -
8.949632e-01
## [2164,]  0.8565162929  1.307312e-01  6.357027e-03 -0.7698696901 -
5.374070e-01
## [2165,] -0.0752485159  6.221493e-01  1.771206e+00  0.8554630038
5.324992e-01
## [2166,] -8.4499430138 -6.246203e-01  1.025598e+00 -0.6795479954 -
1.266305e+00
## [2167,]  0.6673884337  8.273337e-01  8.073364e-01  0.1868999577 -
6.841361e-01
## [2168,] -8.4760474694 -5.606087e-01  1.117908e+00 -0.5884893377 -
1.220483e+00
## [2169,]  0.9100867188 -1.436974e-01  1.907385e-01 -0.4255777232 -
2.589672e-01
## [2170,]  0.8025057360 -3.080076e-01 -3.404540e-01 -0.6764990157 -
7.630297e-01
## [2171,]  0.8785861951 -4.646765e-01  3.194153e-01 -1.1825145959 -
2.246994e-01
## [2172,]  0.5864570431  3.875927e-01 -1.020970e+00  0.2372275245
8.181510e-02
## [2173,]  1.0750108992 -6.517452e-01 -5.831347e-01  2.3043374948 -
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## [2174,]  0.8839269977 -9.007068e-01 -1.771429e+00 -0.1595245431 -
```

```
4.374488e-01
## [2175,]  0.5712479577  1.528758e+00 -9.768497e-01 -0.5687252615
2.565437e-01
## [2176,]  0.1426795489 -3.328334e-02 -4.366148e+00  2.1058853029
2.787206e+00
## [2177,]  0.3643832042 -2.714068e-01 -2.741056e+00  0.3658728315
1.861054e-01
## [2178,]  0.8767068403 -1.558983e+00 -2.066853e+00  0.4008084810 -
8.410535e-01
## [2179,] -1.0478780661 -5.887951e-01 -6.496065e+00  0.8052472680
4.075012e-01
## [2180,]  0.9154182789 -2.253017e-02  5.509166e-01 -0.1524409673 -
3.846221e-01
## [2181,]  1.1213273639 -1.959510e+00  5.720063e-01  0.3436047821 -
1.081154e+00
## [2182,]  0.7874478277  1.997495e-01  4.145215e-01 -0.1261838761 -
8.709967e-01
## [2183,]  0.9259148455 -1.510030e-01  1.470735e-01 -0.4046381968 -
2.988549e-01
## [2184,]  1.0188087527 -1.245658e+00 -6.957282e-01 -0.6244247530 -
1.150420e+00
## [2185,] -0.3561363958 -1.571675e+00 -9.187577e-02  0.4745896780 -
1.130649e+00
## [2186,]  0.9847068274 -1.784172e+00  8.204690e-01 -0.0381509815 -
3.223841e-02
## [2187,] -0.4564851756 -1.659813e+00 -3.033078e-01  0.8376563519 -
1.165165e+00
## [2188,]  0.8989558861 -1.458929e-01  1.865601e-01 -0.5159895337 -
2.242695e-01
## [2189,]  0.7637508555  1.823378e-01  5.215414e-02 -0.2505196088 -
6.307762e-01
## [2190,]  0.8575083736  5.458798e-01  3.807355e-01 -0.0692908896 -
7.629121e-01
## [2191,]  0.9002144114 -7.642050e-01  8.946423e-01 -1.5110755253
5.493659e-01
## [2192,] -3.0607255437  1.309755e+00 -5.815347e-02  0.0578104102
6.542610e-01
## [2193,] -2.1318584622  2.621580e+00  2.979841e+00 -0.1183838882
2.343806e+00
## [2194,]  0.7486645373 -5.175889e-01 -1.939615e-01  0.7187149164 -
7.061797e-01
## [2195,]  0.7899341623  4.787643e-01  9.469340e-01 -0.0131491628 -
3.483071e-01
## [2196,] -0.7455391617 -4.951986e-01 -8.905860e-01  0.5452474438 -
7.860166e-01
## [2197,]  0.5315398747  3.241603e-01 -7.463938e-01  2.1423030930 -
9.681646e-01
## [2198,]  0.9683878941 -2.247291e-01  9.546661e-02  0.3960963754 -
1.221269e+00
## [2199,]  0.4723469182  1.166246e+00  9.454830e-01  3.1935958647 -
```

```
7.964763e-01
## [2200,]  0.7228580054  6.177492e-01 -1.946475e-02  0.1315669644 -
7.154286e-01
## [2201,]  0.5508114530  1.664732e+00 -7.754433e-01 -0.8155809401
4.032779e-01
## [2202,]  0.7334880524  7.659557e-01 -4.759873e-01  0.2814398928 -
5.116739e-02
## [2203,] -1.3317716204  8.878783e-01 -4.669160e+00  0.6791138130
8.197675e-01
## [2204,] -1.0227259431  1.282006e+00  5.314179e-01 -0.0707678778
5.515220e-01
## [2205,]  0.9186253464 -1.408883e-01  8.947228e-02 -0.5087840242 -
3.140829e-01
## [2206,]  0.6327685976  1.447151e+00  6.753430e-01  2.4307029262 -
1.135577e+00
## [2207,]  0.8466465055  5.386984e-02  2.648269e-01 -1.1615429908 -
4.843935e-01
## [2208,]  0.0723247555  1.339779e+00  3.423682e-01  1.8349560364 -
6.020108e-01
## [2209,] -0.3278583514 -2.737005e+00 -1.004658e+00 -0.7838951240 -
5.427586e-01
## [2210,]  0.9429717605 -7.173396e-01  3.477089e-01 -0.1091383099 -
5.148176e-01
## [2211,]  0.6519554957  1.386101e+00 -1.591771e-01 -1.1147365342 -
4.704984e-01
## [2212,]  0.9595131406 -5.510517e-01 -5.554950e-01 -0.0463015533 -
1.145364e+00
## [2213,]  0.4472303345  1.861416e+00  1.305585e+00  0.9895145982 -
5.899203e-01
## [2214,]  1.0737463321 -1.834346e+00  2.361558e-01 -0.2610135899 -
9.427428e-01
## [2215,]  0.7881773906 -8.134452e-01 -1.099010e+00  0.5445310812 -
2.137552e-01
## [2216,]  0.7033495726 -2.641222e-01 -1.068071e-01  0.8811548891 -
6.832702e-01
## [2217,]  0.8677016385 -2.096431e-01  1.936452e-01 -1.2415631433 -
3.130569e-01
## [2218,] -8.4781245416 -5.444924e-01  1.123820e+00 -0.5769365508 -
1.216545e+00
## [2219,]  0.0986145334 -5.690282e-02  7.683106e-01 -0.5495070015
4.831216e-01
## [2220,]  0.6114822294 -4.783123e-01 -9.262905e-01  0.7406651422 -
9.564519e-01
## [2221,]  1.0216463564 -9.353022e-01 -2.851162e-01 -0.5627560261 -
9.943646e-01
## [2222,]  0.7564525122  5.112828e-01  2.506961e-01 -1.5424624994 -
2.543259e-01
## [2223,]  0.9339264614 -4.867937e-02  8.146709e-01 -0.1302333918 -
3.344560e-01
## [2224,]  0.8121476534  4.164722e-01 -7.122149e-01  0.5462379666 -
```

```
4.113447e-01
## [2225,]  0.8105737626  7.484904e-01  4.616727e-01  1.5404638302 -
1.125322e+00
## [2226,]  0.5020650370  2.098009e+00  8.227607e-02 -0.9473021975 -
2.738164e-01
## [2227,]  0.9247970988  6.402194e-01  5.278818e-01  0.5101602992 -
5.805697e-01
## [2228,]  0.8481434867  6.276522e-01  3.534892e-01 -0.1204100582 -
7.584188e-01
## [2229,]  0.5413134408  9.195759e-01 -1.309737e+00 -0.4567403803 -
1.531632e-02
## [2230,]  0.0579016515 -3.283894e-01 -2.418336e+00  0.2051843482 -
4.450548e-01
## [2231,]  0.9148729937  3.872146e-02  4.456992e-03  0.1726439117 -
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## [2232,]  0.4328365785  2.478435e+00  8.364027e-01 -0.0504522424 -
3.687480e-01
## [2233,]  0.9517165319 -4.517451e-01  6.322761e-01 -0.1259582164 -
5.781369e-01
## [2234,]  0.7808301698  5.648866e-01  4.928189e-02 -1.4277621518 -
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## [2235,]  0.5208713732  2.067501e+00  2.349336e-02 -0.9808865966 -
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## [2236,]  0.9160675879 -9.714418e-02  6.635936e-01 -0.1056047416 -
2.888523e-01
## [2237,]  0.9682929798 -6.296356e-01 -6.720060e-01  0.0875623123 -
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## [2238,]  0.4002353994  1.088811e+00 -5.550401e-02 -0.0678642386 -
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## [2239,] -0.0580949802  5.477231e-01  1.725885e+00  0.8811592480
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## [2240,]  0.7997071391 -2.797877e-01  2.182715e-01  0.2733871201 -
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## [2241,]  0.6529289547  1.228616e+00  4.941501e-01 -0.7280034244 -
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## [2242,]  0.8679435157 -8.666241e-05 -2.260934e-01 -1.0108215977 -
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## [2243,]  0.9094527362 -2.977421e-01  9.401411e-01  0.5386372190 -
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## [2244,] -0.9879766417 -1.334706e+00 -1.722521e+00  2.0385693063 -
1.030517e+00
## [2245,]  0.6335191802  1.080933e+00 -2.410518e-01 -1.9337515032
1.149741e-03
## [2246,] -4.6801852811  9.806416e-01  5.683169e-01  0.2384999541
4.830907e-01
## [2247,]  0.9356672510 -2.789933e-01 -2.666578e-02 -0.2189409604 -
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## [2248,]  0.7454125627 -7.250973e-01 -4.993526e-01 -0.4487404163 -
4.982243e-01
## [2249,]  0.6759916003  9.470418e-01  1.019627e+00  0.3443287897 -
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4.104299e-01
## [2250,]  0.7445215313  6.789911e-01  2.959628e-01 -1.3819672451 -
4.053209e-02
## [2251,]  0.9151772287 -1.318318e-01 -5.182353e-03  1.2410623876 -
3.684338e-02
## [2252,]  0.4978138447  1.827555e+00 -1.120634e+00 -1.0500650932
1.342092e-01
## [2253,] -0.1022194532  1.225100e+00  3.797499e-01 -0.9603257272
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## [2254,]  0.5287189790  2.043211e+00  2.599947e-01 -0.8388131400 -
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## [2255,]  0.9324137816 -2.730078e-01  1.398231e+00  1.2156471148 -
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## [2256,]  0.7578262658  1.484564e+00  1.020202e+00  2.0862504062 -
1.148498e+00
## [2257,] -0.1661260016  1.767951e+00  1.816373e+00  0.6456097130
1.458014e+00
## [2258,]  0.4431839496  2.302625e+00  7.217641e-01 -0.0370809225 -
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## [2259,]  0.7617847878  4.280934e-01  2.716952e-01 -1.6639336180 -
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## [2260,]  0.8936215205 -3.264915e-01 -1.276356e+00 -0.4262442323 -
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## [2261,]  0.4285963909  5.199638e-01 -2.103156e+00  0.7024410644
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## [2262,] -0.2471235922 -2.594314e+00 -5.402370e-01 -0.9826574105 -
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## [2263,]  0.9414285980 -1.932948e-01  1.280854e+00  1.2316434882 -
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## [2264,]  0.7918115765  2.895368e-01  4.582313e-01  0.0866923009 -
8.860506e-01
## [2265,]  0.3088859552 -1.851541e-01 -8.525844e-01  1.0659780133 -
8.695562e-02
## [2266,] -4.6725548498  9.515425e-01  5.995219e-01  0.3934370480
4.410897e-01
## [2267,] -7.6614398452 -8.283933e-01 -5.689644e-01 -0.3990765917 -
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## [2268,]  0.7772633857 -4.492120e-01 -6.181113e-01  0.6579540924 -
1.073865e+00
## [2269,] -0.6486148114  9.437913e-01 -1.341009e+00  2.3980929658
4.362449e+00
## [2270,]  0.5288291773  1.747035e+00  1.212121e+00  0.7304200544 -
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## [2271,]  0.8749555193  4.685740e-01  3.037740e-01 -0.2420271496 -
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## [2272,]  0.9683993445 -5.517268e-01 -2.843279e-01 -0.7769215759 -
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## [2273,] -0.1235909973  1.558302e+00  7.630182e-01 -0.9217639400
5.637168e-01
## [2274,]  0.2530236971  2.166880e-01 -7.352594e-01  1.4655425846 -
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9.783286e-01
## [2275,] -0.0289831352  4.287438e-01  1.667407e+00  0.6187299487
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## [2276,]  0.9977777700 -5.141439e-01 -3.767056e-01  0.2528787717 -
1.255813e+00
## [2277,]  0.6949831209  8.236176e-01  1.099536e+00  0.4232660388 -
3.540064e-01
## [2278,] -0.3505678502 -2.688193e+00 -1.232984e+00 -0.9068155119 -
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## [2279,]  0.8256895018  8.835841e-02  3.092288e-01 -1.1581487144 -
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## [2280,]  0.6763432701  9.013670e-01 -9.126287e-01 -0.6204165973
1.580439e-01
## [2281,]  0.7381969734  5.312080e-01  3.376436e-01 -1.5578770499 -
1.672987e-01
## [2282,] -0.1875355917  1.837223e+00  1.578374e+00  0.3702757123
1.558039e+00
## [2283,]  0.7253964678 -3.757454e-01 -1.118333e-01  0.8290123717 -
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## [2284,]  0.5711065377 -3.962177e+00 -5.680993e+00 -1.3224684346 -
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## [2285,]  0.9389407106 -1.101939e-02  8.335616e-01 -0.1548667574 -
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## [2287,]  0.7654522670  1.312847e+00  4.494676e-01 -0.7168745923 -
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## [2288,]  0.2319531792  6.861969e-01 -2.273549e-01 -0.7000104863
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## [2289,]  0.9914503072 -1.759988e+00  7.941869e-01 -0.0180606864 -
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## [2290,] -0.9444999977  3.958705e-01  1.504549e+00 -1.5971824304
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## [2291,]  0.1797575780  1.107230e+00  1.309549e+00  1.0258505943
1.184851e+00
## [2292,]  0.8312459762  4.525426e-02  3.039076e-01 -1.2191352538 -
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## [2293,]  0.8873205496 -2.055796e-01  8.812749e-01  0.3735568710 -
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## [2294,]  0.3724584286 -3.613346e-02 -1.740602e-01  0.3718461533 -
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## [2295,]  0.7392041409  9.268746e-01  7.935186e-01  0.4356854293 -
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## [2296,]  0.5917687221  1.460219e+00  5.128781e-01 -0.5856229373 -
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## [2297,] -7.6748522742 -8.582561e-01  9.039616e-01 -0.2916804516 -
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## [2298,] -3.0461170321  1.316814e+00 -1.378737e-01  0.0847182016
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## [2299,]  0.6543946449  8.722035e-01  8.185486e-01  0.1575901113 -
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6.423564e-01
## [2300,]  0.6036346343  1.304790e+00  9.139162e-01  0.6346949957 -
5.241415e-01
## [2301,]  0.7545539938 -2.830350e-01  6.277782e-01  0.8408453718 -
3.609305e-01
## [2302,]  0.5196240725  1.412059e+00  4.516560e-01 -0.7986338692 -
1.089852e-01
## [2303,] -0.8947103620  1.575251e+00  6.906395e-01  1.2219946871
2.838617e+00
## [2304,] -9.6684124196 -4.029288e-01  2.615097e-01  1.7774706225
3.848766e+00
## [2305,]  0.9348388026 -3.050498e-01  6.189962e-01 -0.0534126774 -
6.052740e-01
## [2306,] -0.1344202814  1.629074e+00  7.549422e-01 -0.9718177891
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## [2307,] -0.0717648697  1.824970e+00 -5.877405e-02 -0.0173227081
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## [2308,]  0.7810306195  2.529119e-01  5.836071e-01 -0.5638056435 -
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## [2309,] -8.4394444944 -1.046189e+00  1.360582e-01 -0.4894908842 -
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## [2310,] -9.2417186085 -2.428117e-02  6.097718e-01  0.0095505796
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## [2312,]  0.5406794415  2.053482e+00 -8.217983e-01 -0.2961581249
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## [2313,]  0.6833028967  4.555086e-02 -2.336851e+00  0.0953818903 -
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## [2314,] -1.9849277376 -2.125624e+00 -2.331681e+00  0.4001133356 -
1.205515e+00
## [2315,]  0.6887645170  6.699271e-01 -9.998896e-01  0.5539696317 -
6.758263e-01
## [2316,]  0.5996588797  9.696825e-01 -7.467924e-01  2.2011276511 -
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## [2317,]  0.7133974125  7.949524e-01 -5.418107e-01  0.0214252707
1.900852e-02
## [2318,]  0.0197128603  7.119050e-01 -3.640693e+00  3.2638054404
3.126810e+00
## [2319,]  0.9903286005 -1.563922e+00 -9.912557e-01  0.3886209158
1.614078e-01
## [2320,]  0.0390044740  2.503216e-01 -3.546996e+00  1.2393911682
3.505874e+00
## [2321,]  0.1593870827  1.076346e+00 -2.843838e+00  2.5430400474
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## [2322,] -0.1495444298 -7.664412e-01 -4.121408e+00  1.2574969317 -
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## [2323,]  0.5494939363  1.384614e+00  6.269854e-01 -0.6016057554 -
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## [2324,]  0.6558797978  8.119751e-01  9.247343e-01  0.1995966053 -
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2.780962e-01
## [2325,]  0.7838160098  4.861286e-01  8.019410e-01  0.0543267159 -
3.138875e-01
## [2326,]  0.7344042318 -1.426045e-01 -7.503578e-01  0.3425246094 -
1.356195e+00
## [2327,]  0.8451538956  1.774389e-01  6.226342e-02 -0.7099490445 -
4.998834e-01
## [2328,]  0.6978464933  8.563356e-01 -1.019163e-01 -0.6013833065 -
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## [2329,] -1.2413226370  1.095643e+00 -2.612934e+00  5.2692233515
4.599813e+00
## [2330,]  0.9784078748 -5.186533e-01 -2.809445e-01 -1.1224422873 -
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## [2331,]  0.9403923122 -2.584920e-01  1.324626e+00  1.2036516360 -
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## [2332,]  0.4592188459  2.147131e+00  7.709608e-01 -0.2614738445 -
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## [2333,]  0.6065326703  1.381416e+00 -2.447067e-01 -1.3540805634 -
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## [2334,]  0.6794025256  8.459270e-01  1.047993e+00  0.3674627382 -
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## [2335,]  0.7248357148  8.834964e-01  8.063175e-01  0.2991393205 -
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## [2336,]  0.4054669001  1.666157e+00 -3.500029e+00 -3.6215207721
1.145275e+00
## [2337,]  0.7512995524  1.177232e+00  1.167272e+00  1.2881112818 -
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## [2338,]  0.9124612802 -1.527635e-01  2.246015e-02 -0.8423779343 -
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## [2339,]  0.6595043159 -5.558380e-01 -4.274008e-01 -0.1736085301 -
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## [2340,]  0.9056954277 -4.210198e-02 -5.166960e-02 -0.0640486002 -
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## [2341,]  0.9012512938  7.419813e-01  8.010115e-01  1.6972721208 -
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## [2342,] -7.6506523129 -9.556506e-01  7.913867e-01 -0.4809404823 -
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## [2343,]  0.8679291750  8.443789e-02 -4.588028e-01 -1.4478475864 -
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## [2344,]  0.9201105916 -7.613740e-01  1.362030e-01 -0.3789043813 -
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## [2345,]  0.9096119954  7.619178e-02 -7.694706e-02 -0.0066803592 -
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## [2346,]  0.5322146795  2.020026e+00  5.680147e-02 -0.9556294878 -
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## [2347,] -3.0519308667  1.324084e+00 -3.130477e-01 -0.0664415024
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## [2348,]  0.9236599527 -5.245690e-02  8.422185e-01 -0.2628644320 -
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## [2349,]  0.7025557455  1.353218e+00  1.153799e+00  1.1850549957 -
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## [2350,]  0.7965342804 -1.681946e-01  1.414980e-01  0.7738787621 -
9.910994e-01
## [2351,]  0.7914287140  1.467288e-01 -4.596930e-01 -0.2578701478 -
1.323736e+00
## [2352,]  0.9208227569 -2.896787e-01 -1.337818e+00 -0.3525897443 -
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## [2353,]  0.7611592388  6.790311e-02  4.701109e-02 -0.5532347288 -
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## [2354,]  0.9143237115 -3.560842e-01  2.899230e-01 -1.4990192262 -
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## [2355,] -9.2660459881  1.790022e-02  2.055967e+00  0.0909256188
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## [2356,] -1.8905159235 -2.427780e+00 -1.084294e+00  0.0386501326 -
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## [2357,] -7.6758800542 -8.384697e-01  8.847145e-01 -0.2988720143 -
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## [2358,]  0.8294076819  4.750300e-02 -4.688079e-01 -1.0539049887 -
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## [2359,]  0.8618188070 -3.534677e-01  3.634225e-01 -1.0102998480 -
2.443265e-01
## [2360,]  0.7754617351  2.244772e-01  4.460385e-01 -0.5091664623 -
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## [2361,]  0.0457046033  1.075923e+00 -2.512534e+00 -0.2655898612
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## [2362,]  0.6314212272  9.268839e-01  8.291638e-01  0.0338670339 -
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## [2363,]  0.9031347919  9.809450e-02  1.895282e-01  0.2235723211 -
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## [2364,]  0.7621421311  1.408711e+00  9.701890e-01  1.9003965883 -
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## [2365,]  0.7284783654  1.712047e-01  9.938432e-02 -0.4621694489 -
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## [2366,] -2.1362676679  2.672295e+00  2.948833e+00 -0.1225763613
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## [2367,]  0.9076128065 -6.206927e-01  3.255087e-01 -1.1090959262 -
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## [2368,]  0.6739744196  8.356994e-01  1.108865e+00  0.4689171524 -
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## [2369,]  0.5766195665  1.599907e+00  7.518516e-01 -0.7918225153 -
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## [2370,] -0.3308944455 -1.928121e+00 -1.847935e+00  3.3756702931 -
1.739179e+00
## [2371,]  0.3918987528  1.904597e+00 -1.385225e+00  0.3982114745 -
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## [2372,]  0.6354422995  6.931438e-01 -9.129393e-01  0.3112886663 -
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## [2373,] -0.6860425050  2.645120e-01 -1.881433e+00 -0.8492870298 -
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## [2374,]  0.9214176363 -4.097820e-02  8.552848e-01 -0.1844266678 -
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2.617763e-01
## [2375,]  1.0299299697 -8.108016e-01  5.977273e-02 -0.1697604976 -
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1.483494e+00
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## [2378,] -0.7362973446 -4.903001e-01 -9.865822e-01  0.4018046761 -
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## [2379,] -8.3060253133 -1.645095e+00  1.328219e+00 -0.8283241881 -
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## [2380,]  0.5782895701  1.423859e+00  1.136748e+00  0.6154812284 -
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## [2381,]  0.6257896877  1.165594e+00  7.937137e-01 -0.6436319534 -
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## [2382,]  0.7887034742  3.708287e-02  2.590076e-01 -0.2750035827 -
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## [2383,]  0.7312483557 -5.234351e-01 -5.011612e-01 -0.3982015011 -
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## [2384,]  0.6523879691  1.189508e+00 -1.198900e+00 -0.9851389250
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## [2385,]  0.5678288132  1.371629e+00  9.735299e-01  0.5300804651 -
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## [2386,]  0.7926275134 -2.084665e-01  7.016568e-01  1.2000590883 -
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## [2387,]  0.8429617691 -1.894979e-02 -2.585296e-01 -0.9579090213 -
9.823683e-01
## [2388,] -2.1369087815  2.640100e+00  3.007533e+00 -0.0894145737
2.375473e+00
## [2389,]  0.4495562482  2.416184e+00  9.142674e-01  0.0550940676 -
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## [2390,]  0.4984724725  2.207278e+00  9.480311e-01  0.1058437842 -
2.565835e-01
## [2391,]  0.6494517158  1.231587e+00  5.252102e-01 -0.7445654799 -
3.909323e-01
## [2392,] -0.0403814873  4.886421e-01  1.690491e+00  0.7688009377
5.161154e-01
## [2393,]  0.8456293363  2.255630e-02 -2.004896e-01 -1.1661274681 -
5.356138e-01
## [2394,]  0.9083978191 -1.829281e-02 -5.310519e-02 -0.0592683324 -
3.800479e-01
## [2395,] -0.0816580126  1.162875e+00  6.231976e-01 -0.8200477154
5.369794e-01
## [2396,]  0.7736762273  2.973141e-01  5.054253e-01 -0.2966912535 -
4.097529e-01
## [2397,] -0.5702864558 -1.452656e+00  1.137227e-01  1.1550383782 -
1.727677e+00
## [2398,]  0.8164380055 -8.548863e-03 -6.333051e-01 -0.2858060923 -
1.290662e+00
## [2399,]  0.4078344672 -1.539587e-01 -1.931583e-01  0.3471338653 -
```

```
4.352743e-01
## [2400,] -0.1336076258  1.536301e+00  8.720735e-01 -0.7873149706
6.112352e-01
## [2401,]  1.0915428493 -1.876569e+00  3.937266e-01  0.2339800918 -
9.988496e-01
## [2402,]  0.9853760589 -5.285191e-01  6.320763e-01 -0.0013800215 -
5.998321e-01
## [2403,]  0.7409638307  3.326430e-01  4.424242e-01 -0.6353523773 -
3.267412e-01
## [2404,]  0.5838937933  1.417536e+00  8.486781e-01 -0.2835847496 -
2.760631e-01
## [2405,]  0.6957869393  1.027179e+00  2.547398e-01 -1.0521466352
2.900595e-03
## [2406,]  0.5874460325  1.329484e+00  8.399133e-01 -0.3240674793 -
2.816468e-01
## [2407,] -3.0584085831  1.266643e+00 -3.449326e-01 -0.1675341216
6.881861e-01
## [2408,]  0.9515797240  4.778312e-01  2.857269e-01  0.3454801764 -
5.422944e-01
## [2409,]  0.4652188642  2.183327e+00  8.727268e-01 -0.0060304169 -
1.027781e-01
## [2410,]  0.7391045353  2.069731e-01  2.285046e-01 -0.4391750800 -
5.652045e-01
## [2411,] -1.1294960670  3.194483e-01 -3.911295e+00  0.0023143098
1.328516e-01
## [2412,] -0.7093856007  5.080215e-01 -2.000713e-01  0.4598630261 -
9.276197e-02
## [2413,]  0.6449749827  8.732697e-01 -7.532880e-01 -0.3565369511 -
1.010162e-01
## [2414,]  0.7046656234 -3.154404e+00 -3.189537e+00  5.7203758400
1.295471e+00
## [2415,]  0.9308408928 -6.876474e-01  3.386029e-01 -0.2139106503 -
4.581859e-01
## [2416,]  0.6610218128  1.367150e+00  1.489583e-01 -2.0289406084
2.091796e-01
## [2417,] -7.6987699724 -7.892438e-01  8.676359e-01 -0.4312762177 -
2.064358e+00
## [2418,] -3.0495517124  1.309116e+00 -5.133499e-02  0.0946259039
6.790793e-01
## [2419,]  0.9319447809 -4.699714e-01 -1.331169e+00 -0.4096137507 -
4.613710e-01
## [2420,]  0.8128498599  2.917955e-01  2.465932e-01  0.3066121928 -
1.305565e+00
## [2421,]  0.7293672912  8.141850e-01  7.098212e-01  0.1083257146 -
6.378434e-01
## [2422,] -0.0815596917  1.819881e+00  1.403680e+00  0.0773965943
1.526721e+00
## [2423,]  0.7636651127  1.456430e+00  9.852895e-01  1.9874190126 -
1.128254e+00
## [2424,]  0.6524174564  1.082067e+00  8.531103e-01 -0.4295705385 -
```

```
2.291167e-01
## [2425,]  0.6580406869  9.281972e-01  8.100493e-01 -0.3599886276 -
2.627201e-01
## [2426,] -0.0759423041  1.094492e+00  3.723392e-01 -1.0216580978
5.771807e-01
## [2427,] -7.6800367420 -8.296389e-01  8.651188e-01 -0.3769754464 -
2.080166e+00
## [2428,]  0.9832530661 -1.238112e+00 -9.282412e-01 -0.9439665093
4.498920e-01
## [2429,]  0.6345665230  1.004816e+00 -7.720560e-01  1.6820044037 -
4.847600e-01
## [2430,]  1.2900662745 -2.828752e+00  1.507262e+00 -0.2365599749
4.035438e-01
## [2431,]  0.4623519187  2.251026e+00  7.610101e-01 -0.1376318312 -
1.587195e-01
## [2432,]  0.7443160768  1.489888e+00  1.038389e+00  2.0895855138 -
1.131185e+00
## [2433,]  0.7354085639  7.004201e-01  3.171960e-01 -1.4306788452
1.222017e-02
## [2434,]  0.5993124752  2.197861e+00  6.000625e-01 -0.1707267911 -
4.227676e-01
## [2435,] -1.0090701745  1.269623e-01 -2.209046e+00 -0.4512680481 -
6.923850e-02
## [2436,] -0.2635690080 -2.097981e+00 -4.476464e-01  3.3823860847 -
2.358249e+00
## [2437,]  0.4666158468  1.844037e+00  1.332237e+00  1.1608699649 -
6.250253e-01
## [2438,]  0.6967205139  6.689186e-01  4.775583e-01 -0.5148095913 -
6.278944e-01
## [2439,]  0.1002525758 -6.498512e-02  7.760253e-01 -0.5867403401
5.350016e-01
## [2440,] -8.3045473630 -1.641345e+00  1.307160e+00 -0.8432468720 -
8.679925e-01
## [2441,]  0.8456772559  2.528000e-02  2.242403e-01 -1.2238283981 -
4.849718e-01
## [2442,] -0.0579041405  5.496925e-01  1.745767e+00  0.7340405652
6.028869e-01
## [2443,]  0.7188967401  9.334423e-01  8.555193e-01  0.4737403193 -
6.421393e-01
## [2444,] -1.8767572351 -2.420127e+00 -1.106058e+00  0.1042747387 -
1.840032e+00
## [2445,]  0.4335234826  1.914656e+00 -2.601435e-01 -0.4253563714 -
2.823513e-01
## [2446,]  0.6712250421  9.236800e-01  1.379636e-01 -0.6817293115 -
4.575020e-01
## [2447,]  0.5880212442  2.033881e+00  7.499246e-01  0.4858714097 -
5.817313e-01
## [2448,]  0.7855579270  9.599623e-01  6.188481e-01  0.2874595213 -
6.878199e-01
## [2449,]  1.1758769086 -1.691647e+00  7.478143e-01 -0.1103509841 -
```

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3.938890e-01
## [2450,] -9.6736632705 -3.944886e-01  3.045046e-01  1.8142245982
3.889124e+00
## [2451,]  0.4655949113  1.827157e+00  1.265298e+00  0.9540991328 -
5.878009e-01
## [2452,]  0.4142050048 -1.388162e-01 -2.306143e-01  0.3978663136 -
4.983614e-01
## [2453,]  0.9277764080  6.833099e-03  8.437068e-01 -0.0925086167 -
3.009505e-01
## [2454,]  0.2761534901  5.403825e-01 -1.764712e+00  1.2605640781
2.844627e+00
## [2455,]  0.9357022516 -7.479406e-01  8.549203e-02 -0.4526855303 -
3.957173e-01
## [2456,]  0.5020256267  2.175958e+00  9.172639e-02 -0.8969212308 -
2.489975e-01
## [2457,]  0.7577491263  3.755727e-01  6.968835e-01 -0.3366757228 -
3.919459e-01
## [2458,]  0.5395921390  1.980910e+00  8.369172e-02 -0.9444231687 -
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## [2459,]  0.6182503981  9.952867e-01  4.649574e-01 -0.9398262493 -
1.502969e-01
## [2460,]  0.5733419149  1.334265e+00  8.725012e-01  0.3278324062 -
4.192299e-01
## [2461,]  0.6390066521  9.003110e-01  6.325751e-01  1.7119684041 -
9.299228e-01
## [2462,]  0.0332237017  5.464897e-01 -7.255597e-01 -0.5990991572
1.603187e-01
## [2463,]  0.7295603376  5.943281e-01 -9.118433e-01 -0.6705261058 -
1.280431e-02
## [2464,] -8.3215547048 -1.586648e+00  1.346291e+00 -0.7952378314 -
8.504319e-01
## [2465,]  0.5393961915 -5.402239e-01 -4.305235e-01 -0.3439233891 -
4.511832e-01
## [2466,]  0.6078152012  1.285495e+00  1.169754e+00  0.8251772942 -
5.488630e-01
## [2467,]  0.2408700302  6.012219e-01 -2.114126e-01 -0.6327455907
7.238673e-02
## [2468,] -0.1353685043 -2.142384e+00 -3.329114e-01  2.7911390957 -
2.287058e+00
## [2469,]  0.7290174035 -8.113803e-02 -1.084157e+00 -0.1272015550 -
1.226214e+00
## [2470,]  0.9576021078 -4.500434e-01  6.931622e-01 -0.0131899681 -
5.343481e-01
## [2471,]  0.7301453477  8.527520e-01  7.606506e-01  0.2030237427 -
6.163618e-01
## [2472,]  0.6768815689  1.100884e+00  5.990946e-01 -0.5599293617 -
3.984943e-01
## [2473,] -8.8775900766 -6.044946e-01 -1.871806e+00  1.0698387508
3.306002e+00
## [2474,]  0.5042799394  1.414386e-01 -1.662868e-01 -0.3528595705 -
```

```
4.118182e-01
## [2475,]  0.3060620519  3.816099e-01 -2.342212e+00  0.9788553817
3.810062e-01
## [2476,] -5.3021806145  1.303430e-01  1.999368e-02  1.6145646399
1.554205e+00
## [2477,]  0.2556538327  1.182947e+00 -2.118322e+00 -0.7423553695
7.106665e-01
## [2478,]  0.3203891138  1.711628e+00 -1.510687e+00 -0.8146207823
5.118438e-01
## [2479,]  0.1218481066 -8.626745e-02  9.257639e-01 -0.4710288000
4.460861e-01
## [2480,]  0.3392194869  1.558895e+00 -1.286496e-01 -0.7522353314
1.918543e-02
## [2481,]  0.5590740609  1.532928e+00  1.164702e+00  0.7564712802 -
5.040638e-01
## [2482,]  0.8052144469  2.517079e-01  6.983647e-02  0.2643372181 -
1.278706e+00
## [2483,]  0.1974641676  1.652138e+00 -3.085669e-01 -0.5026766031
7.277015e-02
## [2484,]  0.6908720075  8.640723e-01 -1.692425e-01 -1.7113369185
6.073332e-04
## [2485,]  0.6145932425  1.405566e+00 -8.484972e-02 -2.4622114960
3.352192e-01
## [2486,] -0.1234325418 -2.148501e+00 -1.560367e-01  2.8756726789 -
2.352390e+00
## [2487,]  0.4322392838  2.385492e+00  7.543239e-01 -0.1029251618 -
3.995117e-01
## [2488,]  0.7456431579  6.646689e-01  1.486564e-01 -1.4020334840
3.866805e-02
## [2489,]  0.6383164164  9.889694e-01  6.371842e-01 -0.4538208045 -
1.805382e-01
## [2490,]  0.8599317603 -2.469442e-01  3.033580e-01 -1.2297133067 -
1.755605e-01
## [2491,]  0.7648829884  5.899557e-02  1.743514e-01 -0.2421382556 -
4.975035e-01
## [2492,] -0.2070737207  1.267235e+00 -4.572282e-02  0.5178438166
2.172595e-01
## [2493,]  0.7508126647  4.184228e-01 -1.199917e+00 -0.6281893946 -
5.365239e-01
## [2494,]  0.5066459766  9.059489e-01 -1.169175e+00  0.8796060662
1.694394e-01
## [2495,]  0.5551867924  1.638069e+00  6.677023e-01 -0.7398518090
1.893440e-02
## [2496,]  0.1148422667 -1.523183e-01  7.862502e-01 -0.5159614569
5.072926e-01
## [2497,]  0.8201539762  4.429319e-01  1.037177e+00  0.3377736433 -
3.774764e-01
## [2498,]  0.5575631736 -7.243565e-01 -6.870969e-01 -0.5641511912 -
4.290855e-01
## [2499,] -0.1544134752  1.698551e+00  1.580700e+00  0.4119156126
```

```
1.554270e+00
## [2500,]  1.0308434797 -9.165229e-01 -1.636846e-01 -0.4035352431 -
8.967001e-01
## [2501,]  0.7516437941  1.272147e+00  5.403903e-01 -0.6648086184 -
2.233237e-01
## [2502,] -0.0535860065  5.027303e-01  1.746772e+00  0.7752519665
5.859377e-01
## [2503,]  0.4509923531  2.322980e+00  6.776868e-01 -0.1850645432 -
4.287833e-01
## [2504,]  0.5902839011  1.428718e+00  4.146971e-01 -0.6046949864 -
1.353192e-01
## [2505,]  0.7927107645  2.294130e-01  5.904658e-01 -0.5067205262 -
4.014811e-01
## [2506,]  0.8790002990  6.718165e-02 -4.613724e-02 -0.1365076069 -
3.489610e-01
## [2507,]  0.9709262311 -5.769443e-01 -4.473402e-01 -1.1257083627 -
1.133398e-01
## [2508,]  0.6613365874  8.667992e-01  4.306419e-01 -0.6374675612 -
5.905679e-01
## [2509,]  0.9033375787 -7.354018e-01  8.650887e-01  0.2930614617 -
6.712581e-01
## [2510,]  0.9943679192 -1.258790e+00 -7.472307e-01 -0.6526985808 -
9.720319e-01
## [2511,]  0.5710712920  1.592336e+00  7.585686e-01 -0.9326286589
1.000122e-02
## [2512,]  0.1091847538 -1.084414e+00 -2.624468e+00  0.5572504904 -
1.226796e+00
## [2513,]  0.6368730544  9.499015e-01  6.046117e-01 -0.5981211887 -
1.469118e-01
## [2514,]  0.2250910983  6.727974e-01 -1.452764e-01 -0.6292391700
1.429812e-01
## [2515,] -7.6703903655 -9.124243e-01  7.749722e-01 -0.6134933904 -
2.066546e+00
## [2516,]  0.7506958626  9.343471e-01  8.192390e-01  0.5218419049 -
6.693291e-01
## [2517,]  0.7952691192  3.488593e-01  8.226131e-03  0.0895529800 -
1.236348e+00
## [2518,] -8.3883145409 -2.728703e-01  7.345988e-05 -0.0287821283
8.158179e-02
## [2519,]  0.1818155928 -2.488794e-01 -7.936276e-01  0.4450640541 -
2.786963e-01
## [2520,]  0.9387443462 -2.785423e-01  1.340101e+00  1.1172466484 -
4.491124e-01
## [2521,] -0.6510150442 -4.836964e-01 -5.149976e-01  0.0285258178 -
7.106479e-01
## [2522,]  0.7782301793  6.795179e-01 -8.684620e-01  0.1509648219 -
3.246852e-01
## [2523,]  0.7299980824 -3.563297e+00 -2.038648e+00 -0.3520929726
4.741243e+00
## [2524,] -0.7292292158  1.152808e+00 -2.496183e+00  1.3562775389
```

```
5.073489e+00
## [2525,] -0.2993899848  6.598801e-01 -5.983308e-01 -0.2922457425
1.483554e+00
## [2526,]  0.1157945567  2.711971e+00 -1.672287e+00  0.1849388899
5.562993e-01
## [2527,] -0.5140232226  2.449333e+00 -1.250770e+00 -0.1759560882
2.486089e+00
## [2528,]  0.4359419872  1.781603e+00 -1.231088e+00  0.9011825317 -
3.630126e-01
## [2529,]  0.4923020023 -3.636082e-01 -1.994799e+00 -0.3168675604
5.809229e-01
## [2530,]  0.6796179678  1.126076e+00 -6.807992e-01  0.0645353473
1.063148e-01
## [2531,]  1.1599718523 -2.282688e+00 -2.385100e-01 -0.2388726280
5.976253e-01
## [2532,]  0.4327337611  1.955217e+00 -9.827946e-01 -0.6586249121
6.171233e-01
## [2533,]  0.2451150196  3.427251e-01 -3.001299e+00  0.4787672870
3.250686e+00
## [2534,]  0.7903125664 -1.064688e-02 -9.754482e-01  0.8214468263 -
1.026653e+00
## [2535,]  0.9565371295 -1.979535e-01 -3.358634e-01  1.0592200704 -
1.934987e-01
## [2536,] -0.3022099597  1.341512e+00 -8.910983e-01 -0.1617203959
1.268895e+00
## [2537,]  0.5543803217  2.262578e+00 -7.144888e-01 -0.1703023644
1.130133e-01
## [2538,]  0.1907860864  1.245771e+00 -2.303596e+00  0.4209692240
5.562402e-01
## [2539,]  0.6377297742  1.281389e+00 -5.596498e-01 -0.0561520983
5.177677e-02
## [2540,] -1.1440457481  1.472282e+00 -3.398646e+00  1.1557220960
5.660654e+00
## [2541,]  0.5602174572 -1.495363e-02 -1.323978e+00 -0.3054177740
4.910877e-01
## [2542,]  0.6022165081  1.619963e+00 -1.011514e+00 -0.8392964858
4.948225e-01
## [2543,] -7.6166917412 -9.954567e-01 -5.068801e-01 -0.3029021911 -
1.621264e+00
## [2544,]  0.6025189036  1.346963e+00 -1.538861e+00 -0.2755634118 -
6.026774e-02
## [2545,] -0.2721812079  7.520806e-01 -1.943407e+00 -0.3685021808
1.171725e+00
## [2546,]  0.8560403089 -2.585618e-01 -1.481409e+00 -0.2658786134
3.929587e-01
## [2547,]  0.2367548223  2.956958e+00 -1.251182e+00 -1.1313690064
5.515741e-01
## [2548,]  0.1844702195  1.306906e+00 -2.456172e+00  3.6874141336 -
6.145667e-01
## [2549,]  0.7525518431  6.254257e-01 -7.890581e-01 -0.4398905101
```

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2.637902e-01
## [2550,]  0.7721083417  3.702687e-02 -7.116052e-01 -1.3711608430
7.261609e-01
## [2551,] -9.1780509964 -3.649703e-01  6.916007e-01 -0.0448146691
1.306874e+00
## [2552,]  0.4819186594  1.945368e+00 -1.578147e-01  0.4179456029
9.969128e-02
## [2553,]  0.2256263782  9.028086e-01  7.674784e-01  2.9003113573
1.428023e+00
## [2554,]  0.6915001220  7.888957e-01 -1.128082e+00 -0.6438708826
1.440074e-01
## [2555,]  0.8727957415 -7.641601e-02 -2.505372e-01  0.9584955237 -
2.675070e-01
## [2556,]  0.9163152746  2.561691e-01 -4.426564e-01  1.5545899993 -
3.185590e-01
## [2557,]  1.0071628373 -2.908665e-01 -2.282227e-01  1.4881632992 -
3.171273e-01
## [2558,] -0.1848839271  2.109009e+00 -5.111549e-01 -1.0183414176
2.345657e+00
## [2559,] -1.0406321559  5.095688e-01 -1.879113e+00  0.7436411972 -
2.206600e-01
## [2560,]  0.7408304659  7.338255e-02 -7.523302e-01 -0.2463326635
1.956858e-01
## [2561,]  0.1438868209 -7.493070e-01  5.476838e-01  0.0269287804
1.655343e+00
## [2562,]  1.0695261159 -1.345941e+00  2.502603e-02  0.3571383198
4.537145e-01
## [2563,] -0.8383511951  1.506755e+00  7.499723e-01  0.2026527049
3.343586e+00
## [2564,]  0.6329747683  1.274297e+00 -5.720939e-01 -0.6033372275
3.509820e-01
## [2565,] -0.9992723079  7.939465e-01 -6.256846e-02 -0.3487014247
1.733856e-01
## [2566,]  0.8705091912 -3.497922e-01 -4.752043e-01  0.4499291926
2.213275e-01
## [2567,]  0.7715325083  1.027256e+00 -5.093935e-01  1.0584857184 -
3.461144e-01
## [2568,]  0.9297733138 -7.634051e-01 -5.952494e-01 -0.8946094804
6.335785e-01
## [2569,] -1.0252769847 -1.585414e-01 -2.793771e+00  0.3569661827 -
3.514533e-01
## [2570,]  1.0206368727 -1.584627e+00 -6.282932e-01  0.5229498796 -
5.292477e-01
## [2571,]  0.7843066260  5.985537e-01 -6.630846e-01 -0.3574629379
6.250652e-01
## [2572,]  0.0219600672  4.682812e-02 -5.546379e-01  1.0755148080
4.453336e-02
## [2573,]  0.6757066357  6.158488e-01 -8.112330e-01 -0.9799436359
3.975157e-01
## [2574,]  0.7023815145  6.004840e-01 -7.178894e-01 -0.4369321108
```

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1.293303e-02
## [2575,]  0.8458099532 -4.176017e-01 -5.026917e-01 -0.6741994609
5.276563e-01
## [2576,] -0.8754304471 -1.364129e+00 -2.516390e+00  0.9363404032 -
4.601381e-01
## [2577,] -2.1759241740 -9.308571e-01 -2.175714e+00 -1.1712883402 -
9.490786e-02
## [2578,]  0.7839639761  1.339404e+00 -1.125827e-01  1.9760414238 -
3.186940e-01
## [2579,]  0.8370931169 -3.257519e-01 -7.512163e-01 -0.7865471560
1.585566e-01
## [2580,]  0.9843651103 -1.078925e+00 -8.136980e-02 -0.5658220486
7.544021e-01
## [2581,]  0.9273331777 -2.520893e-02 -1.642431e-01  1.3628624360
3.199934e-02
## [2582,]  0.4974423588  1.883732e+00 -6.281583e-01 -0.0665128178 -
9.108833e-02
## [2583,]  0.0682940011 -3.155472e-01 -2.972666e+00  2.3143498321 -
2.359217e-01
## [2584,] -1.0210567266 -1.181024e-01 -3.634876e+00  1.7558757333
1.445665e+00
## [2585,]  0.8813001645 -4.114011e-02 -6.332640e-01 -0.1045996541
6.553165e-02
## [2586,]  0.0211277033 -1.112264e+00 -3.061337e+00 -0.5409572230
8.391041e-01
## [2587,]  0.1888116445  5.951676e-01 -3.240056e+00  1.9823021514
2.686645e+00
## [2588,] -2.0122380106 -2.830763e+00 -1.852607e+00  0.1569422319 -
3.857943e-01
## [2589,] -1.9199212097  2.309563e-01 -7.747033e+00  3.0961721828
3.974501e+00
## [2590,]  0.9824589160 -1.275489e+00 -7.339085e-01  1.3325629145 -
2.110509e-02
## [2591,]  0.1631688150  2.678142e+00 -1.193151e+00 -0.8954246466
4.757137e-01
## [2592,]  0.4846797470  1.642773e+00 -9.437387e-01  0.1044596331
1.827112e-01
## [2593,]  0.4912856850  5.423390e-01 -1.994218e+00  1.3299885538 -
7.982366e-02
## [2594,] -0.3324037925  1.162517e+00 -4.344645e+00 -2.6914822827
2.601522e+00
## [2595,]  0.5508638978 -1.357422e-01 -1.762130e+00  0.0240210210
1.882214e-01
## [2596,] -0.8774329390  2.023237e-01 -4.398830e+00  0.5089385982
5.936236e-01
## [2597,]  0.4898233716  2.927494e-01 -1.841810e+00  0.9029032343
3.924013e-02
## [2598,]  0.5251018018  1.527629e+00 -1.147144e+00 -1.2356831151
4.268592e-01
## [2599,]  0.2693458248  2.116101e-02 -2.325797e+00  0.9383201150
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8.220267e-02
## [2600,] -1.1178078102 -1.879914e+00 -8.041173e+00 -0.0270443865
1.011008e+00
## [2601,] -1.0043651597 -4.653489e-01 -5.074482e+00  0.4292615560
7.519639e-01
## [2602,]  0.0827229917 -1.435794e+00 -2.556449e+00 -1.6725639950
1.719514e+00
## [2603,]  0.5086756029  1.100620e+00 -1.202893e+00 -0.4119406680
3.189342e-01
## [2604,] -0.1608577726  9.199600e-01 -3.454894e+00  0.3606012551
5.283140e-01
## [2605,]  0.3421439468 -6.411440e-01 -4.487605e+00  0.3256441005
7.121741e-01
## [2606,]  0.2068694967  1.807679e-01 -2.368888e+00  0.1743548454
5.811859e-01
## [2607,] -1.3146481650 -3.012634e-01 -3.376289e+00  2.1465926685 -
3.227129e-01
## [2608,]  0.8528767517 -7.998698e-01 -8.491552e-01  0.4448432724 -
1.661389e-01
## [2609,]  0.2306980393 -1.172048e+00 -1.712642e+00  0.4860501138
1.044923e+00
## [2610,]  0.7880338521  1.128217e-01 -1.597596e+00 -1.4089145179
6.318935e-02
## [2611,]  0.3827100835  5.596247e-01 -2.386544e+00  2.8955817658
2.842177e+00
## [2612,]  0.9821460796 -5.099132e-01 -1.241425e-01 -0.7143911702 -
1.585665e-01
## [2613,]  0.6013857073  1.517968e+00  1.948150e-01  1.3131525095 -
8.268568e-01
## [2614,]  0.6034347216  1.536891e+00  8.615107e-01  0.1013601708 -
5.672688e-01
## [2615,]  0.8347222886 -6.161657e-02 -6.313873e-01 -0.2655583190 -
1.288273e+00
## [2616,]  0.7639236598  5.150573e-01  8.340403e-02 -1.5061156756 -
5.688296e-03
## [2617,]  0.7227457653  1.033293e+00  1.953499e-01 -1.0801875073 -
1.531492e-02
## [2618,] -2.1332016270  2.655639e+00  3.043244e+00  0.0141915769
2.384576e+00
## [2619,]  0.1592550922 -3.602633e-01  3.854043e-01  0.6333973832 -
6.252258e-01
## [2620,]  0.8857122717  7.061133e-02 -1.661197e-02 -0.0975231048 -
3.216045e-01
## [2621,] -0.7407165540 -5.113073e-01 -6.848795e-01  0.6398228719 -
8.117083e-01
## [2622,]  0.6509120331  8.377606e-01  8.794453e-01  0.2021084904 -
5.994068e-01
## [2623,]  1.0839765564 -1.391383e+00  1.318907e+00  0.2488247733 -
2.570868e-02
## [2624,]  0.8479184825  8.363369e-02  3.261609e-01 -0.9666751197 -
```

```
4.805298e-01
## [2625,]  0.6509928130  8.369480e-01 -1.753974e+00 -2.4553243731 -
9.743894e-02
## [2626,] -5.2389349999 -6.996210e-02  1.229613e+00  1.4500859474
1.016220e+00
## [2627,]  0.7612954432  6.017127e-01  6.475448e-02 -1.5525594250
2.615228e-02
## [2628,]  0.7358431769  6.948549e-01  1.147636e-01 -1.4886445637
4.402681e-02
## [2629,]  0.6587595126  1.159638e+00  5.403680e-01 -0.6648649175 -
4.071622e-01
## [2630,]  0.6154747331  9.807303e-01  6.270785e-01 -0.5679905673 -
1.540330e-01
## [2631,] -0.0963805767  1.877413e+00  7.109488e-01 -1.4046774368
1.728140e+00
## [2632,]  0.8588118406 -1.368672e-01  5.260838e-01 -1.0314388481 -
2.339436e-01
## [2633,]  0.4419233658  6.001679e-01 -1.787341e+00  0.4823831041 -
2.438072e-02
## [2634,] -2.1475122100  2.681936e+00  3.038018e+00 -0.0504891120
2.402699e+00
## [2635,]  0.5323299322  1.813972e+00  2.450596e-01 -1.0367329624 -
5.884626e-02
## [2636,] -2.3429743758  1.793117e+00 -9.068024e-01  0.8790688798
5.583402e+00
## [2637,]  0.6244920605  1.243548e+00  8.168512e-01 -0.6429236566 -
6.762025e-02
## [2638,]  0.7772139613  4.957298e-01 -8.999344e-02 -1.1581419304 -
4.008537e-01
## [2639,]  0.7010789311  6.433987e-01  3.302769e-01  1.8717038966 -
8.835522e-01
## [2640,]  0.9814513496 -6.188709e-01 -1.957070e-01 -1.0341666939 -
9.847132e-02
## [2641,] -0.1172930122  1.500131e+00  8.096086e-01 -0.9245243583
6.423299e-01
## [2642,]  0.5398275867  2.072603e+00  3.501400e-01 -0.5615592157 -
3.349396e-01
## [2643,]  0.9156531263 -7.439185e-01  1.019813e+00 -0.7951876766
1.708746e-01
## [2644,]  0.5926077797  1.569202e+00  7.904378e-01 -0.5964632218 -
1.172952e-01
## [2645,]  0.3152427929  1.779945e+00  8.218413e-03 -0.8724544814
4.661854e-02
## [2646,] -3.0316541848  1.292552e+00 -1.155916e-01  0.0901625710
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## [2647,]  1.0286721911 -7.375759e-01  3.417117e-02 -0.1845956385 -
9.733519e-01
## [2648,] -0.8029039882  1.386160e+00  2.004865e+00  0.1451599147
2.788124e+00
## [2649,]  0.4418725998  5.550923e-01 -1.948125e+00 -1.0574020257
```

```
2.599766e-01
## [2650,]  0.6143965505  1.601436e+00  8.555131e-01  0.1155726158 -
5.388436e-01
## [2651,]  0.2987911013  1.702548e+00 -1.540504e-01 -1.0167048636
1.269562e-01
## [2652,]  0.6331687224  1.238118e+00  8.066266e-01 -0.6498153065 -
7.243447e-02
## [2653,]  0.9131553120 -3.915400e-02  6.958902e-02  0.2405390347 -
3.935282e-01
## [2654,]  0.7164811360  1.278954e+00  1.211037e+00  1.3210083719 -
5.472644e-01
## [2655,]  1.0907876689 -1.460791e+00  1.368065e+00  0.3422787294 -
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## [2656,]  0.8819801621 -2.392340e-01  5.124059e-01 -1.0039867614 -
2.452854e-01
## [2657,]  0.9369752302 -2.727670e-01  1.318830e+00  1.0451123864 -
4.220527e-01
## [2658,]  0.9208324263  7.539866e-01  7.287921e-01  1.6597145932 -
9.650661e-01
## [2659,]  0.7133644112  1.021043e+00  3.136855e-01 -0.8345823189 -
1.242998e-02
## [2660,] -2.1176640387  2.618346e+00  2.988892e+00 -0.0391199212
2.362390e+00
## [2661,]  1.1637204846 -1.332994e+00 -8.876153e-01 -1.9355022326 -
8.410390e-01
## [2662,]  0.9032742262  5.992240e-01  3.893089e-01  0.4546183375 -
9.776131e-01
## [2663,]  0.4388380416  2.481198e+00  8.267012e-01 -0.1867367701 -
2.410738e-01
## [2664,]  1.0870525575 -1.455155e+00  1.431483e+00  0.4911078351 -
3.179045e-02
## [2665,] -0.8678659499 -8.110737e-01 -8.471940e-01 -1.4131183074 -
5.284048e-01
## [2666,]  0.5632642385  1.427194e+00  1.259865e+00  0.8158747752 -
4.499079e-01
## [2667,]  0.7758686127  2.810814e-01  7.568757e-02  0.0596453020 -
1.195304e+00
## [2668,] -0.0950979805  1.210332e+00  7.231761e-01 -0.6873932752
5.835748e-01
## [2669,]  0.7222139112 -5.972836e-01 -4.220746e-01 -0.3225378224 -
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## [2670,] -0.1139101056  1.475194e+00  8.712572e-01 -0.7740395960
6.170428e-01
## [2671,]  0.6454615904  9.188619e-01  5.628160e-01  1.5377680738 -
9.083760e-01
## [2672,]  0.6678009510  5.177806e-01 -1.487526e+00 -1.2625899938
4.163175e-01
## [2673,]  0.8944470713 -3.620856e-01  5.520416e-01 -0.9866150847 -
2.368641e-01
## [2674,] -0.7816788104  1.408768e+00  2.155406e+00  0.1565252150
```

```
2.760826e+00
## [2675,] -0.7801975323 -1.505912e+00 -2.762513e-01  1.3793667455 -
1.583484e+00
## [2676,]  0.7672416682  6.150415e-02  2.485018e-01 -0.4232120303 -
5.411496e-01
## [2677,]  0.5776129296  1.646639e+00  8.833205e-01 -0.0637131605 -
4.362826e-01
## [2678,]  0.6945816570  5.522107e-01  7.969483e-01 -0.2736126739 -
3.838776e-01
## [2679,] -0.9220176212 -5.340167e-01 -1.679161e+00  0.1134912788 -
9.491165e-01
## [2680,] -7.6583352846 -8.961079e-01  8.191658e-01 -0.4332618777 -
2.083345e+00
## [2681,]  0.6889827016  4.877413e-01 -2.436532e-01 -1.4126262393 -
9.231211e-02
## [2682,]  0.6295055387  1.451055e+00  3.463445e-01 -0.5116180893 -
7.159625e-01
## [2683,]  0.8877025522 -1.369948e-01  1.110478e+00  0.9925867301 -
7.387962e-01
## [2684,]  0.6623493906  8.968534e-01 -4.686968e-01 -2.0813030767
6.156648e-02
## [2685,]  0.4588337169  1.778748e+00  1.229754e+00  0.7636222895 -
5.340404e-01
## [2686,] -0.8705898027 -1.792633e+00 -6.551297e-01  1.6244877027 -
1.562916e+00
## [2687,]  0.1098259660  1.210367e+00  2.526802e+00  3.2766571737
1.166601e+00
## [2688,] -1.0091763731  7.728568e-01  1.605284e+00 -0.2648679656 -
2.200123e-01
## [2689,]  0.8644941368 -2.683641e-01  4.822083e-01 -0.4102966093 -
4.906403e-01
## [2690,] -8.2854320079 -1.718221e+00  1.294592e+00 -0.8783643577 -
8.462870e-01
## [2691,] -0.1235498932  1.577381e+00  7.749080e-01 -0.9518717304
6.269036e-01
## [2692,]  0.2337916445  6.642589e-01 -1.611140e-01 -0.6165178609
1.491718e-01
## [2693,]  0.7704080441  1.991160e-01 -9.177262e-01 -0.7738692072
2.223326e-01
## [2694,]  0.7731060128 -5.385945e-02 -1.013869e+00 -1.2461485312
5.366173e-01
## [2695,]  0.5915526430  1.450819e+00 -1.349404e+00 -0.9561434774
3.345472e-01
## [2696,]  0.6334195746  9.925108e-01 -1.980145e+00  1.1780780942 -
5.952826e-01
## [2697,]  0.2292700203 -1.474529e-01 -2.655451e+00  2.1841405916
3.093542e+00
## [2698,]  0.8802132187 -3.119656e-01  1.502649e-01 -1.5186005931 -
1.943620e-01
## [2699,]  0.2177277079 -9.445610e-01  1.606385e+00 -0.3197047820
```

```
1.067914e+00
## [2700,]  0.8797219607  1.022040e-01  2.082115e-01  0.0052960686 -
3.364813e-01
## [2701,]  0.6756391492  8.480107e-01  1.138034e+00  0.3900620017 -
2.986807e-01
## [2702,]  0.9295793954 -6.687233e-01  2.840687e-01 -1.2388414831 -
4.112727e-01
## [2703,]  0.7709275254  5.333022e-01  1.652185e-02 -0.8413799936 -
4.337967e-01
## [2704,]  0.4711047573  9.601060e-01 -7.969945e-01 -1.5807313033
8.725233e-02
## [2705,] -0.0891952599  1.888746e+00  6.791073e-01 -1.3374296368
1.678172e+00
## [2706,]  0.1334293408 -1.488879e-01  1.010081e+00 -0.3506773814
4.720003e-01
## [2707,]  0.6675605686  1.351897e+00 -2.135504e-03 -1.0555648056 -
5.226202e-01
## [2708,]  0.6017813061  1.563801e+00  4.739926e-01 -0.3654546647 -
6.451751e-01
## [2709,]  0.4823596866  6.120688e-01  3.629149e-01 -0.5616885181
4.838427e-02
## [2710,]  0.8478734674 -2.687169e-01  2.488004e-01 -0.6533420058 -
4.304431e-01
## [2711,]  0.7251521046  7.222454e-01 -1.369510e+00 -2.2771066676 -
3.427095e-01
## [2712,]  0.9102278012 -8.594872e-01  7.074558e-01  0.2546392663 -
6.042695e-01
## [2713,]  0.5692641162  1.944953e+00  3.390726e-01 -0.6262488515 -
3.033973e-01
## [2714,]  0.9459894545 -7.033325e-01  3.830079e-01 -0.1157285228 -
4.307453e-01
## [2715,]  0.6899872236  1.308429e+00  1.180136e+00  1.0840971102 -
4.874210e-01
## [2716,]  0.5987838658  1.297461e+00  9.240672e-01  0.5539417088 -
4.486020e-01
## [2717,]  0.4832153402  1.754965e+00  1.342436e+00  1.1003385568 -
5.614564e-01
## [2718,]  0.9181492268  7.165176e-01  9.857242e-01  1.7701368678 -
9.749405e-01
## [2719,]  1.1304595651 -3.553393e+00 -5.036312e-01 -0.2194744459 -
4.892630e-01
## [2720,]  0.6834492613  6.447475e-01  7.218429e-01 -0.3315282935 -
4.221368e-01
## [2721,]  0.8154943501  3.185074e-01  1.335487e-01 -1.0801327825 -
5.893605e-01
## [2722,]  0.6294736570  1.445666e+00  3.697753e-01 -0.5391187544 -
6.712310e-01
## [2723,]  0.9626274102 -9.538734e-01  8.457473e-01  0.3687903351 -
6.938544e-01
## [2724,]  0.6900018624  8.903617e-01  1.117071e+00  0.5155981868 -
```

```
3.552974e-01
## [2725,] -0.1420096098  1.620749e+00  1.593984e+00  0.4994094314
1.525322e+00
## [2726,]  0.5873773318  1.294779e+00  9.286541e-01  0.4736067652 -
4.136348e-01
## [2727,]  0.9433160359 -3.075626e-01 -3.914128e-01  0.2896210388
3.672215e-01
## [2728,]  0.5550578916  1.578562e+00  6.189479e-01 -0.8894965860
3.070591e-02
## [2729,] -0.0835226484  1.830306e+00  4.896818e-01 -1.4091950687
1.721841e+00
## [2730,]  0.5438291799 -4.014011e-02 -3.974061e-01 -0.5024612934 -
3.364065e-01
## [2731,]  0.4814293700  2.180347e+00  1.087416e+00  0.1798576885 -
1.502686e-01
## [2732,]  0.3578462039  1.842567e+00  5.928595e-02  0.2551879520 -
3.999932e-01
## [2733,] -2.1201119522 -1.130627e+00 -9.627408e-01 -1.4523487918 -
5.549648e-01
## [2734,]  0.4715416785  1.842118e+00  1.309128e+00  1.1328526381 -
6.133146e-01
## [2735,]  0.4689053848  1.267090e+00 -3.814995e-01 -0.7987049627 -
3.827659e-01
## [2736,]  0.6846237305  1.105224e+00  5.005098e-01 -0.7068826553 -
4.007637e-01
## [2737,]  0.7479112649  8.882956e-01  7.742897e-01  0.0234075676 -
4.215803e-01
## [2738,]  1.0102844029 -1.235754e+00 -5.308803e-01 -0.4348647017 -
1.020239e+00
## [2739,] -0.2243105328 -2.688095e+00 -7.777460e-01 -1.1022525172 -
4.753778e-01
## [2740,]  0.6471203220  9.989305e-01 -1.184237e-01 -1.6486423649
1.875378e-02
## [2741,]  0.2572467734 -1.093496e+00  1.553827e+00 -0.3239685195
1.014551e+00
## [2742,]  0.6003630326  1.318096e+00  1.102573e+00  0.6256819760 -
4.987212e-01
## [2743,] -0.5738290003 -1.412340e+00  1.682914e-01  1.3173752759 -
1.722717e+00
## [2744,]  0.6325121748  1.472092e+00  4.265571e-01 -0.2767959458 -
7.275253e-01
## [2745,] -0.6360663144 -4.171042e-01 -3.086966e-01  0.2624407182 -
7.635565e-01
## [2746,]  0.6664538087 -6.507142e-01 -3.704461e-01 -0.1144095384 -
5.562438e-01
## [2747,]  0.9236227022 -4.175295e-01 -1.301268e+00 -0.4461229530 -
3.822581e-01
## [2748,]  0.9717351359 -3.999676e-01  7.513045e-01  0.2215421475 -
5.401859e-01
## [2749,]  0.9158912112 -4.221666e-01 -1.541968e+00 -0.5871398967 -
```

```
3.732802e-01
## [2750,] -0.7534704859 -1.743942e+00 -1.593260e+00  0.4004036908 -
1.084607e+00
## [2751,]  0.9357998309  6.157546e-01 -2.006272e-01  2.0982922294 -
4.203893e-01
## [2752,] -7.6248288161 -6.784761e-01 -5.052488e-01  0.1655673282 -
1.786792e+00
## [2753,]  0.2934041586  1.261119e+00 -1.635313e+00  2.1913173930 -
2.852387e-01
## [2754,] -1.1388213538 -7.343325e-01 -6.621732e+00  1.5661484031 -
7.678744e-02
## [2755,]  0.4507445722  2.256796e+00  8.591812e-01 -0.0681828696 -
7.503422e-02
## [2756,]  0.6040532987  1.462329e+00  4.317497e-01 -0.4987743937 -
6.451233e-01
## [2757,]  0.6248040714  1.331208e+00  3.442588e-01 -0.5986662523 -
1.832409e-01
## [2758,]  0.9401855063  7.208711e-01  9.989858e-01  2.0102178742 -
1.066365e+00
## [2759,] -7.6139578793 -8.230240e-01  7.759422e-01 -0.0862629773 -
2.236110e+00
## [2760,]  0.8507157986 -5.999342e-02  1.161692e+00  0.8225094140 -
6.133418e-01
## [2761,]  1.0840074069 -6.650304e-01 -1.067288e+00 -2.4084721790 -
9.090830e-01
## [2762,]  1.0489339387 -6.104461e-01  6.422198e-01 -0.0724203654 -
2.266862e-01
## [2763,]  0.6155158848  1.558988e+00  3.080641e-01 -0.5333113685 -
7.363329e-01
## [2764,]  0.9693901168 -1.893922e-01  8.923392e-01 -0.0375940775 -
2.497386e-01
## [2765,] -0.0644594217  1.808213e+00  1.339441e+00  0.0113630328
1.539779e+00
## [2766,]  0.8669767172 -8.036417e-02  1.079479e-01 -1.1801327488 -
3.767223e-01
## [2767,]  0.8213257439 -9.231263e-01  4.575816e-01  0.5657507844 -
6.431838e-01
## [2768,]  0.6738186018  1.160983e+00  5.901949e-01 -0.4577657582 -
4.295296e-01
## [2769,]  0.9332363035 -5.278494e-01  7.586321e-01  0.3622997242 -
2.889189e-01
## [2770,]  1.1404160016 -1.907483e+00  3.084588e-01 -0.0163049348 -
1.134210e+00
## [2771,]  0.5615804315  2.004322e+00  3.733586e-01 -0.4779350728 -
3.321054e-01
## [2772,]  0.8591257682 -3.012105e-01  2.314021e-01 -0.6666985718 -
4.355330e-01
## [2773,]  0.8128823128  4.900974e-01  1.044885e+00  0.2652550452 -
3.096472e-01
## [2774,]  0.5217494842  3.137134e-01 -9.086114e-02 -1.0859836605 -
```

```
4.934631e-02
## [2775,]  0.8764203630 -1.846140e-01  4.740264e-02 -1.3830946372 -
3.397379e-01
## [2776,]  0.8820143393 -4.212969e-01 -3.933538e-02 -1.7842740150 -
4.928261e-02
## [2777,]  0.6698046642  1.098616e+00  8.091550e-01 -0.5369715904 -
1.147329e-01
## [2778,]  0.4934801287  1.958678e-01 -4.918143e-01  0.7791425982 -
3.796508e-01
## [2779,] -0.0260839673  6.414459e-01 -2.584182e+00 -1.1293401028
7.236116e-01
## [2780,]  1.0049178221 -4.754332e-01  6.564840e-01  0.1235295667 -
5.848721e-01
## [2781,]  0.8201555278  3.205395e-01  7.273463e-01 -0.0951455590 -
2.880571e-01
## [2782,]  0.7188865046 -9.036858e-02 -1.025785e+00 -0.0371360131 -
1.218260e+00
## [2783,]  0.6115557018  8.199720e-02 -5.514364e-01 -0.7670992839 -
1.231554e-01
## [2784,]  1.0087169086 -1.203369e+00 -3.376033e-01 -0.3392578996 -
1.072108e+00
## [2785,]  0.2328417971  5.232189e-01 -1.957849e+00 -0.1204892573 -
3.315559e-01
## [2786,]  0.9484137979 -4.703545e-01 -1.294095e+00 -0.2825442278 -
4.322377e-01
## [2787,]  0.6693536268  5.702313e-01  8.222222e-01 -0.3622819588 -
3.281407e-01
## [2788,]  1.0059808644 -2.562289e-02  6.096465e-01  1.1461802434 -
8.877567e-01
## [2789,]  1.0902830097 -1.447728e+00  1.291498e+00  0.1865238585 -
2.550167e-02
## [2790,]  0.2520528531  6.215728e-01 -2.381557e-01 -0.6704551666
1.063969e-01
## [2791,]  0.5108694938  2.069529e+00  1.018372e+00  0.1164750227 -
1.800578e-01
## [2792,] -0.9721145134  3.136616e-01 -8.610643e-01  0.2332084032 -
7.617023e-01
## [2793,]  0.5937732746  1.395711e+00  4.908646e-01 -0.7814086259 -
1.674910e-01
## [2794,]  1.0584708759 -6.137207e-01  5.489476e-01 -0.1045120066 -
3.213747e-01
## [2795,]  0.7965631310 -3.388726e+00 -2.168380e+00  5.3798083095
6.840966e-01
## [2796,]  0.8591716822  1.125731e-02  2.505842e-01 -1.2915400210 -
3.724003e-01
## [2797,]  0.9842813246 -5.124392e-01  5.980760e-01 -0.1302912656 -
5.481487e-01
## [2798,] -3.0563097568  1.289655e+00 -2.962699e-01 -0.0623757834
7.245271e-01
## [2799,]  0.9007900778 -4.389602e-01 -1.405249e+00 -0.5075167809 -
```

```
2.692145e-01
## [2800,]  0.0332493820  2.375694e-01 -2.993298e+00 -0.4357063452
4.482704e-01
## [2801,]  0.4272172686  7.910977e-01 -1.557922e+00 -1.1426211910
3.657262e-01
## [2802,] -1.0462703861  6.979742e-01  4.869448e-01 -1.3614719136
1.031417e+00
## [2803,]  0.4663520325  2.419518e+00  8.439021e-01  0.0672066587 -
3.471898e-01
## [2804,]  0.9667544220 -1.118883e+00  1.302679e+00 -0.6732689155
3.573624e-01
## [2805,]  0.9170862494 -1.927358e-02  5.022118e-02  0.1857207534 -
3.684725e-01
## [2806,] -0.0628866637  1.781134e+00  4.602402e-01 -1.4293126466
1.708073e+00
## [2807,] -1.8830346437 -2.407917e+00 -1.068971e+00  0.0283662427 -
1.731781e+00
## [2808,]  0.8765594777 -5.214692e-02  3.583443e-01 -0.9097185629 -
4.351501e-01
## [2809,]  0.7291826263  1.438553e+00  1.431320e+00  2.0798399323 -
6.600089e-01
## [2810,]  0.6017990351  1.379619e+00  3.791673e-01 -0.6055057654 -
1.543130e-01
## [2811,]  0.9285250730 -4.723249e-01 -1.240907e+00 -0.2689884713 -
4.231536e-01
## [2812,]  0.9546747709  5.206413e-01  1.056559e+00  1.8750024258 -
8.871637e-01
## [2813,]  0.7049750142  8.736431e-01 -8.904549e-01 -1.9053595860 -
2.064687e-01
## [2814,] -8.2934780194 -1.715735e+00  1.356332e+00 -0.8307475472 -
7.996741e-01
## [2815,] -0.6398950669 -4.356935e-01 -2.525074e-01  0.3015500937 -
7.405534e-01
## [2816,]  1.0329076303 -1.352632e+00 -5.824837e-01 -0.4788051295 -
1.066049e+00
## [2817,]  0.6001937451  1.630644e+00  8.218389e-01 -0.0382129129 -
4.838954e-01
## [2818,]  0.7061594168  7.250212e-01  1.075326e+00  0.4237258294 -
3.763981e-01
## [2819,]  0.1685314844 -3.297494e-01  5.782406e-01  0.7824664320 -
6.738377e-01
## [2820,] -3.0484115497  1.284472e+00 -3.124854e-01 -0.1339922636
7.520703e-01
## [2821,]  0.6727675451 -6.679677e-01 -6.390391e-01 -0.2985810332 -
5.224324e-01
## [2822,] -0.1606589320  1.680680e+00  1.644359e+00  0.5116802718
1.582772e+00
## [2823,]  0.4094390201 -8.397078e-02 -2.158347e+00  0.1794745403
1.043472e-01
## [2824,] -0.4610568213 -5.750554e-01 -2.194907e+00  0.6164366394
```

```
5.068557e-01
## [2825,]  0.9615189130 -4.947215e-01  2.732155e-01 -1.4056195328 -
2.714216e-01
## [2826,]  0.9377874151 -1.504215e-01  1.329890e+00  1.6160169336 -
6.542945e-01
## [2827,] -2.1106459314 -1.135656e+00 -8.040205e-01 -1.3605817674 -
6.335895e-01
## [2828,]  0.8530512606  1.481287e-02  2.394514e-01 -1.1904120287 -
4.624060e-01
## [2829,] -0.9155144516  9.493017e-01  1.589554e+00 -0.4093096774 -
2.134620e-04
## [2830,]  0.6226033241  1.490306e+00  4.042612e-01 -0.3917647158 -
6.933371e-01
## [2831,]  0.7994229502 -9.100955e-01  2.391345e-01  0.3709015240 -
5.696220e-01
## [2832,]  0.9687496258 -5.312798e-01 -1.629528e-01 -0.9773172990 -
5.911217e-02
## [2833,]  0.3791164623  7.737186e-01 -1.125826e+00 -1.1698794898
1.114388e-01
## [2834,]  0.0927518052  1.225161e+00  2.646659e+00  3.3848633193
1.240847e+00
## [2835,]  0.4233600633  1.902191e-01 -6.979174e-01 -0.8247219838 -
2.376676e-01
## [2836,] -1.8856723874 -2.392615e+00 -1.145087e+00 -0.0177098481 -
1.801870e+00
## [2837,]  0.4555771063  1.547414e+00  4.701282e-01 -0.3848990582
5.320014e-03
## [2838,]  0.0889436500  1.157124e+00  2.604353e+00  3.2720409187
1.224457e+00
## [2839,]  0.4704501996  2.322652e+00  8.212305e-01 -0.1365841985 -
2.680464e-01
## [2840,] -0.1194446495  1.222475e+00  5.936535e-01 -0.7779188637
6.971311e-01
## [2841,]  0.5837257795  1.417170e+00  8.521379e-01 -0.2549660024 -
2.791011e-01
## [2842,]  0.0566675047  6.450878e-01 -2.463553e+00  2.9141283239
2.707390e+00
## [2843,]  0.2621275202  6.555536e-01 -2.108453e-01 -0.5032424608
7.538345e-02
## [2844,]  0.8185929578 -8.797845e-01  5.068639e-01  0.7793826618 -
6.943612e-01
## [2845,]  0.8960110246  6.454465e-01  5.112424e-01  0.6841420217 -
9.491791e-01
## [2846,]  0.9720508014 -7.497887e-01  6.980914e-01 -0.9052398429 -
1.507022e-01
## [2847,]  0.7202894394  3.371158e-01 -2.597742e-01 -1.3771691089 -
1.215205e-01
## [2848,]  0.4865262563  8.803117e-01 -7.515799e-01 -1.4796274978
8.550519e-02
## [2849,] -0.8569099925  3.604276e-01 -1.855573e-01  0.2027865773 -
```

```
8.137110e-01
## [2850,]  0.4803154598  9.901695e-01 -5.104401e-01 -1.3053516793
5.675618e-02
## [2851,]  0.8561903696 -1.006620e-01  5.207556e-01 -1.0412576031 -
2.144908e-01
## [2852,]  0.4419151900  1.363777e+00 -4.339257e-01 -0.9263127863 -
3.651339e-01
## [2853,]  0.2284733104  5.537992e-01 -3.517298e-01 -0.7560770931
2.055265e-01
## [2854,]  0.9299203394 -6.279493e-01  2.746835e-01 -1.2266870006 -
4.157052e-01
## [2855,]  0.6158086493  1.252484e+00  9.868610e-01  0.6945332166 -
4.169094e-01
## [2856,]  0.9026922668 -4.882252e-01  8.379849e-01  0.3194212518 -
2.083667e-01
## [2857,] -0.7359882784 -1.770351e+00 -1.558544e+00  0.4947874934 -
1.077522e+00
## [2858,]  0.5755989358  1.399832e+00  3.871702e-01 -0.7318222110 -
1.006487e-01
## [2859,]  0.5932023669  1.465526e+00  4.948756e-01 -0.6970131822 -
1.901702e-01
## [2860,]  0.7499810300  1.335213e-01  3.190534e-01 -0.4543967486 -
4.299513e-01
## [2861,]  0.4449645731  8.788812e-01 -1.497827e+00 -0.2276040614 -
3.255220e-02
## [2862,]  0.6710227417 -7.884199e-01 -1.791499e+00  1.7528614346 -
3.674451e-01
## [2863,]  0.8816061661 -4.119653e-01  2.408716e-02 -1.6476491848 -
3.738967e-02
## [2864,]  1.0559725272 -5.290617e-01  8.504463e-01  0.1257652832 -
2.962097e-01
## [2865,]  0.2606307581  8.017678e-02 -6.594868e-01  2.0555502270
2.761688e+00
## [2866,]  0.3137124954  1.221568e-01 -1.299499e+00 -0.6314645734 -
1.797056e-01
## [2867,] -0.0191148231  3.628526e-01  1.761775e+00  0.7783294987
6.192555e-01
## [2868,] -2.1633847540 -1.196895e-01 -4.340275e-01 -0.4110668532 -
9.980375e-01
## [2869,]  0.8034750892  1.018366e-01 -9.463687e-01 -0.6678991360
3.880563e-01
## [2870,]  0.5023911654  8.492011e-01  1.427386e-01  0.7212149409 -
2.778002e-01
## [2871,]  1.0445607015 -1.004527e+00 -1.148012e-01 -0.3368444486 -
8.631872e-01
## [2872,]  0.8819277571 -1.152801e-01  1.190224e+00  1.0706637699 -
6.872807e-01
## [2873,]  0.8832350006  3.140873e-01  6.029726e-01 -0.7107062870
7.270636e-02
## [2874,]  0.4724744123  1.764925e+00  1.290237e+00  0.8729793308 -
```

```
4.844761e-01
## [2875,]  0.7040862788  6.125948e-01  5.550425e-01 -0.4804733789 -
5.336500e-01
## [2876,] -5.2635798412 -1.003233e-02  1.301522e+00  1.5165068794
1.076122e+00
## [2877,]  1.0031567676 -1.403136e-02  7.236165e-01  1.3544332759 -
8.444879e-01
## [2878,]  0.8048981396  3.858536e-01  2.108451e-01  0.2322979756 -
1.281907e+00
## [2879,]  0.0511212773  4.432112e-01 -8.968306e-01 -0.6982184354
2.649469e-01
## [2880,]  0.8437556674 -7.300895e-02  1.188495e+00  0.8958190887 -
6.353474e-01
## [2881,]  0.8300175810  9.623759e-02  2.905492e-01 -1.2936402345 -
3.383298e-01
## [2882,]  0.2459838205 -1.092703e+00  1.648099e+00 -0.3326753708
1.133018e+00
## [2883,]  1.0379825475 -9.051184e-01  3.364681e-02 -0.2712252506 -
9.407655e-01
## [2884,]  0.5498289978  2.233355e+00 -6.989568e-01 -0.4786719054
2.983709e-01
## [2885,]  0.6665642457  1.600041e+00 -8.648390e-01  0.2718640984 -
6.729817e-02
## [2886,]  0.8231784900  1.739024e-01 -3.974673e-01 -0.7559446070
6.727114e-01
## [2887,]  0.7585120239  1.907271e-01 -9.738011e-01 -0.3616965201 -
1.017351e-01
## [2888,]  0.8428288740 -2.790653e-02 -4.545944e-01 -0.9023282008
6.419220e-01
## [2889,]  0.6041963561  1.386210e+00 -7.248254e-01 -0.5307689039
1.437638e-01
## [2890,]  0.7725008647  9.223089e-01 -2.793306e-01  1.5994980225 -
4.249898e-01
## [2891,] -3.1130135097 -1.559554e+00 -3.476410e-01  0.4459931697
8.225838e-01
## [2892,]  0.6456715628  9.585850e-01 -7.364165e-01 -1.1863107030
4.538329e-01
## [2893,]  0.7509693804  7.292897e-01 -3.208872e-02  1.2038091292
1.066948e-01
## [2894,]  0.4998161060 -3.394206e-01 -1.408001e+00  0.4929321263 -
2.093173e-02
## [2895,]  0.2812246430 -6.195475e-01 -4.096413e+00  0.8542044147
3.311817e+00
## [2896,]  0.5560761767 -9.592038e-01 -2.935478e+00  0.0018953159
1.737755e-01
## [2897,]  0.6661750335  8.834165e-01 -6.161984e-01 -0.1615446727
5.392643e-03
## [2898,] -0.9224581486 -1.708214e-01 -2.895157e+00  1.1812746608 -
2.598568e-01
## [2899,] -0.0349435075  4.366192e-01  1.757536e+00  0.7998503620
```

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6.050204e-01
## [2900,] -3.0212966840  1.247807e+00 -1.001769e-01  0.1042932071
6.734684e-01
## [2901,]  0.8913076479 -3.965255e-01  1.003821e+00  0.4096465732 -
2.830623e-01
## [2902,] -0.2672856355 -2.118516e+00 -6.189332e-01  3.1162956960 -
2.165392e+00
## [2903,]  0.7188716023  9.297367e-01 -1.091336e-02 -1.1670878376
2.396932e-02
## [2904,]  0.7352546777 -1.457056e-01 -7.987838e-01  0.1650486230 -
1.271855e+00
## [2905,]  0.8500838424  1.738016e-02 -9.102368e-02 -0.9462511657 -
3.139459e-01
## [2906,] -5.2691999101  5.036087e-02  1.285369e+00  1.5011529575
1.070574e+00
## [2907,]  0.1301282355 -9.463109e-02  9.145506e-01 -0.4747000463
4.639747e-01
## [2908,]  0.6589483479  6.992330e-01  7.730977e-01 -0.4041030651 -
3.255196e-01
## [2909,]  1.0652549148 -1.425964e+00  1.341423e+00  0.0982475095
7.135628e-02
## [2910,]  0.6040321010  1.213898e+00  8.819141e-01 -0.7256164710
1.464581e-02
## [2911,]  0.6393499744  9.825868e-01  8.658570e-01 -0.3494883439 -
1.759635e-01
## [2912,]  0.1869482637  2.915218e-01 -1.209572e+00 -0.8034009352 -
1.291274e-01
## [2913,]  0.8672547587  1.725003e-01  3.906965e-02 -0.6838823810 -
4.756480e-01
## [2914,]  0.3460751212 -1.059419e+00 -2.168002e+00  0.5793071544 -
1.369099e+00
## [2915,]  0.2602796294  5.718932e-01 -1.792217e-01 -0.6593176211
1.696660e-01
## [2916,]  0.9277183818 -2.552071e-01  6.758017e-01 -1.1317001825
7.287891e-02
## [2917,] -0.2827363812  2.499188e+00  5.415289e-01 -0.2875333270
1.923171e+00
## [2918,] -0.0203535700  4.080946e-01  1.726129e+00  0.7376545999
6.104934e-01
## [2919,]  0.9979919433  4.137723e-01  1.046378e+00  1.9616787724 -
9.070324e-01
## [2920,]  0.9641696216 -4.416562e-01  6.929356e-01  0.0279897970 -
5.098264e-01
## [2921,]  0.9077637175 -6.193444e-01  4.398911e-01 -1.1294156779 -
2.924253e-01
## [2922,]  0.6455703757  1.276811e+00  4.283834e-01 -0.8411789237 -
3.755664e-01
## [2923,]  0.6498054599  9.548542e-01  5.236040e-01 -0.6727592037 -
1.619833e-01
## [2924,]  0.8630505916 -2.548696e-01  4.416403e-01 -0.5651863575 -
```

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4.425105e-01
## [2925,]  0.5758535429  1.764024e+00 -9.514916e-01 -0.5380114835
1.862510e-01
## [2926,]  0.6691680290  1.400053e+00  8.928389e-01 -0.3109635527 -
2.740751e-02
## [2927,]  0.8724874105 -3.218222e-01 -4.329842e-03 -1.7117435652 -
2.178045e-02
## [2928,] -0.8381537728  2.642139e-01 -3.475356e-01  0.1629323410 -
7.607746e-01
## [2929,]  0.7899313722  8.804006e-01  1.001137e+00  1.5073889738 -
9.288359e-01
## [2930,]  0.6871185128  7.031664e-01  5.890750e-01 -0.3296750481 -
5.639481e-01
## [2931,]  0.6170815208  1.308378e+00  4.960984e-01 -0.8884599146 -
2.918723e-01
## [2932,] -3.0565317328  1.284714e+00 -3.182171e-01 -0.2039810289
7.765576e-01
## [2933,]  0.8794234669 -2.161797e-01  1.275529e+00  1.1605797955 -
6.651779e-01
## [2934,]  0.7719065628  9.535584e-01 -2.569206e-01 -1.3107660067 -
3.731982e-01
## [2935,]  0.2285482856  6.903801e-01 -4.334831e-01 -0.8988403130
2.292839e-01
## [2936,] -0.8959480833 -1.638548e+00 -6.494331e-01  1.5806454939 -
1.506868e+00
## [2937,]  0.7139709537  4.859203e-01  7.801108e-01 -0.2419737768 -
3.811719e-01
## [2938,]  0.6316670464  1.219150e+00  5.477292e-01 -0.6683017301 -
3.714896e-01
## [2939,]  0.4976107479  1.471207e+00 -6.943484e-02  1.0359495359 -
6.857500e-01
## [2940,] -2.1239511121 -1.094768e+00 -7.440327e-01 -1.3317191410 -
5.749741e-01
## [2941,]  0.6764577019  5.923289e-01  8.729368e-01 -0.1342582157 -
3.620465e-01
## [2942,]  0.5876131580  1.455032e+00  6.488315e-01 -0.8509472403
7.240530e-02
## [2943,]  1.0082716049  3.172870e-02  8.630612e-01  1.2743887651 -
8.454566e-01
## [2944,]  0.9018629017  3.515460e-02  1.292184e+00  1.3475827740 -
3.022706e-01
## [2945,] -0.8124045695 -2.884011e-01 -1.204971e+00 -0.2811412468 -
9.737569e-01
## [2946,] -0.7876771200  1.359277e+00  1.955001e+00  0.0812663218
2.798723e+00
## [2947,]  0.7004895269  1.002917e+00  9.666693e-02 -1.1199313060
1.161365e-01
## [2948,]  0.6821440257  5.612159e-01  7.945221e-01 -0.3306580786 -
3.471468e-01
## [2949,]  0.5101584596 -1.095724e+00 -3.455446e+00 -0.1291561668 -
```

```
2.794387e-02
## [2950,] -2.3718761313  6.090654e-01 -1.800413e+00 -0.6531247721 -
2.660248e-01
## [2951,]  0.8965304268 -4.596551e-01  6.975171e-01  0.1250226968 -
2.713298e-01
## [2952,] -0.9501300307  1.005750e+00  1.608680e+00 -0.4675101654
2.840181e-02
## [2953,] -1.8952995416 -2.437200e+00 -1.236940e+00  0.0410493982 -
1.724601e+00
## [2954,]  0.5909141904  1.943106e+00  5.795435e-01  0.4382565869 -
5.397037e-01
## [2955,]  0.9679728990 -1.297381e+00  4.028856e-01 -0.1108368087 -
4.990049e-01
## [2956,] -0.8538041018 -1.936534e+00 -6.126131e+00 -0.1632680248
3.930490e-01
## [2957,]  0.9277084671  1.582773e-04  1.448879e+00  1.5531907510 -
4.432308e-01
## [2958,]  0.8750659160 -3.911572e-01 -1.457001e-02 -1.7281991373 -
4.124778e-02
## [2959,]  0.7454147115  3.650049e-01  3.788628e-01 -1.2255202910 -
9.160779e-02
## [2960,]  0.9396015661 -3.264282e-01  1.327317e+00  1.0826443825 -
4.332191e-01
## [2961,]  0.7378534772  1.059549e+00 -2.774987e-01 -0.3628801806 -
7.205436e-01
## [2962,]  0.9443029817 -4.671404e-01 -9.645535e-02  0.2145701305 -
1.634262e+00
## [2963,] -0.1086935365  1.126412e+00 -3.207837e+00  1.5200348757
3.141205e-01
## [2964,]  0.8968590276 -1.395047e-01  1.142933e+00  1.1035660719 -
7.285363e-01
## [2965,]  0.6365462639  1.011271e+00  5.764667e-01  1.5857673634 -
8.747077e-01
## [2966,]  1.1766228424 -1.079777e+00  5.468006e-01  1.8304476911 -
1.542443e+00
## [2967,] -0.1519667173 -2.059125e+00 -2.952693e-01  2.8261228587 -
2.250232e+00
## [2968,]  0.8043090222  4.844084e-02  5.462633e-01 -0.2649824992 -
6.420531e-01
## [2969,]  1.1471401735 -1.918051e+00  2.842179e-01 -0.0521820569 -
1.121862e+00
## [2970,] -2.8033229947 -1.690389e+00  1.109279e+00 -0.0168680228
8.970123e-02
## [2971,]  0.6811511756  1.046730e+00  4.107741e-03 -1.3307478650
1.102623e-01
## [2972,]  0.7385736419  3.157010e-01 -1.290741e+00  0.1353504019 -
3.053907e-01
## [2973,]  0.5248944250  1.820336e+00 -3.801750e-01 -0.3019492175
3.592472e-01
## [2974,] -1.0151584290  8.405502e-01  1.401479e+00 -0.1809889939 -
```

```
2.419270e-01
## [2975,] -0.0648715577  5.979682e-01  1.747527e+00  0.7934938642
6.102409e-01
## [2976,]  0.7154761161  1.269285e+00 -3.993216e-02 -1.2871503617 -
1.249205e-01
## [2977,]  0.8220694821  3.537239e-01  7.323899e-01 -0.0988742001 -
2.439850e-01
## [2978,]  0.1604926472 -3.455118e-01  6.697756e-01  0.8015506824 -
5.746868e-01
## [2979,]  0.9157589757 -5.106831e-01  1.027643e+00  0.4565299398 -
2.810659e-01
## [2980,]  0.5516881382  1.959722e+00  1.326857e-01 -0.8227574670 -
1.989423e-01
## [2981,]  0.7250317620  3.898642e-01 -1.975793e-02 -1.2364758783 -
1.230440e-01
## [2982,]  0.8060200930  3.788784e-02  1.727241e-01  0.1324731436 -
8.768694e-01
## [2983,]  0.8702458393 -1.217690e-03 -1.558692e-01 -0.9105514972 -
3.772554e-01
## [2984,] -7.6769616013 -8.928750e-01  8.907668e-01 -0.4476494147 -
1.987696e+00
## [2985,]  0.5822238475  1.702012e+00 -4.764808e-01  0.2648754787
9.394729e-03
## [2986,]  0.8338799085 -1.220404e-01  1.604167e-01 -0.7018493520 -
6.290441e-01
## [2987,]  1.0758267438 -6.653874e-01  8.135403e-01 -0.0014781217 -
2.679734e-01
## [2988,] -8.2761589479 -1.797267e+00  1.353577e+00 -0.8612176792 -
7.697712e-01
## [2989,]  0.2196659405 -1.085879e+00 -2.479653e+00  0.8824660695 -
1.261364e+00
## [2990,]  0.9868686450 -3.017307e-01  1.358267e+00  1.6734767027 -
6.112634e-01
## [2991,]  0.8367432519  7.804966e-02 -1.698466e-01 -1.0526764954 -
3.415273e-01
## [2992,] -0.0333686899  4.312095e-01  1.761957e+00  0.8182041921
6.083577e-01
## [2993,] -0.6443328448 -1.724827e+00 -2.092174e-01  1.5814657217 -
1.674629e+00
## [2994,]  0.7182126161  5.924416e-01  5.085682e-01 -0.5053410559 -
5.403011e-01
## [2995,] -0.1348271031  3.446301e-01 -9.705732e-01  0.3489994527
6.997868e-01
## [2996,]  0.8092823568  1.660118e-01 -1.053756e+00 -0.4859243808
4.152009e-01
## [2997,]  0.6901153219  8.046716e-01  1.184566e+00  0.5256488739 -
2.862114e-01
## [2998,] -5.2365035248 -7.735356e-02  1.210092e+00  1.4114719616
1.049226e+00
## [2999,]  0.8928896740 -4.162019e-01  2.045458e-01 -1.5329995698 -
```

```
1.038552e-01
## [3000,]  0.7771566803  1.861507e-01 -1.252952e-01 -0.2429298613 -
7.815289e-01
## [3001,]  0.9721904719  4.235906e-01  9.429118e-01  1.6152509881 -
8.758373e-01
## [3002,]  0.6454358278  7.775740e-01  5.841971e-01 -0.7751382137 -
8.775235e-02
## [3003,] -0.2406222302 -2.281827e+00 -6.895779e-01  3.0243680515 -
2.197593e+00
## [3004,]  0.9035105511 -5.439668e-01  3.678083e-01 -1.1395876567 -
3.555057e-01
## [3005,]  0.6097912027  8.467749e-01  6.141243e-01  0.4245357220 -
1.980097e-01
## [3006,] -8.2924798541 -1.711756e+00  1.342755e+00 -0.8396019682 -
7.907222e-01
## [3007,]  0.8324391350  9.288876e-02  7.954574e-01 -1.1214801341
1.985188e-01
## [3008,]  0.1369095793 -2.171686e-01  7.931526e-01 -0.5552894689
5.710439e-01
## [3009,]  0.7276948420  1.062951e+00 -1.858913e-01 -1.2944107233 -
3.337240e-01
## [3010,] -0.8288370911 -3.257225e-01 -1.315029e+00 -0.2999779255 -
8.911688e-01
## [3011,]  0.7914323704  7.857152e-01  1.038322e+00  1.4406558772 -
8.596961e-01
## [3012,]  0.7417917271  8.433173e-01 -6.503538e-01 -1.4519236257 -
3.513168e-01
## [3013,]  0.7118163879  1.137432e+00 -3.904872e-01 -1.3873507101 -
2.908059e-01
## [3014,]  0.1209737670  1.220741e+00  2.564264e+00  3.4662414049
1.158794e+00
## [3015,]  0.2350232926  6.228165e-02 -2.523004e+00  2.3748612760
3.227552e+00
## [3016,] -2.1900426657 -6.375938e-02 -4.053682e-01 -0.4388022221 -
9.743131e-01
## [3017,] -1.8588439704 -2.376840e+00 -9.603467e-01  0.4800250181 -
1.793761e+00
## [3018,]  0.0320478684  5.133855e-01 -6.226909e-01 -0.5331762111
2.708862e-01
## [3019,] -0.8821813995 -5.750274e-01 -1.753244e+00 -0.3519227377 -
1.999952e-03
## [3020,]  0.9145955175 -1.736272e-01  2.078947e-01  1.4627206211 -
8.780817e-01
## [3021,]  0.7251488379  1.516978e+00  3.539070e-01  0.8380851589 -
7.683428e-01
## [3022,]  0.4951038941  1.794446e+00  7.305876e-01 -1.1079725716
9.423292e-02
## [3023,]  1.0926454645 -1.858742e+00  1.619549e-01  0.1512676312 -
3.239321e-01
## [3024,] -0.1352633423  1.685067e+00  1.896055e+00  0.7907035164
```

```
1.534871e+00
## [3025,]  0.7168407357  9.257859e-01 -6.153623e-01 -0.6223231349
3.998153e-01
## [3026,]  0.6766692609  5.099663e-01 -8.285969e-01 -0.0509918917
2.538904e-01
## [3027,]  1.2482433778 -2.649170e+00 -3.673820e-01  0.3998202296
1.781308e-01
## [3028,]  0.9583052261 -5.531053e-01 -1.402932e+00  0.6251112658 -
1.286277e-01
## [3029,]  0.6408622408 -2.759790e-01 -2.957618e+00  1.4621688462 -
2.881094e-01
## [3030,]  0.1070038725  1.170621e+00 -3.049729e+00  0.3841028613
3.670989e+00
## [3031,] -0.1099808681 -2.297498e-01 -2.737497e+00 -0.2082879909
6.733944e-01
## [3032,]  0.9398069029 -8.677107e-01  8.255503e-01 -0.8876051781
2.500141e-01
## [3033,]  1.0149988663 -1.313470e+00 -7.383999e-01 -0.5045016749 -
9.962220e-01
## [3034,]  0.9568504409 -1.351705e-01  1.267516e+00  1.4886101166 -
6.086683e-01
## [3035,]  0.7461615084  8.825040e-01 -4.911472e-01 -0.6213215441 -
6.240665e-01
## [3036,]  0.7694652048  1.256439e+00  1.364736e+00  1.9663050948 -
6.486184e-01
## [3037,]  0.8850347218  6.071026e-01  5.450020e-01  0.6408219292 -
8.924931e-01
## [3038,]  0.8903385029  7.201210e-01 -9.382651e-01  0.3883249810
6.307454e-02
## [3039,]  0.7230065632  3.158535e-01 -5.605254e-02 -1.4389218526 -
5.378479e-02
## [3040,] -2.1034593938 -1.228345e+00 -7.246592e-01 -1.2994187041 -
5.908903e-01
## [3041,]  0.6694309131  9.128374e-01 -3.232641e-02 -0.7615499530 -
3.669585e-01
## [3042,]  0.9095654446 -4.378509e-01  7.560670e-01  0.2553568539 -
2.431433e-01
## [3043,] -3.0674069668  1.284185e+00 -2.145940e-01 -0.0380485500
7.966180e-01
## [3044,]  0.5692151476  1.583089e+00  6.120817e-01 -0.8724966605
5.680912e-02
## [3045,]  0.4709259272  2.183709e+00  1.111348e+00  0.0584913916 -
4.261513e-02
## [3046,]  0.7728531712  9.169951e-01  9.744964e-01  1.3019182490 -
8.902978e-01
## [3047,] -8.3060141228 -1.638664e+00  1.389707e+00 -0.7731084856 -
7.772649e-01
## [3048,] -0.6475703377 -1.652350e+00 -1.154343e+00  0.0830738842 -
1.012875e+00
## [3049,]  0.8711516797 -3.117801e-01  5.785988e-01 -0.3503965167 -
```

```
3.961791e-01
## [3050,] -1.0249006722  8.577664e-01  1.650900e+00 -0.1953193507 -
1.813365e-01
## [3051,] -3.0275994268 -1.790975e+00  7.334326e-01  0.1295764901
2.463022e-01
## [3052,]  0.9423509957 -9.347551e-01  9.028817e-01  0.3012168859 -
6.015912e-01
## [3053,] -2.2724926227  3.932486e-01 -4.686808e-01 -0.7359109585 -
8.851408e-01
## [3054,]  0.4270404824  1.129817e+00 -1.677674e-02 -0.8137572146 -
2.370110e-01
## [3055,]  0.6620520939  8.011847e-01  7.299265e-01 -1.0818896106
5.383826e-02
## [3056,] -0.3388707096  4.876215e-01 -3.998296e+00  2.5994236205
3.251338e+00
## [3057,] -0.0635048787  1.724601e+00  3.939346e-01 -1.5737951092
1.707079e+00
## [3058,] -0.0599453768  1.798659e+00  7.509561e-01 -1.1943603750
1.714426e+00
## [3059,]  0.6531395180  8.501722e-01  6.331565e-01 -0.5645999426 -
9.936580e-02
## [3060,]  0.8499792058  9.228160e-03 -3.377098e-01 -1.1007569397 -
2.686471e-01
## [3061,]  0.6068288600  1.387085e+00  7.366731e-02  1.2438043787 -
6.970406e-01
## [3062,] -5.2741186764  8.106241e-02  1.327453e+00  1.5381325850
1.108317e+00
## [3063,]  0.6919366148  3.825028e-01 -1.700566e-01 -1.4712498262
3.039969e-02
## [3064,]  0.8452311040  2.858839e-01  7.350235e-01 -0.0496192494 -
2.469936e-01
## [3065,]  0.8345227047  2.081239e-02  3.820180e-01 -0.3886330593 -
7.366848e-01
## [3066,]  0.8504553932  3.812081e-01  1.018231e+00  0.2739858291 -
3.017594e-01
## [3067,]  0.5784649472  4.541278e-01  3.658763e-01 -0.1634827965 -
3.005368e-01
## [3068,] -3.0389844103  1.287212e+00 -2.958236e-01 -0.0725307868
7.727637e-01
## [3069,]  0.8582278940  3.629657e-02  8.435719e-01 -0.9515213051
1.897816e-01
## [3070,]  0.9196006727 -2.846030e-01  1.351454e+00  0.9306454141 -
3.206149e-01
## [3071,]  0.7611125289  1.348245e+00  3.177309e-01 -0.1376783761 -
6.990251e-01
## [3072,]  0.5589997814  1.766245e+00  5.091270e-01 -0.8485836105 -
1.821041e-02
## [3073,] -0.9341521038 -4.712001e-01 -1.708709e+00 -0.1097439062 -
8.276781e-01
## [3074,] -0.9167188961  1.832167e-01 -6.135059e-01  0.5137952927 -
```

```
7.926689e-01
## [3075,]  0.6664165239  8.281618e-01  5.234059e-01  1.4818225501 -
8.830232e-01
## [3076,]  0.8135690532  1.472035e-01  5.270740e-02 -0.5753276978 -
4.231956e-01
## [3077,] -0.6151532796  1.817184e-01  8.831441e-01 -0.0129001852 -
5.551292e-01
## [3078,] -2.1778596931 -7.394128e-02 -5.440677e-01 -0.7718070875 -
9.355109e-01
## [3079,] -0.0605155945  1.801456e+00  6.271668e-01 -1.4479040599
1.718971e+00
## [3080,]  0.6109446269  1.383899e+00  3.814017e-02  1.1554873565 -
6.794857e-01
## [3081,]  0.4836843972  1.742390e+00  1.326656e+00  0.9202450514 -
4.578198e-01
## [3082,]  0.6333494758  1.301956e+00  7.692070e-01 -0.7066690119 -
4.266886e-02
## [3083,]  0.7722610824  9.646280e-01  9.370606e-01  1.3267207716 -
9.420942e-01
## [3084,]  1.1323218906 -1.930655e+00  3.119817e-01 -0.0830061256 -
1.083330e+00
## [3085,]  0.8013361254  2.680360e-01  3.138928e-01 -0.3213069650 -
4.569443e-01
## [3086,]  0.8601023527  7.165456e-02 -1.745193e-01 -1.0455344459 -
3.037398e-01
## [3087,]  0.1837533848 -9.539776e-03 -3.878099e+00 -0.8637226164 -
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## [3088,]  0.8745431458  9.219298e-01 -7.089884e-02 -1.1729470208 -
6.182908e-01
## [3089,]  0.4945020053  8.262641e-01  2.478017e-02  0.5686312612 -
1.096310e-01
## [3090,]  0.4575382915  2.908350e-01 -1.249671e+00  2.5420037657
2.358317e+00
## [3091,]  1.0334832631 -1.296358e+00 -7.464994e-01 -0.4199016004 -
1.011634e+00
## [3092,]  0.4043725781  1.879120e+00  2.489078e-01  0.5945537239 -
4.969881e-01
## [3093,]  0.8209573537 -6.158051e-02  1.577012e-01 -0.6878381406 -
6.503164e-01
## [3094,] -1.7714640596  1.598291e+00 -3.780720e+00  0.2571353252
8.750959e-01
## [3095,]  0.5909921408 -3.433771e+00 -3.586092e+00 -0.6140588676 -
1.345755e+00
## [3096,] -0.0302112473  4.048781e-01  1.760332e+00  0.7430480871
6.611977e-01
## [3097,] -0.5840220004 -1.528980e+00  2.276020e-01  1.0442010998 -
1.523369e+00
## [3098,]  1.0414753648 -2.053862e+00  2.427001e+00  5.3397668622 -
1.247554e-01
## [3099,]  0.7165277690  8.456691e-01 -9.324588e-01 -1.9645157666 -
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1.918179e-01
## [3100,]  0.7552445788  4.653092e-01  6.013845e-01 -1.0216783435 -
1.256271e-01
## [3101,]  0.8976461077 -8.106724e-01  8.517720e-01  0.1064768126 -
5.664347e-01
## [3102,]  0.8095900946  1.178189e+00  1.327942e+00  2.0203856238 -
6.783891e-01
## [3103,]  0.7613996529  6.071664e-01 -1.210290e-02 -0.9885763612 -
3.581814e-01
## [3104,]  0.8070892179  1.100650e-01  6.713558e-02 -0.5443431815 -
4.439626e-01
## [3105,]  0.7560281965  1.398613e+00  1.310474e+00  1.8822513986 -
6.457258e-01
## [3106,]  1.0844347862 -1.475308e+00  1.458252e+00  0.3002924567
1.293657e-01
## [3107,]  0.7967611884 -9.306797e-01  3.065311e-01  0.4529371505 -
5.463960e-01
## [3108,]  1.0542519179 -6.004985e-01  8.304033e-01 -0.0620988268 -
2.222348e-01
## [3109,]  0.9537922861 -8.833220e-01  1.004055e+00 -0.8995949091
2.553426e-01
## [3110,] -0.0749669617  1.882503e+00  6.488939e-01 -1.4375286617
1.743516e+00
## [3111,]  0.5126679936  2.066131e+00  8.201454e-01  0.0028008585 -
9.478250e-02
## [3112,]  0.8357015311 -2.618879e-02  3.388705e-01 -0.7280365684 -
5.922854e-01
## [3113,]  0.7945600640  7.328870e-01  1.040464e+00  1.3879246304 -
8.370527e-01
## [3114,] -0.0558702668 -3.768965e-01  1.310087e-01  0.7381086572 -
4.561446e-01
## [3115,]  0.1286630904 -3.124144e-01 -3.701713e+00  1.0313404904
3.109271e-02
## [3116,]  1.2069792145 -1.038911e+00  5.235741e-01  2.0311859558 -
1.618269e+00
## [3117,] -2.1856965274  1.135245e-02 -4.607320e-01 -0.5143077675 -
9.564516e-01
## [3118,]  0.6884831691  4.992208e-01  7.479804e-01 -0.4665164971 -
3.166401e-01
## [3119,]  0.9930609080 -1.124277e-02  6.172980e-01  1.0289148197 -
7.982420e-01
## [3120,]  1.0040405802 -1.165894e+00  1.356878e+00 -0.4436846185
3.384087e-01
## [3121,]  0.9765220818  4.854670e-01  9.662609e-01  1.8069201848 -
9.167839e-01
## [3122,]  0.9096966278  1.755891e-02  1.520734e+00  1.4868832181 -
3.283442e-01
## [3123,]  0.5761802561  1.525162e+00  6.000482e-01 -0.9451547011
7.559059e-02
## [3124,]  0.7073999333  7.352289e-01  1.141198e+00  0.5139405061 -
```

```
3.156680e-01
## [3125,] -8.3095353959 -1.629711e+00  1.402681e+00 -0.7602542571 -
7.632911e-01
## [3126,]  0.8872800389  3.619611e-01  1.085754e+00  0.7716746026 -
5.605455e-01
## [3127,]  0.9064344961 -4.340817e-01  1.010110e+00  0.3794976211 -
2.188933e-01
## [3128,]  0.8396737310 -2.265376e-01  3.421502e-01 -0.5889333531 -
3.300423e-01
## [3129,]  0.9209282474 -8.046068e-01  7.368070e-01 -1.1048871357
2.629264e-01
## [3130,]  0.9296328893  5.828670e-01  3.805107e-01  0.4025127099 -
4.398786e-01
## [3131,] -0.4784370776  1.160373e+00 -7.637302e-01  1.1906602945
4.499506e+00
## [3132,]  0.8167013220  3.391852e-01  7.784966e-01 -0.1015634595 -
1.956544e-01
## [3133,]  0.5329330882 -2.433628e-02 -2.577391e+00 -0.6954540748
2.357174e-02
## [3134,]  0.6625973268  1.082709e+00  4.963297e-01 -0.7858861761 -
3.385457e-01
## [3135,] -0.6726094507 -1.627872e+00 -1.071130e-01  1.6010880892 -
1.560872e+00
## [3136,] -2.8146975242 -1.690499e+00  1.202941e+00  0.0385686609
1.724394e-01
## [3137,]  0.2370265490 -1.015259e+00  1.665408e+00 -0.2586815808
1.130815e+00
## [3138,]  0.6193257239  1.511028e+00  7.735995e-01 -0.0708154694 -
3.908907e-01
## [3139,]  0.2503132303 -1.143379e+00  1.677859e+00 -0.2594916914
1.143448e+00
## [3140,]  0.9558784548 -3.584861e-01  1.429862e+00  1.2380066770 -
3.616229e-01
## [3141,] -7.6607459450 -9.346777e-01  8.972902e-01 -0.3883164406 -
1.983399e+00
## [3142,]  0.8823775010 -1.999008e-01  1.189125e+00  0.9884836007 -
6.316142e-01
## [3143,]  0.6625750533  8.884180e-01  6.697127e-01 -0.3681498415 -
1.308097e-01
## [3144,]  0.9518642081 -7.698425e-01  5.490364e-01 -1.1244894304
1.203656e-02
## [3145,]  0.7958756548  1.246821e+00  1.369561e+00  2.0563031782 -
6.488450e-01
## [3146,]  0.5888481605  1.625354e+00  8.965927e-01  0.0359170651 -
4.402050e-01
## [3147,]  0.6061464194  1.612592e+00  8.202512e-01  0.0675031812 -
4.042886e-01
## [3148,] -0.9906664396  6.660903e-01  1.389432e+00 -0.3234852381 -
1.750661e-01
## [3149,]  0.7769747209  5.799981e-01  1.229541e-01 -1.0513754911 -
```

```
3.733576e-01
## [3150,]  0.6568689510  8.774475e-01  6.153999e-01 -1.3526852535
8.756025e-02
## [3151,]  0.6316801054  1.212777e+00  8.177335e-01 -0.7364710456
1.471012e-02
## [3152,] -8.4651882711 -8.107063e-01  1.203061e-01 -0.4039846658 -
3.934218e-01
## [3153,]  0.3254255651  1.533720e+00 -1.560005e+00 -1.0799983680
3.897422e-01
## [3154,]  0.5789427053  6.652233e-01 -1.036643e+00  0.9464255188
2.764814e-03
## [3155,]  0.6852614862  1.165473e+00 -8.453905e-01 -0.0044092345 -
6.278350e-03
## [3156,]  0.8639890533  3.790175e-01 -1.550911e-01  1.2372016237 -
9.156138e-02
## [3157,] -3.5642238827 -1.330927e+00 -1.580518e+00  0.1636627826 -
1.020840e+00
## [3158,]  0.9027063790  2.304190e-01 -1.330990e+00  1.5202078150 -
8.787286e-01
## [3159,] -0.6665776519 -1.583352e+00  1.321324e-01 -1.2340872871
1.038723e+00
## [3160,]  0.6681030977  8.700074e-01 -8.806672e-01 -1.0860035961
2.647179e-01
## [3161,]  1.1065618532 -2.661236e-02 -9.941374e-01  1.7522977684 -
2.831050e-01
## [3162,] -0.4053113807 -1.415318e+00 -4.120873e+00 -0.1382441270
3.942374e-01
## [3163,]  0.5755141121  1.549161e+00 -6.802957e-01 -1.2407129500
6.184907e-01
## [3164,]  0.4522507484 -1.135182e+00 -2.519712e+00  2.4681088094 -
4.520883e-01
## [3165,]  0.4205459711  2.630119e-01 -1.953390e+00  0.6366105150
6.460519e-02
## [3166,]  0.4036924061 -5.111684e-01 -2.953159e+00  3.1647015889 -
3.350240e-01
## [3167,] -0.7873293385 -6.771707e-01 -2.320815e+00  1.4749463742 -
3.270860e-01
## [3168,]  0.9017942729  2.685889e-01 -6.295839e-01  2.2246239572 -
4.698007e-01
## [3169,]  0.5715060868  1.691386e+00 -1.363097e+00 -1.2534580555
5.643343e-01
## [3170,]  0.9761878501 -1.105840e+00  1.376680e+00 -0.5571016951
4.140651e-01
## [3171,]  0.8668499567  3.092873e-01  5.077016e-01 -0.6896409235
1.870184e-01
## [3172,] -2.1385162939 -1.099938e+00 -8.664276e-01 -1.3097337694 -
5.191012e-01
## [3173,] -0.8216863455 -2.944235e-01 -1.271539e+00 -0.5444723562 -
9.045539e-01
## [3174,]  0.2335103741 -1.869344e+00 -1.513308e+00 -2.3363478158
```

```
1.108793e+00
## [3175,] -2.1077386568 -1.080757e+00 -7.518481e-01 -1.2140303211 -
6.180956e-01
## [3176,]  1.0440565423 -7.933061e-01 -9.708391e-02  0.4152154166 -
7.324295e-01
## [3177,]  1.1350776825 -1.915531e+00  3.711610e-01  0.0211227580 -
1.055891e+00
## [3178,]  0.8644379826  4.315640e-01  1.218688e+00  0.9567548780 -
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## [3179,]  0.7945895584  5.810095e-01  1.979428e-01 -0.8128879693 -
3.782723e-01
## [3180,]  0.6620507266  1.004474e-01 -3.693923e-01  0.4043525206 -
7.832408e-01
## [3181,]  1.0157581335 -7.405163e-02 -1.061936e-01  1.2851019971 -
1.546685e+00
## [3182,]  0.0945321489  1.194755e+00  2.636523e+00  3.2929475816
1.296293e+00
## [3183,]  0.9114313582 -5.562689e-01  4.686217e-01 -0.9078550181 -
3.525692e-01
## [3184,]  0.8826635462  4.308610e-01  1.179438e+00  1.0012251933 -
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## [3185,] -2.2846953969  4.306119e-01 -5.634195e-01 -0.8309583056 -
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## [3186,]  0.9211765606 -7.593720e-01  1.083637e+00 -0.6416584014
1.923686e-01
## [3187,] -0.8095424699 -4.301431e-01 -1.356878e+00 -0.3669707323 -
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## [3188,]  0.6417578636  9.152493e-01  6.675177e-01 -1.2546566711
8.886325e-02
## [3189,]  0.7474374503  6.390631e-01  1.828275e-01 -1.4908738349 -
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## [3190,]  0.6152695917  1.326774e+00  4.297440e-01 -0.5751050233 -
8.758111e-02
## [3191,]  0.7271541476 -9.629074e-02 -1.060136e+00 -0.0836896528 -
1.193306e+00
## [3192,] -1.8838204367 -2.399625e+00 -1.238216e+00  0.0471629495 -
1.690071e+00
## [3193,]  0.6421444286  1.467093e+00  7.028651e-01 -0.5578681254 -
2.302402e-01
## [3194,]  0.8337677569  3.659241e-01  1.218988e+00  1.0440737394 -
4.701915e-01
## [3195,] -0.0654630400  1.822107e+00  1.324233e+00 -0.0730732123
1.591932e+00
## [3196,]  0.1843931621 -3.495800e-01  5.380154e-01  0.6946984567 -
6.328444e-01
## [3197,] -2.9924615444 -1.983965e+00  7.470633e-01  0.1062613003
2.819599e-01
## [3198,]  1.0649503016 -6.263845e-01  8.628740e-01  0.0231638261 -
2.137508e-01
## [3199,]  0.9021470625 -1.738475e-02  1.548454e+00  1.4665251887 -
```

```
3.003462e-01
## [3200,]  0.9397445718  5.864374e-01  8.717757e-01  1.9225638156 -
9.285681e-01
## [3201,]  0.7979558271 -3.047801e-02  1.788276e-01  1.3964833903 -
7.655117e-01
## [3202,] -1.0308025351  7.969252e-01  1.439787e+00 -0.3077114294 -
1.414866e-01
## [3203,] -1.8689406398 -2.449382e+00 -9.991363e-01  0.2498435602 -
1.739510e+00
## [3204,]  0.6635048178  8.521417e-01  5.652290e-01  1.6587848657 -
9.332625e-01
## [3205,]  0.5859362247  1.609413e+00  9.152325e-01  0.1139091396 -
4.625367e-01
## [3206,]  0.9004139763 -3.565210e-01  7.414029e-02 -1.7904163555 -
6.891502e-02
## [3207,]  0.8728939785  3.664497e-01  6.924151e-01 -0.5406201259
1.148947e-01
## [3208,]  0.7428308797 -1.533104e-01 -7.793108e-01  0.1246947416 -
1.199519e+00
## [3209,]  0.9010992835  6.956948e-01  6.161125e-01  0.3960342332 -
3.971077e-01
## [3210,]  0.6058351166  1.498152e+00  8.606616e-01 -0.5283572565 -
3.698967e-02
## [3211,]  0.6801361567  1.058582e+00  5.261205e-01 -0.1446959160 -
4.191094e-01
## [3212,] -1.0696367858  1.611317e+00  4.914674e-01 -0.0372639742
5.613683e-01
## [3213,]  0.5366946629  1.759254e+00  5.476184e-01 -0.8941986980
2.268447e-02
## [3214,]  0.3929985980 -4.638289e-01 -2.982253e+00  1.3352984642
2.243283e+00
## [3215,]  0.4373001361  4.084222e-01 -1.274892e+00  2.5261502321
2.352060e+00
## [3216,]  0.7936031259  1.296543e-01 -7.146058e-02 -0.1068406985 -
7.699436e-01
## [3217,]  0.7891685615  1.244321e+00  1.656150e-01 -0.0493511316 -
6.652683e-01
## [3218,]  0.8868584248 -1.769624e-01  9.158842e-02 -1.2439519018 -
3.207872e-01
## [3219,]  0.6690511310  1.220305e+00  4.366107e-01 -0.8141689256 -
3.408939e-01
## [3220,]  0.6852408335  7.187696e-01  5.410714e-01 -0.4550785079 -
5.325107e-01
## [3221,]  0.3885065524  8.051680e-01 -1.073635e+00 -1.0585947291
1.509011e-01
## [3222,]  0.8735438285  2.781124e-01  5.187886e-01 -0.5693397856
1.285416e-01
## [3223,]  0.9118287613 -4.418188e-01  1.052147e+00  0.4579925275 -
2.156946e-01
## [3224,]  0.9596779517  6.378184e-01  8.323014e-01  1.9420617683 -
```

```
9.447470e-01
## [3225,]  0.6601826000  1.090146e+00  9.067006e-01 -0.5983494135
4.550356e-02
## [3226,]  0.6085262057  1.553162e+00  4.559453e-01 -0.4032186862 -
6.180998e-01
## [3227,]  0.8674146949  2.250479e-01  1.279327e+00  1.2704842023 -
5.255574e-01
## [3228,]  0.1922072683 -4.832716e-01  3.470583e-01  0.5757435746 -
5.840896e-01
## [3229,]  0.5412133555  1.709898e+00  3.077828e-01 -1.1074206494
7.987120e-02
## [3230,]  0.9036024763 -9.511081e-02  2.409998e-01 -0.6915727775 -
1.747366e-01
## [3231,]  0.7260747977 -2.159610e-01 -9.639178e-01  0.0138767872 -
1.164342e+00
## [3232,]  0.7789978842  1.222287e+00  2.532364e-01 -0.0054600823 -
6.158253e-01
## [3233,]  1.0384753650 -7.624244e-01 -7.993322e-02  0.4147027980 -
7.072494e-01
## [3234,]  0.2209235050 -2.071174e-01 -3.469202e+00 -1.0864644148
5.670940e-01
## [3235,]  0.9156688640 -2.811565e-01  6.497178e-01 -1.3630130032
1.760519e-01
## [3236,] -0.8444445686  2.517793e-01 -3.403542e-01  0.1556658883 -
7.403550e-01
## [3237,]  0.6161972359  1.520113e+00  4.727699e-01 -0.2687003156 -
6.592885e-01
## [3238,]  0.8647866648  3.255237e-01  4.239273e-01 -0.7973328926
1.501371e-01
## [3239,]  0.7027442937  7.178490e-01  1.151877e+00  0.3993572480 -
2.442474e-01
## [3240,]  0.6823311183  8.801449e-01  8.176082e-01 -0.2951999475 -
2.140573e-01
## [3241,]  0.8593988536 -1.592995e-02  8.354161e-01 -1.1621762717
3.036525e-01
## [3242,]  0.3074097916 -8.786270e-01 -2.677738e+00  0.4501499254 -
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## [3243,]  0.8814259309 -1.311478e-01  3.821238e-01 -1.0664780721 -
2.961341e-01
## [3244,]  0.0173717452 -1.318219e-01 -2.263946e+00 -0.4096359167 -
7.970517e-02
## [3245,] -0.6185805302 -1.721751e+00 -8.816213e-01  0.4609520539 -
1.099928e+00
## [3246,]  0.8005503760  4.214715e-01  2.956454e-01  0.3996228536 -
1.241643e+00
## [3247,]  0.7009136253  6.002193e-01  5.904593e-01 -0.3897185644 -
5.192647e-01
## [3248,]  0.6550860541  1.224652e+00  5.090187e-01 -0.7402577965 -
3.037471e-01
## [3249,]  0.5923302203  1.515859e+00  8.674813e-01 -0.6768129679
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4.488899e-02
## [3250,] -5.2414603012 -7.134714e-02  1.266177e+00  1.4951413319
1.082596e+00
## [3251,]  0.7614434373  3.062361e-01  3.765228e-01 -1.2031888490 -
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## [3252,]  0.6265307464  1.195494e+00  8.887932e-01 -0.7041439358
7.927405e-02
## [3253,]  0.6242491500  1.212647e+00  8.978733e-01 -0.6381422567
4.945944e-02
## [3254,] -2.2796771567  3.162750e-01 -3.875741e-01 -0.7581151221 -
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## [3255,]  0.4022710048  1.797582e+00 -2.489814e-03  0.2701005664 -
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## [3256,]  0.6261380001  1.465564e+00  4.614148e-01 -0.3067134726 -
6.466899e-01
## [3257,]  0.5223555650  1.686366e+00  6.095938e-01 -1.0980975160
1.578764e-01
## [3258,]  0.9025789364  7.665659e-01  6.084991e-01  0.4200770091 -
3.941385e-01
## [3259,]  0.9224590659  7.226789e-01  7.938889e-01  1.7238800932 -
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## [3260,]  0.8254093024 -1.099530e-02 -5.799249e-01 -0.2130549894 -
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## [3261,]  0.5634669405  1.402433e+00 -1.846373e+00 -2.0841440891
8.435079e-01
## [3262,]  0.5510289780  1.600438e+00  8.029771e-01 -0.9441993711
8.524548e-02
## [3263,]  0.9715269729 -7.606603e-01  6.729904e-01 -1.0407134806 -
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## [3264,] -0.2780980389 -1.829889e+00 -3.183648e+00 -0.6407733862 -
2.386943e-01
## [3265,]  1.0478962231 -6.193710e-01  6.914563e-01 -0.0971429391 -
1.347755e-01
## [3266,]  0.9530219231  6.165813e-01  7.566739e-01  1.6765379595 -
8.985709e-01
## [3267,]  0.1966696892 -4.336619e-01  5.624328e-01  0.7257888987 -
6.226087e-01
## [3268,]  0.9364831200 -8.034426e-01  1.072749e+00 -0.7580420006
2.553156e-01
## [3269,]  1.2397132718 -2.647676e+00  1.378956e+00  0.6965691672 -
2.277028e-01
## [3270,]  0.6771081925  4.082851e-01 -2.735315e-02  0.5175961096 -
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## [3271,]  0.9102220188 -5.925864e-01  4.175358e-01 -1.0044360332 -
3.604000e-01
## [3272,] -0.7832232161 -5.802724e-01 -1.306595e+00 -0.2487438436 -
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## [3273,]  0.5286164618  7.791782e-01  2.364085e-01  0.8376715405 -
1.767509e-01
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```

```
2.799745e-01
## [3275,]  0.8635881425  3.463472e-01  4.236706e-01 -0.8541161844
1.900294e-01
## [3276,]  0.9578882239 -8.298197e-01  5.941547e-01 -1.1249756553
7.035638e-02
## [3277,]  0.9863780101 -9.318102e-02  2.805929e-02  1.3415297271 -
1.467056e+00
## [3278,]  0.9334189858 -6.178210e-01  3.581268e-01 -1.0304078215 -
3.883136e-01
## [3279,]  0.2440703995 -1.055022e+00  1.633251e+00 -0.3615627207
1.171683e+00
## [3280,] -1.6183028470 -1.738234e-01 -6.729111e+00 -0.9576070562
1.966080e+00
## [3281,]  0.6788798287  1.086741e+00  4.567963e-01 -0.7911991867 -
3.475553e-01
## [3282,]  0.7320589205  3.268077e-01  1.107438e-02 -1.2454835985 -
5.607884e-02
## [3283,] -0.6598138921 -1.547847e+00  1.666839e+00 -1.1910226771
5.425552e-01
## [3284,]  0.8478972004 -1.289507e-01 -4.763987e-01 -0.4244771805 -
1.190715e+00
## [3285,] -2.1161518514 -1.151404e+00 -9.312129e-01 -1.3338295044 -
5.434700e-01
## [3286,]  0.6641859103 -8.718666e-01 -1.570263e+00 -1.1426650046
7.322278e-01
## [3287,] -0.1187785751 -1.671434e-04 -4.508551e+00 -0.3268386290
5.617969e-01
## [3288,]  0.5970953650 -2.979728e-01 -2.173608e+00  0.4586139702
4.487472e-01
## [3289,]  0.7453311429  9.404786e-01 -3.516449e-01 -1.3209336362 -
2.720130e-01
## [3290,]  0.9285956511 -9.115308e-02  1.189184e+00  1.1765453962 -
2.998442e-01
## [3291,]  0.8817414338 -1.535222e-01  1.860443e-01 -1.0420561393 -
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## [3292,]  0.6160416256  1.133611e+00  6.422908e-01 -0.9016444535
1.013989e-01
## [3293,]  0.8155963116 -3.977296e-01 -1.166487e+00 -0.9378431423
4.013259e-01
## [3294,]  0.8636541729  3.850566e-01  5.653189e-01 -0.4278915409
1.215185e-01
## [3295,]  1.1302771929 -1.887663e+00  3.738627e-01  0.1285708253 -
1.105745e+00
## [3296,] -2.1303784846 -1.054076e+00 -7.246825e-01 -1.3638437622 -
5.040650e-01
## [3297,]  0.7026967714  1.140671e+00  6.695419e-01 -0.0529347395 -
4.807304e-01
## [3298,]  0.8339210743  2.757883e-01  2.472004e-02  0.2218918426 -
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## [3299,]  0.6629159970  5.035929e-01  2.180161e-01  0.6890461964 -
```

```
6.058812e-01
## [3300,] -0.8022098900  1.481649e+00  2.246137e+00  0.2067740026
2.886233e+00
## [3301,]  0.4966308693  8.430641e-01 -6.820748e-01 -1.3887306831
1.635674e-01
## [3302,]  0.6464412390  8.388892e-01  5.291804e-01  0.3904456707 -
2.039314e-01
## [3303,]  0.7352452642  4.354604e-01  3.981935e-01 -1.1489150777 -
8.192495e-02
## [3304,]  0.7865149583  3.569211e-01  5.283875e-01 -1.0470217294 -
1.728785e-01
## [3305,]  0.7768401768  2.905904e-01  3.547868e-01 -1.1364314411 -
1.198174e-01
## [3306,]  0.3807370809 -6.742154e-01 -2.784465e+00 -1.9237146585 -
1.687618e-01
## [3307,]  0.6237002584  1.289164e+00  5.503755e-01 -0.7625038621 -
2.766055e-01
## [3308,] -5.2259704902 -1.106150e-01  1.221579e+00  1.5010128138
1.035540e+00
## [3309,]  0.6146259106  1.966299e+00  5.987017e-01  0.4869850053 -
4.572359e-01
## [3310,]  0.3422785833  6.657877e-02 -1.388238e+00 -0.7596925365 -
1.591298e-01
## [3311,]  0.8199813845  5.138618e-02  7.049811e-02 -0.6483932336 -
3.590919e-01
## [3312,]  0.6938922347  6.303768e-01  5.848500e-01 -0.4327474382 -
4.904928e-01
## [3313,]  0.7105069550  4.013172e-01  5.528722e-02 -1.2724919476
1.109203e-02
## [3314,]  1.1287939413 -1.960726e+00  4.160137e-01  0.0961179362 -
1.059526e+00
## [3315,]  1.0123211640 -4.047519e-02  5.616714e-01  0.9649299354 -
8.054456e-01
## [3316,]  0.6801273135  8.062378e-01  8.397730e-01 -0.4330027725 -
1.202052e-01
## [3317,]  0.7832400542  1.274081e+00  1.842494e-01 -0.0638617947 -
6.246902e-01
## [3318,]  0.7497554435  9.994750e-01 -2.536082e-01 -1.3745124437 -
3.318232e-01
## [3319,] -0.0638663173  1.747030e+00  1.375850e+00 -0.0711077784
1.635888e+00
## [3320,]  0.8722655962  3.696598e-01  7.235148e-01 -0.4921460970
1.100273e-01
## [3321,]  0.7466646660  5.941636e-01  2.632919e-01 -1.4188287708 -
2.449964e-01
## [3322,]  0.6577178940  8.640179e-01  6.726489e-01  1.6810374986 -
8.011241e-01
## [3323,]  0.5988699412  1.618798e+00  4.224747e-01 -0.5098853232 -
5.755638e-01
## [3324,]  0.6521904720  9.558683e-01  8.893468e-01 -0.3965229375 -
```

```
8.447917e-02
## [3325,]  1.0398596835 -5.273237e-01  7.907933e-01 -0.1747143605 -
1.929075e-01
## [3326,]  0.9368539517 -9.153417e-02  1.550094e+00  1.5451153922 -
2.967863e-01
## [3327,]  0.5208870572  8.130082e-01 -7.034679e-01 -1.2865824897
9.759765e-02
## [3328,]  0.6511617931  7.664625e-01  5.693750e-01  0.4627779977 -
2.242604e-01
## [3329,]  0.8062738024  2.475300e-01  1.294985e-01  0.1916920876 -
1.124812e+00
## [3330,] -0.0617560114  1.778110e+00  5.767992e-01 -1.2791374279
1.807074e+00
## [3331,]  0.8189889295  1.162905e-01  9.688541e-01 -0.9542940782
3.338584e-01
## [3332,]  0.7711188846  7.170902e-01  5.578287e-01 -0.8953862967 -
1.074247e-01
## [3333,] -2.1317345822 -1.095159e+00 -9.616796e-01 -1.4290141774 -
5.312266e-01
## [3334,]  0.9324193451 -1.152278e-01  1.744977e-01 -0.6711597564 -
2.325113e-01
## [3335,]  0.6818773160  1.082333e+00 -8.944984e-01 -2.5216335823
1.936405e-01
## [3336,]  0.7534525894  2.001230e-01 -3.590283e-02 -0.1268549294 -
7.431581e-01
## [3337,] -0.0678418520  1.765646e+00  4.898183e-01 -1.5206309489
1.822087e+00
## [3338,]  0.7356039192  6.852316e-01  1.955447e-01 -1.4160382455 -
3.139947e-01
## [3339,]  0.6553127462  8.553880e-01  7.271480e-01 -1.1029965385
9.083003e-02
## [3340,]  0.8856328804 -8.731553e-02  3.851357e-01 -0.9256777195 -
3.510943e-01
## [3341,]  0.7985773833  1.542253e-01  1.639892e-01 -0.5188423873 -
3.123394e-01
## [3342,]  0.7840186595  8.703607e-01  1.118824e+00  1.6026365995 -
8.227809e-01
## [3343,]  0.5645910024  1.673062e+00  5.680487e-01 -0.7608423475 -
5.623566e-03
## [3344,]  0.8549708601 -8.793569e-02  4.024501e-01 -1.0469277560 -
3.126500e-01
## [3345,] -0.7867761282  1.392419e+00  1.958219e+00 -0.0254434368
2.904598e+00
## [3346,]  0.8875697955 -4.045482e-01  5.115563e-02 -1.6030371425
1.027187e-02
## [3347,]  0.7116451029  5.940524e-01  5.629734e-01 -0.4947563689 -
4.744737e-01
## [3348,]  0.9703341331  4.464135e-01  1.089093e+00  1.8589556377 -
7.954336e-01
## [3349,]  0.6701055613  1.071100e+00  8.234734e-01 -0.6243361757 -
```

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1.469152e-02
## [3350,]  0.0998526226  4.327753e-02 -1.831983e+00 -0.7419862702 -
1.494781e-02
## [3351,] -3.0216609144 -1.846256e+00  7.495057e-01  0.1310091197
2.898784e-01
## [3352,]  0.8673734869  3.239291e-01  1.262996e+00  1.2837488770 -
5.160038e-01
## [3353,]  1.1084838876 -1.470478e+00  1.375536e+00  0.3501619989
5.164975e-02
## [3354,]  0.9458288007  4.789174e-01  3.528881e-01  0.3118731230 -
4.169423e-01
## [3355,]  0.9350792572  5.122389e-01  3.777741e-01  0.2997395826 -
3.824273e-01
## [3356,]  0.7301932383  1.072125e+00  1.047412e+00  1.3051734846 -
7.996651e-01
## [3357,]  0.5082302115  2.017094e+00  1.086286e+00  0.0488820123 -
3.842466e-02
## [3358,]  0.8602741046  3.626701e-01  1.389780e+00  1.5239961779 -
4.864403e-01
## [3359,]  0.7473501713  8.266595e-01  6.158482e-01 -0.8453760350 -
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## [3360,]  0.9557303213 -2.118085e-01  1.414445e+00  1.6786487581 -
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## [3361,]  0.7917102242  9.897950e-02 -7.087145e-02 -0.1038953174 -
7.781393e-01
## [3362,]  0.4184175787 -1.351517e-01 -6.881048e-01 -0.5754692504
1.036963e-01
## [3363,]  0.8127785968  2.879041e-01  2.503645e-01  0.1616227826 -
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## [3364,]  0.6871561899  9.224118e-01  8.430744e-01 -0.3095892562 -
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## [3365,]  0.7139246206  3.714686e-01  9.228078e-02 -1.1573369821 -
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## [3366,] -2.7756413808 -1.826981e+00  1.109384e+00 -0.0477600309
1.412994e-01
## [3367,]  0.4144000962  7.537579e-01 -8.168787e-02  1.3104375316 -
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## [3368,]  0.6575504665  8.731371e-01  6.186386e-01 -1.1611251032 -
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## [3369,]  0.3137062216  1.768157e+00 -1.389288e-01 -0.9766503057
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## [3370,] -2.1730846679 -1.292248e-01 -5.237958e-01 -0.7719312771 -
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## [3372,] -2.0722227361 -1.229244e+00 -6.685935e-01 -0.9874299409 -
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8.901101e-01
## [3375,]  0.7021262796  5.907127e-01  3.881169e-01  1.8270278982 -
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## [3377,]  0.6621990952  8.623509e-01  6.945325e-01 -1.1142463567
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## [3378,] -0.2628202756  2.441142e+00  7.724891e-01 -0.1681140873
1.935601e+00
## [3379,]  0.7633181987  5.462632e-01 -6.292350e-01 -0.0376774570
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## [3380,]  0.8459356128 -8.574798e-02 -5.905984e-01 -0.1862300567 -
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## [3381,]  0.8253794432  1.461634e-01  3.658925e-01 -0.3037943272 -
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## [3382,] -1.8452007041 -2.594109e+00 -1.337669e+00 -0.1031505418 -
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## [3383,]  0.6917584953  5.337691e-01  7.952563e-01 -0.3984775560 -
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## [3384,]  1.0153507183 -3.920334e-02  8.838180e-01  1.3334516214 -
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## [3387,]  0.7565327852  1.677644e-01  7.761347e-01 -0.5303268774
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## [3391,]  0.9809564129 -1.191909e+00 -1.049883e+00 -0.6508948648
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## [3392,] -3.8400504457 -2.503909e-01 -1.560185e+00  0.7122469722 -
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## [3394,]  0.9573912774 -4.726293e-01 -7.788071e-01  0.2045996496
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## [3395,]  1.1137080906 -1.385566e+00 -2.218865e-02  0.2654834258
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## [3397,]  1.0039286869 -3.339886e-01 -4.870830e-01  1.3615560915
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## [3403,]  0.4580453446 -5.690069e-01 -1.894851e+00 -0.5926265329
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## [3450,]  0.6958736673  5.755605e-01  8.270476e-01 -0.3040610038 -
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## [3456,]  1.1534335080 -2.131025e+00 -1.948469e+00  0.1325465822 -
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## [3457,]  0.8739035283 -3.983605e-01  2.849517e-01 -0.6119722361 -
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## [3459,]  0.7701213724  1.291884e+00  1.427241e+00  2.1006127653 -
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## [3460,]  0.8912985548  5.043319e-01  6.788368e-01  0.5391760780 -
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## [3461,]  0.5671146456  7.424540e-01  6.590969e-01  1.5938417754 -
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## [3462,]  0.9042706900 -1.930217e-01  3.015279e-01 -1.0983047295 -
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## [3463,]  0.8970713319 -4.097088e-01  3.064745e-01 -1.4188447881 -
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## [3464,] -1.0069958815  7.779283e-01  1.449270e+00 -0.2773750906 -
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## [3468,]  0.8665289309 -1.295513e-01  9.839161e-01 -0.8384594701
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## [3469,]  0.9490418378 -2.292775e-01  1.897630e-03 -0.8355344672 -
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## [3471,]  0.4940786669  1.073010e+00 -1.688857e+00  0.7393933911 -
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## [3472,]  0.2528122139 -1.388634e+00 -3.471246e+00  1.1717463323 -
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## [3473,]  0.6483809263  8.465132e-01  7.325579e-01 -1.1479867991
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## [3477,]  0.6871744146  7.267966e-01  5.651522e-01  1.5450251321 -
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## [3478,] -3.5250026700 -1.461680e+00 -2.216811e-01  0.2057559456 -
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## [3479,]  0.7110519940  4.888247e-01  8.503800e-01 -0.2436276616 -
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## [3480,]  0.7596529496  8.337018e-01  5.977155e-01 -0.8336890173 -
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## [3481,]  0.7790742926  7.526455e-02  6.675094e-01 -0.3943892774
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## [3482,]  0.3517040938 -1.800721e-02 -1.393307e+00 -0.7149182237 -
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## [3485,]  1.0272881726  1.395060e-02  8.409353e-01  1.3477393509 -
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## [3489,]  0.9980387032 -1.115078e+00  1.456022e-01 -1.4262437429 -
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## [3493,] -0.0630692812  1.094906e+00  1.191035e+00  0.3821518112
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## [3495,]  0.3483641423  1.638127e+00  9.565482e-02 -0.6570674854
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## [3496,]  0.9253999240  5.844090e-01  5.347160e-01  0.7937768611 -
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## [3497,]  0.8556007363 -2.121493e-01  5.346796e-01 -0.4655757668 -
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## [3498,] -0.0106685756  3.779243e-01 -2.907858e-01 -0.9011528603
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2.967986e+00
## [3503,]  0.6717791696  1.125878e+00  5.117700e-01 -0.1414310886 -
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## [3505,]  0.9025092689 -5.390254e-01  3.996186e-01 -1.1273112634 -
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## [3506,]  0.6189956464  1.487637e+00  9.708568e-01  0.1151150097 -
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## [3507,] -0.0407870129  9.954466e-01  1.168126e+00  0.4160900004
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## [3509,]  0.9103016170 -4.222448e-01  5.323080e-01 -0.3393956133 -
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## [3520,]  0.3576613817  1.509794e-01 -6.977979e-01  1.1012170691
3.426388e-02
## [3521,]  0.9220647390 -1.741888e-01 -6.178780e-02 -1.0407250615 -
9.708687e-02
## [3522,]  0.7678520603  9.460141e-01 -4.505402e-01 -1.4490324877 -
2.553119e-01
## [3523,]  0.6851975193  1.883699e+00  2.937465e-01 -0.8679597535 -
2.655285e-01
## [3524,]  0.8467386373 -4.086790e-03  2.875202e-01 -0.4585202763 -
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```
4.057128e-01
## [3525,]  0.7854351515  7.328130e-01  3.092785e-01 -1.1699049240 -
2.436301e-01
## [3526,]  1.0150715363 -6.759466e-01  4.188470e-01 -0.0661456840 -
2.747768e-01
## [3527,]  0.1780977505 -3.422837e-01  5.931852e-01  0.7359469133 -
5.651892e-01
## [3528,] -0.0360488795  9.771863e-01  1.209013e+00  0.4874561849
2.748624e-01
## [3529,] -0.7291218882 -1.758959e+00 -1.343269e+00  0.4513008461 -
9.607179e-01
## [3530,]  0.9146646619 -2.901433e-01  6.975891e-01 -1.3106178349
2.263537e-01
## [3531,]  0.6491816445  1.422722e+00  4.025392e-01 -0.3840723244 -
6.375086e-01
## [3532,]  0.7543288545  1.326546e+00  1.340023e+00  1.7830232869 -
5.523727e-01
## [3533,]  0.7876733608  5.612363e-01  2.202735e-01 -0.8383634836 -
3.439411e-01
## [3534,]  0.7969336296  8.541702e-01  1.056566e+00  1.5345126451 -
8.289605e-01
## [3535,]  0.7988457289 -1.323050e+00  8.939555e-01 -0.4774041271
5.422897e-01
## [3536,]  0.6698173079  1.099797e+00  5.014734e-01 -0.8426673819 -
2.621540e-01
## [3537,]  0.6857794821  1.024546e-01 -7.606738e-01 -1.8132065397 -
4.463058e-01
## [3538,]  0.7891779269  2.301969e-01  1.812253e-01  0.1538737960 -
7.854258e-01
## [3539,] -2.4146975991  8.858644e-01 -2.145991e+00 -0.5355222393 -
6.109286e-01
## [3540,]  0.2658513125 -1.184232e+00  1.637673e+00 -0.2630075310
1.138972e+00
## [3541,]  0.6647128698  1.102851e+00  7.665625e-01 -0.4455540488 -
2.392659e-01
## [3542,] -0.7857498450  1.370443e+00  1.966666e+00 -0.0017165373
2.917608e+00
## [3543,] -0.1072149305  1.895247e+00 -4.005920e-01 -0.1929748917
1.941003e+00
## [3544,]  0.8678653675 -3.318619e-01  2.826723e-01 -0.7119232041 -
2.824039e-01
## [3545,]  0.9482440794  5.135559e-01  4.302720e-01  0.4514372444 -
3.611797e-01
## [3546,]  0.7679168585  5.902382e-01  5.264923e-01 -0.3758318861 -
5.123459e-01
## [3547,] -0.6302717930 -1.665743e+00 -8.982439e-01  0.3140295173 -
1.015252e+00
## [3548,]  0.7562210954  1.378136e+00  1.394786e+00  1.9393978677 -
5.472907e-01
## [3549,]  0.9999903510  4.171897e-01  1.012265e+00  1.8138996146 -
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8.120194e-01
## [3550,]  0.3077533530  1.885135e-01 -1.362070e+00 -0.8045899975 -
9.310274e-02
## [3551,]  0.2411145339  1.141930e+00 -7.131382e-01  1.2353633867 -
1.816467e-01
## [3552,]  0.8244213161  3.421587e-01  5.606857e-01 -0.2111225756 -
8.287486e-02
## [3553,]  0.6190964668  1.490277e+00  8.826248e-01 -0.0815513296 -
3.478163e-01
## [3554,]  0.6534590232  1.163720e+00  2.835870e-01 -0.9441870147 -
2.263972e-01
## [3555,]  1.1194473496 -1.491017e+00  1.351633e+00  0.3574279768
4.269822e-02
## [3556,] -3.0016605145 -1.856730e+00  6.744842e-01  0.0037815660
3.068547e-01
## [3557,] -0.9916433836  7.235532e-01  1.653102e+00 -0.2849144720 -
7.812875e-02
## [3558,]  0.8732052560 -7.421037e-02  9.106901e-01 -0.8982160592
2.754110e-01
## [3559,] -0.8269622770  1.785221e-01 -2.938387e-01  0.1865968338 -
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## [3560,]  0.2267133364  6.360714e-02 -1.197951e+00 -0.8210134058 -
6.832591e-02
## [3561,]  0.7703757741  1.437841e-01  6.357053e-01 -0.4867341983
1.076387e-01
## [3562,]  1.1062688301 -1.130531e+00 -2.082510e+00  0.2436414903 -
1.300912e+00
## [3563,]  0.5511567298  7.051704e-01  1.560511e-01  0.7187054354 -
1.617094e-01
## [3564,]  0.7321631568  3.253025e-01 -3.072879e-02 -1.2945618581 -
6.326522e-02
## [3565,]  0.6621505896  1.028008e-01 -9.079155e-01 -1.9206337414 -
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## [3566,]  0.7445817552  9.708418e-01 -3.660677e-01 -1.3814605020 -
2.221819e-01
## [3567,]  0.7302780883  6.991773e-01  2.466960e-01 -1.4490993293 -
2.148103e-01
## [3568,]  0.9353856549 -9.565519e-02  1.601379e+00  1.7347572872 -
3.339661e-01
## [3569,]  1.0755280065 -7.321362e-01  8.421566e-01 -0.0942288781 -
1.677820e-01
## [3570,]  0.7663246556  1.341523e+00  1.408450e+00  2.0881957018 -
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## [3571,]  0.9132817464 -5.072043e-01  2.261302e-01 -1.6236238071
2.711742e-02
## [3572,]  0.8010568286  5.851310e-01  6.432666e-01 -0.8339136681 -
1.245106e-02
## [3573,]  0.7958076908  7.291129e-01  5.983799e-01 -0.7306701149 -
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## [3574,]  1.0633420049 -2.716446e-01  3.712596e-01 -0.8035666718 -
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6.294760e-02
## [3575,]  1.2447194271 -2.743550e+00  1.094787e+00  0.4221626927 -
1.700313e-01
## [3576,]  0.9316153278 -5.099265e-01 -5.482756e-01 -0.0504744333 -
2.570108e-01
## [3577,]  0.9822936646 -8.458642e-01  5.980618e-01 -0.9586845355
4.086506e-02
## [3578,]  0.9558796146 -8.140176e-01  6.908472e-01 -0.3476683770 -
2.392261e-01
## [3579,]  0.6062246828  1.528362e+00  9.129583e-01  0.0021767591 -
3.635392e-01
## [3580,]  0.4243293265  1.726794e-01 -8.975102e-01 -1.0029410948 -
9.152883e-02
## [3581,]  0.2698581419 -5.706473e-02 -2.592793e+00 -0.0014275606
2.090455e-01
## [3582,] -2.7500390019 -1.973252e+00  1.154398e+00  0.0620875163
1.414446e-01
## [3583,]  1.0436636406 -4.233954e-01  9.626885e-01  1.2831756060 -
3.097577e-01
## [3584,]  0.6294197453  1.572262e+00  8.520164e-01  0.2109154719 -
3.980482e-01
## [3585,]  0.7635571100  2.024715e-01  8.626326e-01 -0.4051904840
1.003578e-01
## [3586,]  1.2104308544 -1.665617e+00  1.122866e+00  0.0512930015
1.364131e-02
## [3587,] -0.0665703610  1.851994e+00  7.209524e-01 -1.2680676273
1.783326e+00
## [3588,]  0.8537461249  4.547104e-01  7.134966e-01 -0.5956653972
1.942871e-01
## [3589,]  0.8848249064 -8.205518e-02  1.168618e-01 -1.1920363940 -
2.639471e-01
## [3590,]  0.7845283197  1.319553e+00  3.147018e-01 -0.2075732620 -
5.899980e-01
## [3591,]  0.9554819220 -1.148183e-01  1.555466e+00  1.5989513842 -
2.779798e-01
## [3592,]  0.9427037955 -2.279214e-01  1.355352e-01 -0.9087688391 -
1.435822e-01
## [3593,] -0.6378319952 -1.646666e+00  1.685261e+00 -1.2087916618
6.022287e-01
## [3594,] -0.0073962747  4.692818e-01 -2.481373e+00 -0.1180345078
6.221537e-03
## [3595,]  0.6145058112  6.778362e-01 -4.858518e-01  0.4070010601 -
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## [3596,]  0.1148227784  1.595383e+00 -1.958939e+00 -0.1521970066
3.671546e-01
## [3597,]  0.8881637182  1.348048e-01 -5.274207e-01  0.5649044493 -
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## [3598,]  0.2388564568 -1.002201e+00  1.656226e+00 -0.3214919413
1.204873e+00
## [3599,]  0.8545745770  3.661517e-01  1.285258e+00  1.2154492208 -
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4.228180e-01
## [3600,]  1.0184893901 -1.246617e+00  1.332500e+00 -0.5516421494
4.242543e-01
## [3601,] -9.0256037396 -7.804419e-01  1.606108e+00 -0.5132942763
7.163483e-01
## [3602,]  0.9803546893 -8.847878e-01  6.194741e-01 -1.0109478950
7.894175e-02
## [3603,]  0.8649653075  6.729030e-01  5.263637e-01  0.5308563654 -
8.253093e-01
## [3604,] -0.4730477685 -1.423089e-02 -4.116129e-01 -0.1730133801
1.195597e+00
## [3605,]  0.3486741202 -1.685955e+00 -2.551978e+00  0.5710200634 -
1.418991e+00
## [3606,]  0.9933021383 -9.267463e-01  8.550586e-01 -0.3390555330 -
2.726177e-01
## [3607,]  0.8712923658  3.312282e-01  1.233272e+00  1.1981418679 -
4.696632e-01
## [3608,]  0.9219443041 -5.773990e-01  1.020413e+00  0.2748594945 -
1.397730e-01
## [3609,]  0.8326329798  1.346334e-02  1.407689e-01 -0.5564152739 -
2.924868e-01
## [3610,]  1.0642869506 -9.326672e-01 -3.866300e-01  0.0062234067 -
5.907539e-01
## [3611,]  0.9733012740 -2.916818e-01  1.359387e+00  1.6469541990 -
5.705267e-01
## [3612,]  0.7434857112  6.110896e-01  2.410678e-01 -1.4619459699 -
2.082821e-01
## [3613,] -0.1841207219  2.018170e+00  3.839869e-01 -0.9803158069
5.060657e-01
## [3614,] -0.8059576539  1.641836e-01 -3.751182e-01  0.1825177609 -
7.378676e-01
## [3615,]  1.2543486227 -2.735677e+00  1.375267e+00  0.7122794921 -
2.036242e-01
## [3616,]  0.9314616379 -8.711110e-01  1.136897e+00 -0.8345230527
3.883229e-01
## [3617,]  1.2320128950 -2.641445e+00  1.338354e+00  0.5414741631 -
1.579477e-01
## [3618,]  0.9029226344 -2.233116e-01  1.139621e+00  0.8932662514 -
5.827282e-01
## [3619,]  0.8036283402  5.700036e-01  6.297189e-01 -0.7703424772 -
6.073334e-02
## [3620,]  0.8674620233  1.489420e-02  8.641787e-01 -1.0208586045
3.083589e-01
## [3621,] -3.7593635088 -4.204182e-01 -1.507380e+00 -0.1361006208 -
8.232767e-01
## [3622,]  0.6729219955  1.414463e+00 -6.768436e-01 -0.3786320438
5.143711e-01
## [3623,] -8.4791406744 -6.736133e-01  1.136642e-01 -0.3513098234 -
3.830173e-01
## [3624,] -1.8418669468 -3.545367e+00 -1.445108e+00  1.3323458840 -
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```
1.314220e+00
## [3625,] -1.8293598609 -2.446615e+00 -1.519567e+00 -0.2400685521 -
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## [3626,]  0.5694596711  1.807693e+00 -1.311042e+00 -1.3220578403
7.292565e-01
## [3627,]  0.5550374316 -5.444433e-01 -1.394729e+00  3.1892258418 -
5.106744e-02
## [3628,]  0.3687304061  3.075005e-01 -2.673356e+00 -0.3111644331
3.579325e-01
## [3629,]  0.5275636348 -2.302440e+00 -1.517675e+00 -0.2438694047
1.144532e+00
## [3630,]  0.7109332387  6.427674e-01 -5.566142e-01 -1.6725358471
1.016602e+00
## [3631,] -2.7558887859 -1.941725e+00  1.128266e+00 -0.0520649687
1.884771e-01
## [3632,]  0.7212602440 -9.125775e-01 -9.627259e-01  0.0338879463
4.138461e-01
## [3633,]  1.2869888804 -2.629460e+00 -2.515790e-01  0.1733827363
5.494983e-01
## [3634,] -0.5000820526 -9.775274e-01 -1.256680e-01 -0.7440873572 -
7.342805e-01
## [3635,]  0.9881838535  3.575950e-01 -1.050711e+00 -0.1811450647 -
1.278512e+00
## [3636,]  0.1672282622  1.814515e+00 -2.527797e+00 -0.8006683884
2.665028e-01
## [3637,]  1.0913086955 -1.451523e+00 -1.022405e-01 -1.1071946750 -
2.916311e-03
## [3638,]  0.7299837612  1.101031e+00 -4.079491e-01 -1.4526363305 -
2.131590e-01
## [3639,]  0.7470040855  9.289091e-01 -3.479411e-01 -1.3761800391 -
1.954094e-01
## [3640,]  0.7830698997  1.308988e+00  1.319862e-01 -0.1959611039 -
5.858244e-01
## [3641,]  1.1062961498 -1.522582e+00 -1.351502e-01 -1.1379771873 -
1.987808e-02
## [3642,]  0.8286165462  6.284774e-01  1.040274e+00  1.4482328320 -
8.068976e-01
## [3643,]  1.1860556524 -1.631261e+00  1.098397e+00 -0.0908691240
4.287084e-02
## [3644,]  0.8430514725  3.898389e-01  1.313954e+00  1.2517000474 -
4.294661e-01
## [3645,]  0.6550318869  3.654930e-01  4.975235e-02  0.4901176427 -
4.865771e-01
## [3646,]  0.5947588386  1.593147e+00  8.715924e-01  0.0358818779 -
3.204619e-01
## [3647,]  0.2652029925 -1.340953e-01 -1.438616e+00 -0.9761336976 -
2.509351e-02
## [3648,]  0.7481088965  2.209318e-01 -1.891084e-01 -1.3695818686
2.356413e-02
## [3649,]  0.9039287365  4.499501e-01  6.823031e-01  0.5975347250 -
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6.800346e-01
## [3650,]  0.5837263226  7.944296e-01 -1.771290e+00 -0.8917702890
7.357989e-01
## [3651,]  0.7528746154  1.815766e-01 -1.879243e-01 -1.3679198619
2.429393e-02
## [3652,] -3.0132640464 -1.859372e+00  7.682458e-01  0.1191025633
3.500011e-01
## [3653,]  0.8844108293 -1.217306e-01  1.493344e-01 -1.1814815233 -
2.304383e-01
## [3654,]  0.7857745509  1.260855e-01  8.441465e-01 -0.4500683280
1.355487e-01
## [3655,] -1.7812205324 -2.646408e+00  3.552689e-02 -0.1215387391 -
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## [3656,] -2.2606845683  5.101991e-01 -1.013521e+00 -0.8921532309 -
1.276042e+00
## [3657,]  0.9046701130  3.944786e-01  5.515529e-01  0.6442815239 -
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## [3658,]  0.6740753837  1.198784e+00 -5.283408e-01 -0.3574697787
3.572199e-01
## [3659,]  0.7748547601  5.096787e-01  2.098672e-01 -1.4075766279 -
2.744507e-01
## [3660,]  0.8850420867  2.935469e-01  9.070930e-01  0.6137649887 -
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## [3661,]  0.8061546057  1.079623e+00  4.154238e-01  0.5946199950 -
7.266091e-01
## [3662,]  0.7655192384 -5.700940e-01 -3.193105e+00 -3.1581637227
1.495957e+00
## [3663,]  1.0303192743 -9.070872e-01 -2.582212e-01  0.2056748925 -
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## [3664,]  1.0699390625 -9.758363e-01 -1.533024e-01  0.1450658610 -
6.192109e-01
## [3665,]  0.3585084544  4.153581e-01 -1.336809e+00 -0.8848174777 -
2.358806e-01
## [3666,] -2.2688353427  3.659416e-01 -4.460822e-01 -0.7500224403 -
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## [3667,] -1.8075754669 -2.489594e+00 -2.688587e-02 -0.2887616377 -
5.829050e-01
## [3668,]  0.2198020605  2.381831e-03 -1.348175e+00 -0.9773171160
6.270485e-02
## [3669,]  0.8041781706  1.076576e+00  3.640022e-01  0.5272415792 -
7.562327e-01
## [3670,]  0.4286862811  1.403897e+00 -1.340455e-01 -0.2474881802 -
3.564697e-01
## [3671,]  0.9552696515 -1.394614e-01  6.439698e-01  0.2530163615 -
5.808598e-01
## [3672,]  0.8894279352 -1.043648e+00  1.677542e-01 -0.2945037035 -
2.285698e-01
## [3673,] -7.3433427448 -3.230793e+00 -1.739009e-01 -1.5053509447 -
6.642411e-01
## [3674,]  0.6985003698  1.026766e+00  7.305643e-01 -0.6314821721 -
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```
1.006229e-01
## [3675,]  0.7128369614  1.065832e+00  7.481718e-01 -0.4341155908 -
1.639917e-01
## [3676,]  0.8840820719 -9.601180e-01  4.051321e-01 -0.0432804130 -
3.071336e-01
## [3677,] -1.8174382291 -2.463140e+00 -2.224886e-01 -0.3311096810 -
5.631719e-01
## [3678,]  0.7638195442  1.402847e-01  9.720613e-01 -0.2289281004
1.213749e-01
## [3679,]  0.4988343891  1.933782e+00  1.549303e+00  0.4226312168
3.377691e-01
## [3680,]  1.1828109966 -2.542693e+00  3.463110e+00  5.0020945048 -
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## [3681,]  0.8180804917  4.268253e-01  8.505881e-01 -0.0113918900 -
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## [3682,]  0.7252124462  9.913313e-01  7.282117e-01 -0.5638785276 -
1.059564e-01
## [3683,] -8.3674617279 -9.873894e-01  1.082876e+00 -0.7523103001 -
1.034502e+00
## [3684,] -2.3018815722  5.318551e-01 -1.180104e+00 -1.0893213894 -
1.183665e+00
## [3685,]  1.2456966346 -2.730684e+00  1.107421e+00  0.3584004692 -
1.039404e-01
## [3686,]  0.6970457034  9.208061e-01  7.764161e-01 -0.5390551033 -
1.580118e-01
## [3687,]  0.7199899134  1.003604e+00  7.161078e-01 -0.5320789630 -
1.372760e-01
## [3688,]  0.8456116794  5.444654e-01 -5.293171e-01  0.9938466458 -
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## [3689,]  1.1141046940 -1.496301e+00  1.319090e-02 -1.1966475375 -
1.909274e-02
## [3690,]  1.1146377718 -1.565341e+00 -1.193923e-01 -1.1564371682
1.559942e-02
## [3691,] -0.9742614616  4.488201e-01  1.655184e+00 -1.6537356317
5.876555e-01
## [3692,]  1.2739358230 -2.542784e+00  9.653748e-02  0.0968023398
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## [3693,]  0.3676690985  4.017236e-01 -1.122199e+00 -0.7737004161 -
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## [3694,] -0.2737976407  9.505667e-02  1.436505e-01 -0.1388513583
1.141387e+00
## [3695,] -3.5174542708 -1.562196e+00 -2.820248e-01 -0.1033707519 -
1.367915e+00
## [3696,]  0.8329834828  2.840721e-01  5.726281e-01 -1.7779133639
3.971858e-01
## [3697,] -8.3820337919 -9.986303e-01  1.175631e+00 -0.6901125574 -
9.691722e-01
## [3698,]  0.9058588231 -2.474628e-01  6.973627e-01 -1.2890968703
2.150056e-01
## [3699,]  0.8862239221 -9.930185e-01  4.529858e-01  0.0375550010 -
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3.012783e-01
## [3700,]  1.0070107900 -5.688197e-01  6.151011e-01 -0.0230171195 -
2.722836e-01
## [3701,]  0.1437865418  2.680796e+00 -1.711870e+00 -1.6941854123
8.492119e-01
## [3702,]  0.7979456281 -9.472698e-01 -9.762612e-01  1.1215681704
2.884980e-01
## [3703,]  0.1821405782  3.791892e-01 -2.962133e+00 -0.6361445282
5.698968e-01
## [3704,]  0.7671463589  5.922689e-01 -1.414030e+00  0.2549313721
1.271072e-01
## [3705,]  0.9405457336  5.676583e-01  3.504998e-01  0.2488111306 -
3.404987e-01
## [3706,] -3.6579862189 -6.500216e-01 -4.779572e-01 -0.4512326782 -
1.439100e+00
## [3707,]  0.4849222393  1.872385e+00  1.694075e+00  0.5548761887
3.960236e-01
## [3708,] -2.2916144096  5.623972e-01 -1.030367e+00 -1.0306955722 -
1.259724e+00
## [3709,]  0.9566956219 -2.711478e-01 -1.054287e-01  0.2005313006 -
1.239769e+00
## [3710,] -0.0398982471  1.018962e+00  1.169909e+00  0.4342692526
2.866742e-01
## [3711,]  0.9852498209 -9.249002e-01  5.729975e-01 -0.5519253689 -
2.469039e-01
## [3712,]  0.7755496808  4.416966e-01 -7.851631e-01 -0.0444267926
3.147159e-01
## [3713,]  0.8878386008 -3.556602e-01  7.592642e-01 -1.3427313673
5.210615e-01
## [3714,] -0.1613550675 -2.032448e+00 -2.300320e+00 -0.7734964697 -
1.491468e+00
## [3715,]  0.9054090714  3.351152e-01  6.738463e-01  0.8940767527 -
6.410481e-01
## [3716,]  0.5862845818 -1.258278e+00 -1.963186e+00  0.0570547177
4.769243e-01
## [3717,]  0.7674509739  1.229319e+00  2.417906e-01 -0.1762433136 -
5.087092e-01
## [3718,] -2.2487470171  3.258314e-01 -4.978546e-01 -0.7681963937 -
8.289043e-01
## [3719,]  0.5026052381  1.880150e+00  1.515426e+00  0.3730714811
3.178275e-01
## [3720,]  1.0679342300 -8.899918e-01 -5.307377e-02  0.4625960514 -
6.365921e-01
## [3721,] -1.7506142802 -3.873950e+00 -3.165630e-01  1.0880989588 -
1.884827e+00
## [3722,]  0.8277826240  1.177588e+00  3.658346e-01  0.0926578580 -
6.648107e-01
## [3723,]  0.8448231760  4.313568e-01  1.307514e+00  1.2573925425 -
4.051788e-01
## [3724,]  0.6857011870  7.320962e-02 -9.580354e-01 -1.9966135892 -
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3.388964e-01
## [3725,]  0.7474566896  1.000192e-01  4.727057e-01 -0.6768474860
2.348700e-01
## [3726,]  0.7355747150  8.371525e-01 -2.296323e-01  0.9557360384 -
5.410190e-02
## [3727,]  0.8878873744  2.758056e-01  1.256769e+00  0.9483592426 -
4.196542e-01
## [3728,]  0.7550604744  5.846999e-01  2.685707e-01 -1.3754425363 -
2.155956e-01
## [3729,] -0.1929566548  2.050355e+00  3.925657e-01 -0.9158332630
4.939797e-01
## [3730,]  0.9298082825 -1.335555e+00 -7.112110e-02  0.5674766334 -
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## [3731,]  0.6621259284  7.981361e-01  7.602206e-01 -1.0950414407
1.471492e-01
## [3732,]  0.9462924937 -1.256583e+00 -4.438397e-01 -2.5805651158
8.052133e-01
## [3733,]  0.8687282261  4.010115e-01  9.292595e-01  0.5537972312 -
3.452970e-01
## [3734,]  0.6575832399  8.371503e-01  7.014143e-01 -1.2613422216
1.890121e-01
## [3735,]  0.5041470551  1.815646e+00  1.490102e+00  0.2171434008
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## [3736,]  0.6587555396  1.081602e+00  5.518626e-01 -0.8763341734 -
1.783223e-01
## [3737,] -8.3869062308 -9.558099e-01  1.175123e+00 -0.6726796625 -
9.729610e-01
## [3738,]  0.8826335182 -9.146688e-01  3.282091e-01  0.1545118556 -
2.370205e-01
## [3739,]  0.9683787249  3.545568e-02 -1.774157e-01  1.2063237298 -
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## [3740,] -2.2864552284  4.348633e-01 -1.245781e+00 -1.2074632409 -
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## [3741,]  0.6624006510  9.404631e-01  6.638576e-01 -1.2072181135
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## [3742,]  0.7416856741  8.268025e-01  5.798239e-01 -1.0353990662
3.366197e-02
## [3743,]  0.9227126314 -2.862258e-01  6.885401e-01 -1.2067723392
1.823453e-01
## [3744,] -1.6420049027 -3.798880e+00 -1.115523e-02  0.6032103408 -
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## [3745,]  1.4214749724 -3.008852e+00  8.991992e-01 -0.1863008856 -
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## [3746,] -3.6433825616 -7.896375e-01 -4.261494e-01 -0.3875307708 -
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## [3747,] -8.3629875001 -1.027721e+00  1.120496e+00 -0.7373575066 -
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## [3748,]  1.0873820506 -5.934703e-01  8.038715e-01  1.3239126557 -
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## [3749,]  1.2132030619 -1.713974e+00  1.127548e+00  0.0373309814
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5.126044e-02
## [3750,]  0.7170636764  1.101259e+00  6.609118e-01 -0.1023245447 -
4.039580e-01
## [3751,] -0.0655519519 -9.024641e-01 -3.469585e+00  1.4722253463
8.644362e-01
## [3752,]  1.4260875407 -3.042265e+00  6.985834e-01 -0.2898131716 -
7.575737e-02
## [3753,]  0.8101440446  3.789183e-01  6.406532e-01 -0.1798961344
1.205374e-02
## [3754,] -0.2021163853  2.080168e+00  4.282325e-01 -0.8593813621
5.034405e-01
## [3755,] -0.0328509430  9.594385e-01  1.181822e+00  0.3906990862
3.347587e-01
## [3756,]  0.7646971694  7.333746e-01  6.486920e-01 -0.8753429925
3.030892e-02
## [3757,]  0.9416450948 -1.202685e-01  6.426448e-01  0.1411140508 -
5.184701e-01
## [3758,] -2.2939467848  5.672126e-01 -9.803081e-01 -0.9061499754 -
1.250158e+00
## [3759,]  0.8483753150  4.593031e-01  7.743847e-01  0.5066885931 -
6.617346e-01
## [3760,]  0.1476537583  2.761581e+00 -1.909161e-01 -1.6576926402
3.529328e-01
## [3761,]  0.7788208029  8.169608e-01  1.075227e+00  1.2637307306 -
6.699485e-01
## [3762,] -8.2663679322 -2.053930e+00  3.738842e-01 -0.6656170559
7.187348e-02
## [3763,]  0.7552319154  6.877332e-02 -1.179870e+00 -0.9828512567
4.828378e-01
## [3764,]  1.4096936093 -2.997869e+00  8.801724e-01 -0.3251214213 -
7.822737e-02
## [3765,]  0.9501504982 -1.828351e-01 -1.450461e-01  0.0926541154 -
1.203134e+00
## [3766,]  0.5065243744  2.393298e-01 -1.412739e+00  0.3159308050
3.587604e-01
## [3767,] -0.9867077781  1.180575e+00  1.554380e-01  0.5920505984
3.625053e+00
## [3768,] -7.5248393845 -1.497172e+00 -3.715630e-01 -0.3721858605 -
1.332614e+00
## [3769,] -8.0197320431 -7.604092e-01 -2.214952e+00  2.4761763060
1.255800e+00
## [3770,]  0.9226838523 -8.881151e-01 -1.154528e+00 -2.4027449129
1.781935e+00
## [3771,]  1.0631656238 -1.738098e+00 -6.324381e-02  0.3096954948
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## [3772,]  0.7928374264  2.763186e-01 -4.790072e-01  0.2983773370
4.405405e-01
## [3773,]  0.9507914893 -5.392132e-01 -5.337147e-01 -0.1679514380
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## [3774,]  1.0074793101 -8.441953e-01  1.185017e-01  1.1348375664
```

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3.821604e-01
## [3775,] -0.7739717661  5.841431e-02 -2.048946e+00 -0.2758885694
1.638474e-02
## [3776,]  0.0465956312  1.099205e+00  3.412083e-02  0.2823494673
2.154766e+00
## [3777,] -2.7149911152  1.059606e+00 -1.441941e+00 -0.4334513154 -
1.867725e-01
## [3778,]  0.8778584617 -2.095516e-01 -4.072274e-01  0.5001219495
3.986725e-01
## [3779,]  0.6708149294 -7.152195e-01 -1.746384e+00  2.4204699774 -
4.301305e-01
## [3780,]  0.5358440596  2.737202e-01 -1.035428e+00 -0.7579783996
6.309433e-01
## [3781,]  0.1029744445  4.211626e-01  5.678094e-01  1.7121476723
1.588440e+00
## [3782,]  1.1094787453 -1.688825e+00 -4.885165e-01 -0.0153145792
1.638664e-01
## [3783,]  0.6105885120  1.091671e+00 -1.183677e+00  2.6822162082 -
5.507030e-01
## [3784,]  0.5663478562  1.514275e+00 -9.602601e-01 -0.9017864237
3.484936e-01
## [3785,] -0.6708700280 -2.780222e+00 -2.547125e+00  3.7266359215 -
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## [3786,] -0.0860490479  1.884516e+00 -1.778736e-01 -0.3984043121
2.547260e+00
## [3787,]  0.7418385475  5.215647e-01 -4.226244e-01 -0.2030650374
5.489252e-01
## [3788,]  1.0108371931 -7.717904e-01  5.088753e-01  3.6929432345 -
5.990762e-01
## [3789,] -0.3746792439 -1.771319e+00 -1.536157e+00  2.8086595997 -
1.224545e+00
## [3790,]  0.7886478450  8.281061e-01 -3.367055e-01  0.1850789800
3.997298e-01
## [3791,]  0.4613265654 -7.240966e-01 -2.604017e+00  1.2775881928 -
4.863114e-01
## [3792,]  0.0198573473  5.901105e-02 -2.380579e-01 -0.1561039330
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## [3793,]  0.9823128731 -1.255640e+00 -1.344944e+00 -1.2182113379
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## [3794,]  0.7185402931  5.559970e-01 -8.162050e-01 -0.6195606733
3.248809e-01
## [3795,]  1.0770075179 -1.511486e+00  3.113429e-01  0.5348266486
7.075249e-01
## [3796,]  0.1061468171  1.201441e-01 -1.767360e-01  0.2122940065
2.156305e+00
## [3797,] -0.1992256312  1.612572e+00  3.060964e-01  0.4392975278
1.324710e+00
## [3798,]  1.2029623786 -1.572401e+00 -1.116904e-01  0.9749487501
4.339666e-01
## [3799,]  0.8432593199  1.356901e-01 -1.012104e+00 -0.8814128919
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7.962297e-01
## [3800,]  1.1499107406 -1.985251e+00  1.740744e-01 -0.8590363732
1.276403e+00
## [3801,]  0.7022748830  7.867375e-01 -1.134117e+00 -0.1568677268 -
2.764141e-02
## [3802,] -0.2588901002 -3.119522e+00 -5.259610e+00  1.0712310836
1.488654e+00
## [3803,]  0.9619706106 -8.773243e-01 -6.684122e-01 -1.1328710188
5.922877e-01
## [3804,]  0.7977686496 -2.219510e-01 -6.312131e-01  1.7967473491
1.100436e-01
## [3805,] -1.2199216649 -1.937461e+00 -5.052986e+00  3.2552208887
4.430855e+00
## [3806,] -0.6357681015 -7.752949e-01 -2.163988e+00  0.0645346881 -
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## [3807,]  0.7993021897 -1.731448e+00 -2.604402e+00  0.1408676453 -
4.911579e-02
## [3808,]  0.0376927200  3.520398e-01 -3.206597e+00  3.9148301280 -
1.561264e-01
## [3809,]  0.7484584740 -1.177359e+00 -1.106344e+00 -0.0834741175
8.878693e-01
## [3810,]  0.5506022240  2.679540e-01 -1.680706e+00  1.3504069214
1.246276e-01
## [3811,] -0.3553299515  1.827131e+00 -2.894121e-01  0.5721176964
1.410093e+00
## [3812,]  0.1769083780 -1.287663e+00 -2.764490e+00 -1.0012179119
1.731302e+00
## [3813,]  0.9142420367 -1.768611e+00 -5.161160e-01  0.2310578674
4.831547e-01
## [3814,]  0.1645742940  6.464348e-01 -2.262018e+00  1.6602505040 -
1.768749e-02
## [3815,]  1.0521477057 -8.313177e-01 -5.868164e-01  0.3825715252
4.350741e-01
## [3816,]  0.9542709373 -1.269801e+00 -5.813213e-01  0.9185721381
3.347039e-01
## [3817,] -1.5234222180 -1.861552e+00 -3.377820e+00  2.5682858214
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## [3818,]  0.6421823409  4.174331e-01 -8.856146e-01 -0.4769931296
6.300810e-01
## [3819,]  0.1773631359 -2.334973e+00 -2.918989e+00  0.6934244450
1.289577e+00
## [3820,]  0.7548811746 -1.443398e+00 -1.613199e+00  0.0802104192
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## [3821,]  0.7582774192  4.828593e-01 -5.212031e-01 -0.7851391072
5.935540e-01
## [3822,] -3.7612154039 -4.428556e-01 -3.845003e-01  0.5750267390 -
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## [3823,]  0.8172606488  1.017095e+00  3.307637e-01  0.4518866489 -
7.521041e-01
## [3824,]  0.0423972006  5.608613e-01  2.012384e+00  1.6131567616
```

```
1.228199e+00
## [3825,]  0.6198842978  9.862388e-01  1.063409e-01  2.5014417990 -
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## [3826,]  0.7430936457  1.032971e+00  7.086607e-01  0.0736531921 -
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## [3827,]  0.9328414452  4.978642e-01  3.856349e-01  0.1785448170 -
2.885697e-01
## [3828,] -8.1616816396 -2.402779e+00  1.415689e+00 -1.0278060329 -
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## [3829,] -0.1562145477  2.039180e+00  1.166506e+00  0.0217818603
1.611352e+00
## [3830,]  0.1652315771  4.782374e-02  1.282936e+00  0.4321116639
1.505439e+00
## [3831,] -0.5468710598 -2.763227e+00 -6.978027e-01  3.2256393704 -
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## [3832,]  1.0690320279 -8.353518e-01 -6.257190e-02  0.4004804488 -
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## [3833,]  0.7316722789 -1.919015e-01  2.151734e-01  0.3136181140 -
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## [3834,] -0.0296582142  9.235571e-01  1.235187e+00  0.4750102370
3.435865e-01
## [3835,] -2.7256833369  9.247331e-01 -1.870969e-02 -0.5491552327 -
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## [3836,]  1.0211386879 -1.262827e-01  3.604034e-02  1.3425916948 -
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## [3837,] -0.2012151328  2.137304e+00  1.247580e+00 -0.0128116376
1.686964e+00
## [3838,] -0.3780520451  1.665987e-02  1.389764e-01 -0.1963890396
1.211912e+00
## [3839,]  0.5570121404  1.166806e+00 -1.506687e+00 -1.9549294552 -
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## [3840,] -8.4303130462 -9.733735e-01  1.777523e-01 -0.4112657686 -
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## [3841,]  0.9120648713  3.410621e-01  8.792911e-01  0.8882182473 -
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## [3842,] -2.5442558708  1.212507e+00  4.273964e-01 -0.6617592891 -
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## [3843,]  0.9512678191 -2.093109e-01  2.502913e-01  0.5425948329 -
1.213507e+00
## [3844,] -8.3721484591 -9.922561e-01  1.138345e+00 -0.7112355368 -
9.837926e-01
## [3845,]  0.6145626975  3.018418e-01 -6.914556e-01 -0.9357469888 -
3.433926e-01
## [3846,] -2.2592474117  3.198670e-01 -4.627659e-01 -0.9000976725 -
7.188158e-01
## [3847,]  1.0119930970 -7.296431e-01  5.985127e-01 -0.4081425376 -
1.010282e-01
## [3848,]  0.8090714632  3.252177e-01  5.676918e-01 -0.3762734972
2.001275e-02
## [3849,]  1.2834953345 -2.772175e+00  1.301067e+00  0.5773875555 -
```

```
1.592843e-01
## [3850,]  1.1884556509 -2.183207e+00  1.502072e+00 -0.9833932423
8.384008e-01
## [3851,]  1.0798735495 -9.436732e-01 -3.187896e-01  0.2496974195 -
5.983095e-01
## [3852,]  1.1303501335 -1.573094e+00  1.077425e-01 -0.9538541771 -
3.143630e-02
## [3853,] -0.1886800334  1.971086e+00  1.918146e-01 -1.1420530040
6.094360e-01
## [3854,]  0.9564917388 -2.499611e-01 -3.589285e-02 -1.3654065767
1.769010e-01
## [3855,]  0.7089513243  1.028953e+00  7.444898e-01  0.0042850916 -
3.928725e-01
## [3856,] -1.6519414468 -3.789974e+00  1.218790e-01  0.7773768940 -
1.848432e+00
## [3857,]  0.8439755302 -7.728329e-01  1.683415e+00  4.1197654395 -
9.285210e-01
## [3858,] -0.1469721450  2.021308e+00  1.395023e+00 -0.2018417522
2.187579e+00
## [3859,] -1.8062266615 -3.292947e+00 -2.667554e+00 -0.5306491241 -
5.211314e-01
## [3860,] -2.5044062861  1.089898e+00  3.675070e-01 -0.6154075097 -
7.276417e-01
## [3861,]  0.8684198915  2.370711e-01  1.255310e+00  1.0674823966 -
3.784966e-01
## [3862,] -0.6147303992 -1.738795e+00  1.585896e+00 -1.3365127337
5.821537e-01
## [3863,]  0.6353481064  5.382751e-01 -8.258676e-01 -0.0297609227 -
5.840001e-01
## [3864,]  0.4883682170  1.955995e+00 -8.576643e-01 -1.2719670503
8.793623e-01
## [3865,]  0.7969072167  3.358285e-01  5.133296e-01 -0.8478827597 -
2.503454e-01
## [3866,]  0.6761550215  1.014338e+00  8.402109e-01 -0.3774954246 -
1.459213e-01
## [3867,] -0.1925170847  2.196959e+00  1.664027e+00 -0.1450478293
2.225143e+00
## [3868,]  0.5276730398  1.624665e+00  7.859250e-01 -0.5995438111 -
7.349782e-02
## [3869,]  0.9577493541 -6.520538e-01  2.023673e+00  3.7897506812 -
9.599216e-01
## [3870,]  0.7529554148  6.017626e-01  4.888051e-02 -0.4552787862 -
5.330399e-01
## [3871,]  1.3692491512 -8.397694e-01 -3.405469e-01  0.9982443677 -
1.007240e+00
## [3872,]  1.0587667934 -1.636470e+00  1.109851e+00  0.1828441880 -
1.708541e-01
## [3873,]  0.6542493961 -6.455057e-01 -1.961199e-01  2.3972445953 -
8.817918e-01
## [3874,] -3.4988597642 -1.571589e+00 -2.462807e-01  0.1237358227 -
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```
1.412028e+00
## [3875,]  0.7678296560  4.152544e-01  1.094189e+00 -0.2009709805
4.059575e-02
## [3876,] -0.0750844850  1.210728e+00  1.286301e+00  0.0362647103
6.827466e-01
## [3877,]  0.9402904880 -2.884076e-01  9.761666e-01  0.4739847832 -
1.964147e-01
## [3878,] -0.0892086874  1.277355e+00  1.321419e+00 -0.0054019021
7.465333e-01
## [3879,] -0.6295016795 -1.757111e+00  1.483661e+00 -1.3274937865
6.714525e-01
## [3880,]  1.0338713571 -1.394950e-01 -7.690892e-03  1.3764603160 -
1.404722e+00
## [3881,]  0.6985240348 -1.058910e+00 -1.720662e+00  2.2044648808 -
9.407383e-01
## [3882,] -0.0841606107  1.252872e+00  1.320642e+00  0.0268479261
7.261436e-01
## [3883,]  0.8428657543 -5.979369e-01 -6.066487e-01 -0.1980763855 -
1.506019e-01
## [3884,]  1.3865822165 -2.859275e+00  1.034541e+00 -0.4280135378
1.614700e-01
## [3885,]  0.3911837493 -1.884449e+00 -2.478422e+00  0.6745598123 -
1.356992e+00
## [3886,] -3.4808208045 -1.664634e+00 -2.955325e-01  0.0104559087 -
1.416222e+00
## [3887,]  0.3888376711  2.717030e+00  2.822758e-01 -1.6621148575
2.256054e-01
## [3888,]  1.4120533242 -2.973750e+00  8.821842e-01 -0.2920661065 -
6.570332e-02
## [3889,]  0.7771335813  1.114368e+00  3.978061e-01  0.4244776480 -
6.693109e-01
## [3890,]  0.9340228650 -4.116623e-01  7.309778e-01  0.0905168479 -
8.188923e-02
## [3891,]  1.0737288750 -5.986043e-01  9.192854e-01  1.0602124173 -
2.065023e-01
## [3892,]  0.1479769682  7.753728e-01  9.625220e-01 -0.2748959314
1.515517e+00
## [3893,] -0.6024453087 -1.687802e+00  1.669269e+00 -1.0912397727
5.858154e-01
## [3894,]  0.7743393011  5.446262e-01 -3.635113e-02 -0.5221781333 -
5.789043e-01
## [3895,]  0.1847621606  1.423467e+00 -5.856368e-01 -0.2790215490 -
1.909136e-01
## [3896,]  0.8646738411  5.351366e-01  8.113558e-01 -0.0975852717 -
1.490124e-01
## [3897,]  0.7469970154  7.323617e-01 -1.502067e-01  0.0564733600 -
6.680605e-01
## [3898,]  1.0612105760 -8.448994e-01 -3.246202e-02  0.4723297253 -
6.018114e-01
## [3899,]  1.2261116366 -1.774631e+00  1.058528e+00 -0.1631661310
```

```
8.877281e-02
## [3900,]  0.7939783940  6.071287e-01  6.571079e-01 -0.8677505513
6.069883e-02
## [3901,] -0.1699522582 -1.953808e+00 -4.520869e-02  2.2859093300 -
1.839165e+00
## [3902,]  0.5094367850 -8.935493e-01 -1.501869e+00  0.8381109775 -
1.005536e+00
## [3903,]  0.7198135632  9.490653e-01  7.057066e-01 -0.6706083381 -
7.946889e-02
## [3904,]  0.8015886501  3.625843e-01  5.561117e-01 -0.6597804537 -
2.753284e-01
## [3905,]  0.1297806754 -2.540701e-01  1.020634e+00 -0.3882177895
8.057444e-01
## [3906,]  0.5869547911  6.643967e-02  1.124030e-01 -1.0918337089
1.183861e-01
## [3907,] -0.6940685415 -1.289492e-01 -6.952555e-01 -0.3818613864 -
5.797206e-01
## [3908,]  0.0865563688  4.862008e-01 -8.703068e-01  4.1292889267 -
5.011228e-01
## [3909,]  0.5439040933  1.532120e+00  8.048007e-01 -0.5772317328 -
6.208368e-02
## [3910,]  0.9458737826 -1.601702e-01  2.870659e-02 -1.2655348819
2.134665e-01
## [3911,]  1.7586566347 -3.727823e+00 -3.190670e+00 -3.7887246897 -
1.672217e+00
## [3912,]  0.1353940111  5.786763e-02  1.028668e+00  0.0293009360
1.634940e+00
## [3913,]  1.4492827875 -3.131190e+00  6.257359e-01 -0.3630877113 -
9.706814e-02
## [3914,]  0.7463837693  5.693685e-01  4.694003e-02 -0.5515296710 -
4.877525e-01
## [3915,]  0.6456110074  5.867639e-01 -8.086967e-01  0.1152052054 -
6.080692e-01
## [3916,]  1.2578605320 -2.769064e+00  1.083941e+00  0.2956874705 -
6.578094e-02
## [3917,]  0.8770237840  5.347581e-01  7.584120e-01 -0.0892710445 -
1.895612e-01
## [3918,] -3.6826928401 -5.946408e-01 -4.520799e-01 -0.5964513309 -
1.317447e+00
## [3919,]  0.8670971828  2.285080e-01  1.278093e+00  1.1096492944 -
3.719038e-01
## [3920,]  1.2469872906 -2.997840e+00 -2.714088e-02 -0.3852143511
9.460942e-01
## [3921,]  0.0889196058 -2.386787e-01  4.179793e-01  0.1261084977
1.594963e+00
## [3922,]  0.1866395033  1.892785e-01 -3.047877e+00  0.1698972867
1.527360e-01
## [3923,]  0.9556793194 -2.331357e-01 -5.012713e-02 -1.3809714816
1.788973e-01
## [3924,]  0.8646531602 -1.872641e-01 -1.158523e+00 -2.0038181894
```

```
5.562933e-02
## [3925,]  1.0429825448 -1.044748e+00  1.267364e+00  0.6192563914 -
5.815484e-02
## [3926,] -0.0921680348  1.280148e+00  1.319316e+00 -0.0724481340
7.901285e-01
## [3927,]  0.8991857646 -2.093646e+00 -1.612519e+00 -0.3338848612 -
6.683777e-01
## [3928,] -1.2082570460 -3.273317e-01 -4.717795e+00 -1.6764081668
1.428459e+00
## [3929,]  0.9314256257 -6.760492e-01  2.136107e+00  3.7632777777 -
8.540088e-01
## [3930,] -0.6854958926 -3.247329e-01 -9.623335e-01 -0.7042826867 -
5.273739e-01
## [3931,]  0.6251048423 -2.023872e-02  5.744728e-02 -1.0513037824
5.264735e-02
## [3932,]  0.7549705255  4.694755e-01  1.045842e+00 -0.2950793102
3.605589e-02
## [3933,]  0.5523667632  3.252596e-01  3.994365e-01 -0.3701841845
2.505294e-01
## [3934,] -0.1786108141  2.096584e+00  1.311033e+00 -0.2044839536
1.659360e+00
## [3935,]  0.7016953108  1.113498e+00  6.197448e-01  2.2875635789 -
9.537373e-01
## [3936,]  0.7513282223  6.982307e-01 -9.032803e-02  0.1506778135 -
6.365093e-01
## [3937,] -1.7244606068 -3.862289e+00 -2.996583e-01  1.1978114417 -
1.873694e+00
## [3938,]  0.7341748756  1.037799e+00  6.658010e-01 -0.5984428913 -
1.045801e-01
## [3939,]  0.9953788803 -3.602170e-01 -8.068286e-03 -1.1672920465
1.316590e-01
## [3940,]  0.9186339209  5.629121e-01 -4.656575e-01 -2.5575316418 -
2.698087e-01
## [3941,]  0.7761747197  4.038096e-01  5.593804e-01 -0.8440012614 -
1.916871e-01
## [3942,] -1.0324606054  1.544927e+00  5.567629e-01  0.1377496331
6.397673e-01
## [3943,] -3.7435233555 -5.995828e-01 -3.994897e-01  0.3312527834 -
1.911858e+00
## [3944,]  0.1401862820 -2.947886e-01  7.133096e-01 -0.5888554427
7.831662e-01
## [3945,] -1.6982889991 -3.542648e+00 -1.491279e+00 -0.8575223426 -
1.196595e+00
## [3946,] -0.1746534455  2.087314e+00  1.452987e+00  0.1043207494
1.661380e+00
## [3947,]  0.7845469842 -1.464289e+00 -5.089165e-01 -1.3258044045
1.720590e-01
## [3948,]  1.3790860304 -3.337749e+00  1.227462e+00 -0.4002250473
1.938474e-01
## [3949,]  1.1040370230 -1.651980e+00 -8.112207e-02 -1.2421724725
```

```
9.747977e-02
## [3950,]  0.8666942926 -1.795501e-01 -1.226387e+00 -2.1042086794
4.872463e-02
## [3951,]  1.0446891354 -1.287524e+00  4.511015e-01  0.5843528541 -
3.696160e-01
## [3952,]  0.7661044770  4.250435e-01  8.120878e-01 -0.4937111010
1.094733e-01
## [3953,] -8.1550496243 -2.362613e+00  1.345868e+00 -1.0620034507 -
5.721839e-01
## [3954,]  0.9500909474  1.114684e-01 -8.517311e-01  2.1999563401 -
5.915027e-01
## [3955,] -8.3740771492 -1.007020e+00  1.176107e+00 -0.6881019363 -
9.430768e-01
## [3956,] -0.1966610716  2.210594e+00  1.645511e+00 -0.1509435607
2.221617e+00
## [3957,]  0.7879324076  6.267089e-01  3.493389e-01 -1.2570203373 -
1.390675e-01
## [3958,]  0.9434959003 -1.373917e+00 -3.395901e-02  0.6389660019 -
3.279027e-01
## [3959,] -0.3618823314  7.227893e-02  2.698483e-01 -0.2189781592
1.198218e+00
## [3960,]  1.2259965558 -1.979978e+00  1.151543e+00 -0.1218470289
5.646659e-02
## [3961,]  0.7707067271  3.897362e-01  7.368986e-01 -0.5573162206
4.804176e-02
## [3962,]  0.7096934993  1.056210e+00  7.099242e-01 -0.5525731934 -
1.196783e-01
## [3963,] -0.8851493199  7.360913e-02 -5.769635e+00  1.1243840476
4.176267e+00
## [3964,]  0.6414380970 -2.698568e+00 -4.410221e-01 -0.6574583184
6.303812e-01
## [3965,] -1.8062873555 -2.571817e+00  1.592046e-02 -0.3335400759 -
4.939842e-01
## [3966,]  0.8684436440  2.722126e-01  1.373634e+00  1.3082223095 -
3.428762e-01
## [3967,]  0.8184807650 -3.166735e-02 -1.280114e+00 -2.4500055190
1.498754e-01
## [3968,]  0.7895883149  4.909435e-01  3.550987e-03 -0.4681149297 -
5.427430e-01
## [3969,]  1.1439393504 -1.592272e+00  1.402180e-01 -0.9347805013
2.409011e-02
## [3970,] -0.6062499255 -1.841109e+00  1.436687e+00 -1.3922946874
6.702678e-01
## [3971,]  0.5228029940 -9.299124e-01 -1.492352e+00  0.9565705910 -
1.039724e+00
## [3972,] -0.1071616702  1.394391e+00  1.325745e+00  0.0463869451
7.337511e-01
## [3973,]  1.0332350384 -1.431436e+00  1.356363e-01 -1.2936203496
2.101701e-02
## [3974,]  1.0045682256 -7.572235e-01  7.306540e-01 -0.3665348197
```

```
3.008893e-02
## [3975,]  0.9957526063 -9.547757e-01  5.926610e-01 -0.5205337641 -
2.164556e-01
## [3976,] -0.1503543810  1.976891e+00  1.172042e+00 -0.0066856009
1.632572e+00
## [3977,]  0.0671567258  5.561388e-01  2.118890e+00  2.0611675043
1.165947e+00
## [3978,] -3.7478675604 -5.041935e-01 -4.874606e-01  0.2671586102 -
1.960076e+00
## [3979,]  0.7734328020  4.981090e-01  3.031533e-01 -1.3653131493 -
1.431426e-01
## [3980,]  0.5490454686 -1.042515e+00 -1.515931e+00  0.8864013459 -
1.024206e+00
## [3981,]  0.0337391430  5.543049e-01  2.115574e+00  1.7564520485
1.270487e+00
## [3982,]  0.1295809912  8.644268e-02  1.110979e+00  0.1866493798
1.654521e+00
## [3983,]  1.0361509004 -7.380129e-01  6.475455e-01 -0.0262130378 -
2.083084e-01
## [3984,]  0.6019835921  3.616468e-01 -8.661601e-01 -1.0308070267 -
2.530560e-01
## [3985,]  1.2259434306 -1.901101e+00  1.207092e+00  0.1343532482
2.942718e-03
## [3986,] -0.0809435053  1.284926e+00  1.300809e+00  0.0247616720
7.189852e-01
## [3987,]  0.8459593612 -6.821576e-03 -1.013872e+00 -2.0277872651
3.442541e-02
## [3988,]  1.0210232755 -1.255970e+00  3.708525e-01  0.2417905794 -
2.807277e-01
## [3989,]  0.4199596583  2.565036e+00  3.351775e-01 -1.4914850235
2.076738e-01
## [3990,] -0.1541406304  2.054956e+00  1.615975e+00 -0.2151863255
2.227387e+00
## [3991,]  1.1990943913 -1.652423e+00  1.110842e+00 -0.1061905334
1.241703e-01
## [3992,]  0.7966955527  3.281413e-01  2.411298e-01 -1.0290133654 -
2.316912e-01
## [3993,] -2.7095434666  9.621928e-01 -1.033853e-02 -0.5005020532 -
5.269910e-01
## [3994,]  0.7818163135  6.505430e-01  4.290470e-01 -1.1208584002 -
1.116437e-01
## [3995,]  0.6872911460  9.537825e-01  8.438868e-01 -0.3569389415 -
1.607513e-01
## [3996,]  0.6264165168  1.252072e+00 -9.469718e-01 -1.3919774833
7.013157e-01
## [3997,]  0.6673813054 -9.835368e-01 -1.104708e+00  0.7354636060 -
1.089135e+00
## [3998,] -0.3703461954  6.234775e-02  3.818945e-01 -0.0894277710
1.241987e+00
## [3999,]  0.7815183828  5.352162e-01  2.471005e-01 -1.3710639676 -
```

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1.962232e-01
## [4000,]  0.2579735768 -4.890712e-02 -2.195092e+00 -0.4985187902
6.727252e-02
## [4001,]  0.9117562384 -5.491067e-01  6.137836e-01 -1.3316333126
5.874706e-01
## [4002,]  0.4832683671 -1.614153e+00 -1.898729e+00  0.4566167368 -
1.384745e+00
## [4003,] -3.6692490088 -6.899527e-01 -3.924887e-01 -0.4434125239 -
1.338452e+00
## [4004,] -0.5175727098 -2.874705e+00 -9.045345e-01  3.2474626591 -
8.704023e-01
## [4005,] -0.1604437861  2.067690e+00  1.684769e+00 -0.0338844971
2.210857e+00
## [4006,]  1.0253098663 -1.456617e+00 -1.305217e-01 -1.4571707108
2.278919e-02
## [4007,]  0.7571698629  8.250645e-01  3.578672e-01 -1.1922307997 -
1.395198e-01
## [4008,]  0.9918700452 -6.399907e-01  9.256641e-01 -0.2345929358 -
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## [4009,]  0.1445449189 -2.612467e-01  9.692623e-01 -0.4868458597
8.214505e-01
## [4010,]  0.3739472464  3.836733e-01 -1.071769e+00 -0.7623646851 -
1.714055e-01
## [4011,]  0.1266168553 -4.121947e-01  1.714921e+00  0.0362792537
1.112412e+00
## [4012,] -0.1498910277  1.406963e-01  8.265501e-01 -0.1748127382
1.130669e+00
## [4013,] -3.6700722681 -6.523562e-01 -4.622807e-01 -0.5964739832 -
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## [4014,]  1.3291706492 -1.943924e+00  8.995252e-01  0.5898589712 -
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## [4015,]  0.8209956375 -7.821902e-01 -2.020647e+00 -3.4451089059
1.008452e+00
## [4016,]  0.6525848009  1.391960e+00 -8.598174e-02 -1.4478739978
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## [4017,] -8.3574346034 -4.201613e-01  6.539018e-02 -0.0876936614
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## [4018,]  0.8871023632 -1.665999e-01 -9.258513e-01 -0.4823416612
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## [4019,]  0.7663395760  2.819148e-01 -1.286320e+00 -0.8919923702
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## [4020,]  0.9661292950 -6.996225e-01 -5.389833e-01 -0.0537130795
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## [4021,]  0.6523019083  1.250396e+00 -1.200670e+00 -0.8979685024
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## [4022,]  0.8319700710 -5.757913e-01 -8.931598e-01  0.9191382253
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## [4023,] -0.9180869609 -1.752172e+00 -5.471469e+00  1.0758089062
1.293227e+00
## [4024,]  0.0643544322 -1.748684e-01 -3.548904e+00  1.6671638910
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5.542866e-01
## [4026,]  0.6461111663  1.291116e+00 -1.183942e+00 -0.9200796288
4.344413e-01
## [4027,]  0.7668307367  4.617585e-01  8.636676e-01 -0.2777635220
6.073421e-02
## [4028,]  0.8106686455  1.271882e-01  5.958401e-01 -1.0971329964
7.778934e-03
## [4029,]  1.1240599655 -1.523378e+00  1.686020e-01 -0.7919080329 -
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## [4030,]  0.2982076858  8.044718e-02 -1.822982e+00 -1.0871971815 -
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## [4031,]  0.0835619177 -2.524155e-01  1.781504e+00  0.0821881425
1.161281e+00
## [4032,]  0.1264036878  9.054770e-01  1.036459e+00 -0.2042239517
1.588660e+00
## [4033,]  1.2149152981 -1.753913e+00  1.105517e+00 -0.1173851159
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## [4034,]  0.7959297030  6.669076e-01  3.846968e-01 -1.2021025363 -
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## [4035,]  0.5994007195  9.977355e-01 -8.683680e-02  2.2995940819 -
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## [4036,] -8.3455589291 -1.111959e+00  1.132426e+00 -0.7566899886 -
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## [4037,]  0.6275065950  3.512918e-01 -6.372803e-01 -0.7764369830 -
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## [4038,]  0.9675761428 -4.415191e-01  8.549617e-01  0.2237760712 -
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## [4039,]  0.5948900318 -1.161610e-01 -2.457518e+00 -0.5862596264
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## [4040,]  0.9182385859  3.516359e-01  9.702850e-01  1.1080614455 -
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## [4041,]  0.9679388200 -6.535811e-01  2.337073e+00  4.1124114759 -
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## [4042,]  1.0719367525 -5.553156e-01  7.731845e-01  1.2075454700 -
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## [4043,]  1.2180721892 -1.959927e+00  1.213257e+00 -0.0670088284
1.002931e-01
## [4044,] -0.3748637738  1.953583e+00  1.000354e+00  0.3095342127
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## [4045,]  1.2109248130 -1.719102e+00  1.158627e+00 -0.0567562388
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## [4046,]  0.8564288789 -3.052012e-01 -5.129802e-01 -1.2893173041
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## [4047,]  0.7399494542  1.038274e+00  6.398244e-01  2.4200498687 -
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## [4048,]  1.0105296568 -7.927343e-01  6.272219e-01 -0.5916030398
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## [4050,]  0.7638172423  4.060314e-01  8.394267e-01 -0.4777258748
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## [4051,]  0.6221258776  6.322979e-01 -6.576657e-01  0.2556988794 -
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## [4052,]  0.6466401542  5.684534e-01  6.905333e-01  0.4834646957 -
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## [4053,]  0.7796413824  4.485364e-01  1.109743e+00 -0.1254648046
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## [4054,]  0.8715280017  5.344389e-01  7.796530e-01 -0.1257366356 -
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## [4055,]  0.6383662344 -8.295273e-01 -3.285492e+00 -1.8554190382
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## [4056,]  0.9497795238 -4.538118e-01  7.255439e-01  0.1907360626 -
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## [4060,]  0.9586789414 -7.234291e-01  2.134008e+00  3.8733323811 -
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## [4062,]  1.0432798663 -1.361167e+00  4.131825e-01  0.3227945862 -
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## [4066,]  1.0760417433 -9.329503e-01 -1.839566e-01  0.6181357211
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## [4067,] -0.6202698509 -2.960627e+00 -1.062926e+00  3.6435551270 -
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## [4069,]  1.1153991016 -1.057941e+00  9.325212e-01  0.2155988832 -
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## [4070,] -1.6871629543 -3.723006e+00 -1.621403e+00 -0.9463083547 -
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1.295112e+00
## [4075,]  1.0005764705 -6.450359e-01  9.115983e-01 -0.1600418761 -
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## [4076,]  1.3329987318 -3.216412e+00  9.648196e-01 -0.8522459080
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## [4077,]  0.8227981110  8.690007e-02  1.995572e-01 -0.8646300471 -
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## [4078,]  1.0760810195 -5.745099e-01  9.635713e-01  1.2909924588 -
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## [4079,]  0.8109306777  4.045497e-01  8.693957e-01 -0.1478397845
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## [4080,]  0.8900212560 -9.831547e-01  4.783561e-01 -0.0509406791 -
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## [4081,]  0.8167483261  8.107348e-02 -8.216341e-02 -1.0917693905 -
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## [4082,]  0.4885424640  1.790759e+00  1.468209e+00  0.4219080646
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## [4083,]  1.2376818972 -2.006653e+00  1.174525e+00 -0.0559928812
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## [4084,] -0.6008648981 -4.659624e-02 -3.297336e-01 -0.8038491164 -
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## [4085,]  0.6295424741 -1.057944e+00 -1.052762e+00 -1.2183475651
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## [4086,]  0.8737472898 -5.105672e-01 -8.370537e-01 -0.3888137924
3.726391e-01
## [4087,]  0.1197052373 -1.650191e-01  1.048191e+00 -0.3175084925
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## [4088,]  1.0521999995 -7.818806e-01  3.731206e-01 -0.1568450872 -
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## [4089,]  0.8202199045 -1.663002e+00  6.473275e-01  0.1425993554
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## [4090,] -0.2542189022 -2.058265e+00 -3.532685e-01  2.5152258552 -
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## [4091,]  0.0614211550 -3.301775e+00 -3.575407e+00  0.5711725210
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## [4092,]  0.6468509107 -1.142109e+00 -8.763542e-01 -1.2019450858
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## [4093,] -0.1374003048  2.377389e-02  5.780468e-01 -0.3241909743
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## [4095,]  0.9415943622 -1.436638e+00 -1.275358e-02  0.5398995540 -
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## [4096,]  0.9407542406 -7.212951e-01  3.345207e-01 -0.6039028161 -
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8.589073e-01
## [4100,]  0.9781987979 -2.719015e-01 -1.009777e-01 -1.4468157434
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## [4101,] -0.1869666831  1.973581e+00  2.196087e-01 -1.0810250189
6.302156e-01
## [4102,]  0.7372372915  9.336739e-01  7.251597e-01 -0.5755874032 -
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## [4103,]  0.8635187628  2.077874e-03  1.110037e-01 -0.9289575857 -
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## [4104,]  1.2300795256 -2.022992e+00  1.190616e+00 -0.1094064534
1.061804e-01
## [4105,]  1.0225154605 -1.534496e+00  1.192118e+00  0.2218742384 -
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## [4106,]  0.2238643013 -1.016095e+00 -1.732441e+00  1.1080577478
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## [4107,]  1.0372195812 -7.771053e-01  6.050227e-01 -0.3918897925 -
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## [4108,] -0.4143353596 -1.380332e+00 -1.229273e+00 -0.4464021260 -
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## [4109,] -0.1588174364  1.832005e+00  1.813710e-01 -1.1371928481
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## [4110,]  1.1214757958 -1.093079e+00  1.070740e+00  0.4909529663 -
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## [4111,]  1.1507200927 -1.713495e+00 -1.467758e-01 -1.2044776235
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## [4112,]  1.2417040020 -1.986725e+00  1.162744e+00 -0.1109981045
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## [4113,] -3.7356007404 -5.394030e-01 -4.535071e-01  0.4492201065 -
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## [4114,]  1.1906575184 -2.149350e+00  1.477538e+00 -0.9251501617
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## [4115,]  1.3225877725 -2.042560e+00  7.680396e-01  0.2071087700 -
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## [4117,]  1.2216262576 -1.725030e+00  1.094062e+00 -0.0140182901
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## [4118,]  1.0628627917 -5.635796e-01 -2.986569e-01  1.6092672790 -
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## [4119,] -0.7208348123  1.129533e+00  5.196957e-02  2.3146534886 -
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## [4120,] -1.8001009305 -2.579651e+00 -7.361530e-02 -0.5204180784 -
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## [4122,] -3.7417180086 -6.183892e-01 -2.997404e-01  0.6098667703 -
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## [4126,]  0.8087175038  1.198721e+00 -5.165222e-02  1.7040275302
2.185208e-01
## [4127,] -0.0244783939  9.420060e-01  1.223946e+00  0.4528882465
3.768499e-01
## [4128,] -3.6573869461 -7.252076e-01 -4.543479e-01 -0.6075079723 -
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## [4130,]  0.4973872034 -2.494259e+00 -1.204089e+00  0.4485171743
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## [4134,]  1.0809488931 -1.059386e+00  1.527895e+00  1.0331250064 -
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## [4137,]  0.7548470562 -5.885938e-01  2.493786e-01  2.0325328463 -
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## [4139,]  0.8854321665  4.734407e-01  7.218375e-01 -0.2323584519 -
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## [4140,]  1.0051100877 -4.503371e-02  2.457875e-01  1.8709778662 -
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## [4144,]  0.9597530516 -6.591352e-01  2.093384e+00  3.8410306950 -
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## [4145,]  1.0206757163 -7.894575e-01  8.756442e-01 -0.3103063248 -
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## [4146,] -0.8765419453  1.041534e+00  6.924716e-01  1.6541374063
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## [4147,] -1.0078583933 -2.139642e+00 -3.354563e+00  2.8969765126
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## [4148,]  0.7388267763  6.247369e-01 -3.105808e-01 -0.1468330863 -
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## [4150,]  0.0866868529 -2.684557e-01  1.835130e+00  0.1204090133
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## [4154,]  0.8729016404 -7.598056e-01  1.849800e+00  4.2078842353 -
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## [4155,] -0.0329039253  9.836777e-01  1.277078e+00  0.5137265239
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## [4156,] -2.2842806919  4.603394e-01 -1.165556e+00 -1.0596898352 -
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## [4157,] -3.7416071925 -5.752380e-01 -4.090144e-01  0.3254917187 -
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## [4159,]  1.0141892864  5.481216e-03  6.969240e-01  2.1289809081 -
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## [4160,] -3.7725133551 -4.423652e-01 -3.523887e-01  0.4618736655 -
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## [4163,] -2.1779389070 -1.073627e+00 -2.525980e+00 -0.4884390572 -
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## [4166,]  0.9424970444 -1.614197e-01 -8.705113e-03  0.2681502384 -
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## [4167,]  0.7982703918  4.860923e-01  1.744685e-01 -0.4100749764 -
5.766978e-01
## [4168,]  0.6173281240  1.027360e+00  1.765529e-01  2.5850991675 -
9.286139e-01
## [4169,]  0.9359367466 -3.108212e-01  6.053267e-01 -0.4096049189 -
4.442609e-02
## [4170,]  0.7711523131  3.563379e-01  3.289838e-01 -1.0356213477 -
1.331755e-01
## [4171,]  0.9598097856 -2.136126e-01  1.786594e-02 -1.3341593481
2.701210e-01
## [4172,]  1.0329089748 -1.588558e+00  1.077268e+00 -0.1498830408 -
2.549116e-02
## [4173,]  0.8316414464  2.030445e-02  1.736248e-01 -0.9853048795 -
2.973600e-01
## [4174,]  1.3331723946 -3.275689e+00  1.285992e+00 -0.6551579648
```

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3.821038e-01
## [4175,]  0.1600451748  5.454069e-01 -1.000269e+00  4.0413203760 -
4.375962e-01
## [4176,]  1.3531086141 -3.223975e+00  1.153333e+00 -0.7185026003
3.179213e-01
## [4177,]  0.7551891103  1.259002e+00 -4.410964e-01  1.6055210011 -
2.192795e-01
## [4178,] -2.7378129748  1.087074e+00 -8.329533e-02 -0.6735619479 -
5.141586e-01
## [4179,]  0.4783768938  1.922965e+00  1.500511e+00  0.5335313033
4.602641e-01
## [4180,]  0.9448612355 -6.623293e-01  5.342931e-01 -0.5020153490 -
2.026593e-01
## [4181,]  0.8417969160 -1.644604e-01 -1.181496e+00 -2.1814273338
1.321557e-01
## [4182,] -0.1208677765  1.919914e+00  1.218364e+00  0.2129094737
1.608943e+00
## [4183,]  0.1710296976 -3.989954e-01  1.010413e+00 -0.4144287806
8.359371e-01
## [4184,] -0.4636834942 -3.559818e-02 -7.275086e-02  0.2257342142
1.200709e+00
## [4185,] -0.7763117320  7.886882e-01  1.692439e+00  1.2389120943
2.372991e+00
## [4186,]  0.7114297755  9.110827e-01  8.011738e-01 -0.3735315208 -
1.566500e-01
## [4187,]  0.6024395125 -1.237700e+00 -1.902810e+00  1.4407624544
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## [4188,]  1.1115090069 -1.098114e+00  1.050146e+00  0.4055806707 -
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## [4189,]  0.9703305276 -8.799614e-01  2.991608e-01 -0.6579217339 -
1.807739e-01
## [4190,]  1.0467474330 -1.603109e+00  1.119019e+00  0.0378976101 -
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## [4191,]  1.0166459786 -6.960963e-02  5.187031e-01  2.0750045417 -
1.163948e+00
## [4192,] -0.6965011946  9.330515e-01  2.178536e+00  1.0486112717
2.395715e+00
## [4193,]  0.8222729553 -3.728639e-01 -1.158030e+00 -1.4413404195 -
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## [4194,] -1.8050932083 -2.508579e+00 -1.968044e-01 -0.3759087770 -
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## [4195,]  0.8964655001 -5.204402e-01 -4.690090e-01  0.5415124498 -
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## [4196,]  0.0668765252  5.310123e-01  2.143590e+00  1.9284545033
1.277560e+00
## [4197,] -0.5583128026 -1.764206e-01 -5.385394e-01 -0.6787784422 -
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## [4198,]  0.1229299187 -3.718561e-01  1.712998e+00  0.0225890684
1.140233e+00
## [4199,]  0.1142060227 -3.779813e-01  1.790517e+00  0.1106715785
```

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1.169439e+00
## [4200,] -8.1544014216 -2.417882e+00  1.435157e+00 -1.0136249810 -
4.790528e-01
## [4201,]  0.9779865401 -2.743108e-01  1.643736e-01  0.4408608363 -
1.204249e+00
## [4202,]  0.6655686664  1.162094e-01 -9.937121e-01 -0.5911177765 -
1.871877e-01
## [4203,]  0.6753021543 -8.482498e-01 -3.167473e-01  2.3528887466 -
7.689192e-01
## [4204,] -0.6524388847 -3.291180e-01 -7.845190e-01 -0.5204040941 -
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## [4205,] -0.1867093746  1.919915e+00  2.600394e-01 -1.0301553943
6.537963e-01
## [4206,]  1.0364417773 -9.711523e-01 -1.840076e-01  0.6406396944
4.507135e-01
## [4207,] -3.6504893086 -7.374838e-01 -4.714593e-01 -0.5319317546 -
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## [4208,]  1.0096373968 -4.746093e-01 -8.093717e-02  0.2296969834 -
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## [4209,] -0.6847725392 -1.809257e-01 -7.002458e-01 -0.3990983422 -
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## [4210,]  1.0579686446 -1.014139e+00  1.537376e+00  0.9698627549 -
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## [4211,] -3.6437742016 -7.910858e-01 -4.361541e-01 -0.4973773476 -
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## [4212,]  1.0245271834 -1.381835e+00 -4.908039e-02 -1.2500486659
4.668562e-02
## [4213,] -0.6768712846  8.881901e-01  2.105169e+00  0.9990616809
2.348668e+00
## [4214,]  0.1191969258 -3.845780e-01  1.782558e+00  0.0588608748
1.192637e+00
## [4215,]  0.9877413774 -6.445197e-01  8.710412e-01 -0.4684787717
4.961525e-02
## [4216,] -1.6749955416 -3.652877e+00 -1.738831e+00 -1.1361854129 -
1.061139e+00
## [4217,]  0.7185413716  1.031745e+00  8.013568e-01 -0.4345671525 -
4.373942e-02
## [4218,]  0.8758764286  1.290196e-01  5.942259e-01 -0.1825747215 -
1.934251e-01
## [4219,]  0.5016164706  1.854984e+00  1.633639e+00  0.4786246402
4.346983e-01
## [4220,] -0.1359405880  2.023784e+00  1.458902e+00 -0.1229218545
2.268902e+00
## [4221,]  0.7223135581  1.127983e+00  6.931718e-01  2.4825617618 -
9.044583e-01
## [4222,]  0.7713391557  2.606878e-01 -5.582232e-01 -0.2310238939
2.008057e-01
## [4223,]  0.4702609656  4.594802e-02 -2.334471e+00 -0.3371227430
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## [4224,]  0.7852435542  2.380534e-01 -8.051629e-01  0.3525248405
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4.662535e-02
## [4225,]  0.8669470077  4.414587e-01 -2.714976e-01  0.7119377994
4.476039e-01
## [4226,]  0.6144996743  7.974308e-01 -2.083366e+00 -1.4739295961
4.958821e-01
## [4227,]  0.7193721920 -1.292634e+00 -1.801263e+00  0.1947729095 -
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## [4228,]  0.9482494136 -1.507053e+00 -1.499640e+00  2.3942425689 -
2.179588e-01
## [4229,] -2.2234253107 -2.297853e+00 -8.107846e+00  5.6604895780
2.524530e+00
## [4230,] -2.5117199045 -3.616231e+00 -4.437591e+00  1.5730931927 -
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## [4231,]  0.9622050229 -4.351325e-01  8.653439e-01  0.1208349945 -
1.237437e-01
## [4232,]  0.9887143390  1.139920e-01  7.675664e-01  0.5002637420 -
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## [4233,]  0.9396852093 -2.803310e-01  3.397923e-01 -0.4751650051 -
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## [4234,] -1.6410779148 -3.704012e+00 -1.318184e+00 -0.7717182498 -
1.200380e+00
## [4235,]  0.8147333804  4.995959e-02 -5.280034e-02 -1.2160694297 -
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## [4236,]  1.3386169341 -3.230424e+00  1.321683e+00 -0.5075598673
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## [4237,]  0.9170619269  3.842340e-01  7.559224e-01  1.0465141394 -
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## [4238,]  0.7693503675  4.287047e-01  5.366951e-01 -0.9259613676 -
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## [4239,]  0.9596133421 -7.112809e-01  2.108491e+00  3.8261493743 -
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## [4240,]  0.9774867342 -1.677933e-01  5.911750e-01  0.2350351607 -
5.633181e-01
## [4241,]  0.9513205920 -3.499726e-01  5.867790e-01 -0.3735272881 -
5.868766e-02
## [4242,] -7.5271056735 -1.601193e+00 -3.677281e-01 -0.5486829323 -
1.208550e+00
## [4243,]  1.2061421282 -9.689702e-01  6.280416e-01  1.1603880552 -
6.930715e-01
## [4244,] -0.5953244349  2.778929e-02 -3.255396e-01 -0.7546413484 -
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## [4245,]  0.5216618982  1.689390e+00  1.383757e+00  0.3177453636
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## [4246,]  0.7092471918  1.281151e+00 -1.176661e+00  0.1656453114 -
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## [4248,] -1.0738512226  1.301465e+00  4.966088e-01 -0.6944681232
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## [4249,]  0.9809374179 -2.087726e-01  1.875303e-01 -1.2288613484
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2.127819e-01
## [4250,]  1.0497097811 -1.680613e+00  1.092874e+00 -0.0917823316 -
3.593289e-02
## [4251,] -0.1524620935  2.142289e+00  1.719314e+00  0.1328102898
2.216002e+00
## [4252,] -2.7411764579  1.057364e+00  7.702172e-02 -0.3914127159 -
4.883115e-01
## [4253,]  0.6161299088  1.014218e+00 -4.406049e-01 -0.8108428636 -
1.133350e-01
## [4254,]  0.7831657077  1.321002e+00  1.629236e+00  1.9005994414 -
2.003527e-01
## [4255,] -1.6698134445 -3.682483e+00 -1.477012e+00 -0.8156939917 -
1.173855e+00
## [4256,]  0.7883426920  1.096264e+00  1.480535e+00  1.7991467533 -
1.348399e-01
## [4257,] -0.6873859506  9.291712e-01  2.114070e+00  0.9117852046
2.418393e+00
## [4258,] -1.6217591219 -3.785523e+00  6.697508e-02  0.7690816862 -
1.817255e+00
## [4259,]  1.3382717069 -2.012542e+00  9.107780e-01  0.6774034213 -
1.832375e-01
## [4260,]  1.0459864129 -7.784545e-01  9.082396e-01 -0.1458562388 -
4.766937e-02
## [4261,] -0.4536519874 -1.323326e-01 -2.994355e-01 -0.0185458521
1.297200e+00
## [4262,]  0.9282828370 -6.840020e-01  2.847846e-01 -0.7875694046 -
1.213653e-01
## [4263,]  0.9677139267 -7.161609e-01  2.114572e+00  3.8922426270 -
8.809072e-01
## [4264,]  0.1286675251 -4.483825e-01  1.792104e+00  0.0368369154
1.222301e+00
## [4265,]  0.9888686818 -7.947376e-01  2.281934e+00  3.9527497925 -
9.406863e-01
## [4266,]  0.7838600434  4.347280e-01  1.033108e+00 -0.3648058195
1.177043e-01
## [4267,]  0.3931656512  2.730898e+00  2.898811e-01 -1.7050257962
3.028689e-01
## [4268,]  1.2319608327 -2.002922e+00  1.122058e+00 -0.2062956367
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## [4269,] -0.5498927299 -2.600870e-01 -5.746595e-01 -0.8675445206 -
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## [4270,]  0.3434870648 -1.129540e+00 -1.947661e+00  1.0752896894 -
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## [4271,]  0.1473680630  1.468798e-02  1.162030e+00  0.1757912448
1.747453e+00
## [4272,] -0.5778283431 -1.639864e-01 -5.178643e-01 -0.9516430816 -
4.365164e-01
## [4273,] -0.6674846234  9.238213e-01  1.397559e+00  2.3239269808 -
1.061278e+00
## [4274,] -8.1902580317 -1.238611e+00  2.771513e-01 -0.0691391845
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5.508472e-01
## [4275,]  0.7106648563  1.046519e-02 -1.630345e+00 -0.7839379365
4.515337e-01
## [4276,]  0.8023110062 -1.083948e-01 -6.736530e-01 -0.3483977115
3.155771e-01
## [4277,]  1.0380700787 -9.864523e-01  1.431159e+00  0.9445945327
7.213494e-04
## [4278,]  0.7201337016  1.025006e+00  8.236197e-01 -0.4032915476 -
3.308474e-02
## [4279,] -0.6917186715  1.007915e+00  1.195412e+00  1.9352191954 -
1.095741e+00
## [4280,]  0.8066749263  2.833631e-01  3.083134e-01 -0.8526779779 -
2.156304e-01
## [4281,] -8.1482699434 -2.418452e+00  1.414899e+00 -1.0265692275 -
4.843501e-01
## [4282,]  1.1821596489 -9.058326e-01  7.779741e-01  0.5938075044 -
4.481472e-01
## [4283,]  0.6832228721 -8.401387e-01 -3.275360e-01  2.3614619263 -
7.763397e-01
## [4284,]  1.2042958296 -8.632630e-01  7.363629e-01  0.5731567143 -
4.434960e-01
## [4285,] -0.1566098269  2.018177e+00  1.145004e+00 -0.1591872767
1.713654e+00
## [4286,]  1.1697851517 -2.111200e+00  1.479711e+00 -1.0790244195
9.072227e-01
## [4287,]  0.4783644268 -7.503049e-01 -2.135931e+00 -0.5943540559
1.091957e+00
## [4288,]  0.9829406299  1.241716e-01  7.038533e-01  0.2941758741 -
1.873262e-01
## [4289,]  0.7485108747  9.279293e-01  7.271342e-01 -0.6005849874 -
1.701132e-02
## [4290,]  1.2367376265 -1.972407e+00  1.128254e+00 -0.1213158908
7.024885e-02
## [4291,]  0.1173301500 -3.659665e-01  1.745665e+00 -0.0390887836
1.226252e+00
## [4292,]  0.8876966669  5.016378e-01  8.243239e-01 -0.0864738813 -
7.915953e-02
## [4293,]  0.6996218092  9.110522e-01  8.756913e-01 -0.3391609751 -
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## [4294,]  0.8268714686 -3.408391e-02 -1.180659e+00 -2.1608863755
1.369293e-01
## [4295,] -1.6277876834 -3.889207e+00  8.721844e-02  0.6721914258 -
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## [4296,]  1.0492588447 -1.622385e+00  1.099610e+00  0.1314390381 -
1.164677e-01
## [4297,]  1.1814928992 -8.911158e-01  8.787364e-01  1.2103323750 -
6.682957e-01
## [4298,]  0.8630846440  4.391491e-01  7.679447e-01  0.5116184157 -
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## [4299,]  0.1473176284 -2.952954e-01  1.053529e+00 -0.3619074206
```

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8.672217e-01
## [4300,]  0.9338504748 -2.929018e-01  3.298277e-01 -0.5776666767 -
1.764061e-02
## [4301,]  0.8970373154  4.243856e-01  8.043320e-01 -0.1113989591 -
8.588090e-02
## [4302,]  0.7011445190  1.400883e+00 -5.034407e-03 -1.5188158074
1.997329e-01
## [4303,] -3.6715140489 -7.339845e-01 -4.621585e-01 -0.6825414485 -
1.272315e+00
## [4304,] -2.0476437898 -1.466758e+00 -1.512290e+00 -0.8391308276 -
1.010127e+00
## [4305,] -0.0381728056  1.725595e+00 -2.330761e+00  0.1636887755
5.884555e-01
## [4306,]  0.9525052610 -4.451769e-01  5.817713e-01 -0.4519246625 -
4.895257e-02
## [4307,]  0.7531181754  1.249865e+00  1.211301e+00  1.7709133230 -
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## [4308,]  0.6363669893 -9.098906e-02  1.295093e-01 -0.9825471399
1.277886e-01
## [4309,] -8.1156660598 -1.422944e+00  1.402535e+00 -0.2373671782 -
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## [4310,]  1.1177643817 -1.067473e+00  1.006371e+00  0.3362547299 -
1.622317e-01
## [4311,]  0.1277576757 -2.650991e-01  8.060248e-01 -0.5078546441
8.762614e-01
## [4312,]  0.7125149628  1.142593e+00  5.903456e-01  2.1966943150 -
8.688721e-01
## [4313,]  0.7530751616  1.101515e+00  2.592914e-01 -0.0051853792 -
5.482287e-01
## [4314,]  0.8060934607  4.102239e-01  3.406751e-03 -0.4305711603 -
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## [4315,]  0.1651122945 -3.766609e-01  9.823342e-01 -0.4612902601
8.498615e-01
## [4316,] -0.0516504614  1.133894e+00  1.307583e+00 -0.0373133174
7.959279e-01
## [4317,]  0.9609216720 -4.313962e-01  9.564668e-01  0.2852207808 -
9.767880e-02
## [4318,] -0.4427177315 -1.911970e-01 -3.174703e-01 -0.0190521263
1.280830e+00
## [4319,]  0.4217210638  2.509707e+00  1.406082e-01 -1.7590901788
3.782002e-01
## [4320,]  0.8101812937  1.094814e+00  1.351386e+00  1.5533212198 -
1.182506e-01
## [4321,] -1.6233531151 -3.858011e+00  3.555557e-02  0.5417118956 -
1.746549e+00
## [4322,] -9.0077632638 -1.220488e+00  9.344075e-01 -0.1423778453
1.764957e+00
## [4323,] -3.6398473245 -8.758578e-01 -3.832487e-01 -0.4717387487 -
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## [4324,]  0.7744447864  4.635912e-01 -5.145573e-01  0.2600534825
```

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2.650227e-01
## [4325,] -5.3515242342  7.437348e-01 -4.239747e-01 -0.0229895979
2.264237e+00
## [4326,]  0.8504639964 -2.337617e-02 -1.874365e+00 -0.4679072849
2.712281e-01
## [4327,]  0.8011397530  3.501928e-01  3.646349e-01 -0.8129755236 -
1.555191e-01
## [4328,]  0.4979498616  1.880044e+00  1.498279e+00  0.4962256625
5.131903e-01
## [4329,] -0.2121009552 -1.790836e-01  1.605524e-01 -0.1505216975
1.231437e+00
## [4330,]  0.9571608972 -3.710683e-01  4.865737e-01 -0.5496236729 -
6.747609e-02
## [4331,]  0.8497993882  4.842436e-01  7.542394e-01  0.3692320892 -
5.402262e-01
## [4332,]  0.8351351494  4.422555e-03  1.448934e-01 -0.9885991011 -
3.065321e-01
## [4333,]  1.1793962039 -7.164224e-01  7.427708e-01  0.6845488553 -
4.752132e-01
## [4334,]  0.8561329486 -6.887884e-01  4.707438e-01  1.0299025408 -
4.530581e-01
## [4335,] -0.1522683619  2.009792e+00  1.245159e+00  0.1037610882
1.703731e+00
## [4336,] -0.4863881738 -3.019394e+00 -8.933463e-01  3.1930549471 -
7.926827e-01
## [4337,]  0.8465290371 -1.793614e+00  7.347439e-01  0.2193377437
8.199509e-02
## [4338,]  0.8189876252  7.023945e-02  6.151950e-01 -0.4947068286 -
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## [4339,]  1.1880725932 -8.887668e-01  6.468545e-01  1.1869942676 -
6.940322e-01
## [4340,]  0.9350405740 -3.914078e-01  2.937327e-01 -0.7779291836
3.074158e-02
## [4341,] -1.6697781888 -3.695630e+00 -1.430379e+00 -0.8035634578 -
1.121492e+00
## [4342,]  0.8473251109 -6.766032e-02 -1.485802e-01 -1.2778125633 -
2.624458e-01
## [4343,] -3.6526180882 -8.033013e-01 -4.549927e-01 -0.6856452792 -
1.260423e+00
## [4344,] -9.1161659647 -9.324304e-01  2.627241e+00  0.2092333134
1.442867e+00
## [4345,] -0.7869622753  8.093077e-01  1.769314e+00  1.3879652614
2.385291e+00
## [4346,]  1.3309189903 -4.969632e+00 -1.229662e+00 -0.4039321742
7.611775e-01
## [4347,]  0.3320302435 -7.056933e-01 -2.671431e+00  3.0873369102 -
9.201042e-02
## [4348,]  1.1165525576 -2.132634e+00 -4.094952e-02 -0.4203951638
8.070060e-01
## [4349,]  0.8441603882  1.539875e-01  1.133531e+00  0.5097214375
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1.759558e-02
## [4350,]  0.8235017395 -1.069122e+00 -4.764287e-01 -0.9560079051
3.051527e-01
## [4351,] -2.5207976081  1.137599e+00  5.044911e-01 -0.4216893946 -
6.413148e-01
## [4352,] -5.3567575439  7.879782e-01  9.025039e-01 -0.1036128079
1.803975e+00
## [4353,]  0.7966409798  5.068911e-01  2.406355e-01 -0.3297272833 -
5.342817e-01
## [4354,] -0.7853969443  8.179349e-01  1.732500e+00  1.2699669420
2.416824e+00
## [4355,]  1.6299323395 -5.111597e+00  5.287392e-01 -0.7188709393
5.229750e-02
## [4356,]  0.8478199992  5.096191e-01  8.518609e-01  0.5666752162 -
5.361686e-01
## [4357,] -0.6789919555  9.122242e-01  2.093793e+00  0.9536598189
2.381177e+00
## [4358,]  0.9767574906 -7.863246e-01  2.063565e+00  3.7266232025 -
8.458672e-01
## [4359,] -0.5970785625 -3.061637e+00 -1.299677e+00  3.6035908405 -
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## [4360,]  0.7669904648 -8.104288e-02 -5.608123e-01 -0.6466240488 -
1.705710e-01
## [4361,] -7.5023867940 -1.742290e+00  8.871388e-01 -0.7480805030 -
1.683784e+00
## [4362,]  0.1368761291  6.521696e-02  1.169326e+00  0.1876963277
1.759527e+00
## [4363,]  0.1227083462 -1.445111e-01  1.030252e+00 -0.3845540202
8.669562e-01
## [4364,] -2.5075610331  1.014918e+00  5.069518e-01 -0.5306468636 -
5.931632e-01
## [4365,]  0.9951201003 -2.558743e-01  6.719137e-01  0.2698038330 -
4.667604e-01
## [4366,] -7.5110660285 -1.764331e+00  9.000300e-01 -0.8174683631 -
1.647092e+00
## [4367,]  0.0997185018 -3.970061e-01  1.631321e+00  0.0719780425
1.226104e+00
## [4368,]  0.8116660349  1.181929e+00  1.535367e+00  1.7433231479 -
2.148828e-01
## [4369,]  1.0590857416 -1.567853e+00  1.103964e+00  0.1474020930 -
9.501809e-02
## [4370,]  0.8663496120  4.800907e-02  6.043687e-01 -1.1273182272
1.099750e-01
## [4371,]  0.7278956624  9.848912e-01 -1.013428e-01 -1.3008150737 -
9.551971e-02
## [4372,] -1.7504927906 -2.680920e+00  6.635612e-02 -0.0615360631 -
4.887878e-01
## [4373,]  1.0528677412 -8.704335e-01  9.555969e-01  0.0186358970 -
8.421924e-02
## [4374,] -0.6627853156  8.553284e-01  2.021683e+00  0.8689456856
```

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2.355807e+00
## [4375,]  0.9985986414  1.967497e-01  9.198351e-01  0.4991215576 -
2.144279e-01
## [4376,]  0.9152220368 -3.865241e-01  3.722898e-01 -0.7429098082
7.936682e-02
## [4377,]  0.8555467006 -6.551086e-01  4.257318e-01  0.9842592726 -
4.648767e-01
## [4378,] -2.0548041012 -1.481057e+00 -1.557893e+00 -1.0763549392 -
9.235665e-01
## [4379,]  0.8003576084  1.677703e-01  4.120477e-01  0.0499692909 -
4.202784e-01
## [4380,] -0.6273662947 -2.863579e+00 -1.081086e+00  3.6797613598 -
8.629198e-01
## [4381,]  0.8865278206  3.911888e-01  8.333539e-01  0.6852196751 -
5.872214e-01
## [4382,] -9.1115645235 -9.609043e-01  2.642302e+00  0.2111207748
1.461221e+00
## [4383,]  0.1840242352  7.015893e-01  1.006368e+00 -0.1612885793
1.584681e+00
## [4384,]  0.0539613986  5.375385e-01  2.022927e+00  1.5854629299
1.321362e+00
## [4385,] -9.1255106255 -9.199067e-01  2.683262e+00  0.2560929966
1.479184e+00
## [4386,]  1.0630960589 -1.580165e+00  1.123034e+00  0.0711394905 -
7.776551e-03
## [4387,] -8.3461140277 -1.148316e+00  1.209082e+00 -0.7104794478 -
8.486360e-01
## [4388,] -0.6756978873  8.712662e-01  2.145539e+00  1.0356475605
2.390148e+00
## [4389,]  0.8194367803  2.732714e-01  5.065088e-01 -0.2327308601 -
7.058689e-02
## [4390,]  0.8488283784  2.940959e-01  8.699021e-01  0.1866802494 -
3.237189e-01
## [4391,]  0.9904566489 -7.513876e-01  2.370397e+00  4.1225118271 -
8.971385e-01
## [4392,]  0.8438779437 -1.092796e+00  8.716736e-01 -0.0687528107
5.619684e-01
## [4393,] -9.1125653510 -9.605363e-01  2.651698e+00  0.2185252095
1.469095e+00
## [4394,]  1.3707745506 -3.365916e+00  1.339148e+00 -0.3925727628
3.632966e-01
## [4395,]  0.6014144146  6.030431e-02 -5.728603e-01 -1.1746238413 -
1.082608e-01
## [4396,] -0.1398077857 -2.125954e+00 -7.097334e-02  2.0691043541 -
1.699752e+00
## [4397,]  0.9541415718 -7.892764e-02  6.666823e-01  0.1987027876 -
4.397283e-01
## [4398,]  0.5315029149  1.534503e+00  8.474947e-01 -0.6611262763
7.323013e-02
## [4399,]  0.7177772444  1.108545e+00  6.908130e-01  2.4025200233 -
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8.559427e-01
## [4400,]  0.9479984445 -7.681590e-01  3.517494e-01 -0.6934079553 -
7.470776e-02
## [4401,]  0.0673090500  4.918502e-01  2.114078e+00  1.7299820614
1.350192e+00
## [4402,] -3.6054923002 -9.228887e-01 -4.284923e-01 -0.4111611494 -
1.337900e+00
## [4403,]  0.9700528751 -7.112728e-01  2.257966e+00  3.8366322860 -
8.976041e-01
## [4404,]  1.3456562465 -1.990330e+00  1.089569e+00  0.7278451451 -
2.087530e-01
## [4405,]  0.8553910850  1.023048e-01  5.696458e-01 -0.2340380279 -
2.454171e-01
## [4406,]  0.6257664236 -1.343141e-01 -1.561494e+00  0.2218142793
1.556786e-01
## [4407,]  0.8071184713  2.251590e-01  1.664223e-01 -0.9614272117 -
2.677546e-01
## [4408,]  0.8262761344 -1.119208e+00 -7.070977e-01 -1.0879013944
3.269720e-01
## [4409,]  1.1722076043 -2.330491e+00  1.285628e+00 -0.3467752174
2.883055e-01
## [4410,]  0.7450132330  1.184619e+00  3.068315e-01  0.1742769078 -
5.733777e-01
## [4411,]  0.8079795504  1.155275e+00  1.662989e+00  1.9625684130 -
1.866738e-01
## [4412,] -0.5186354417 -2.934859e+00 -9.306707e-01  3.1041025834 -
8.045112e-01
## [4413,]  0.8549006677  4.104255e-01  8.098927e-01  0.4628558309 -
5.304343e-01
## [4414,] -7.4856762133 -1.764704e+00  8.937186e-01 -0.6785329404 -
1.697452e+00
## [4415,]  0.7363617518  9.178278e-01  1.722468e-01 -1.1366122587 -
1.014797e-01
## [4416,]  1.1465447655 -1.129587e+00  9.175275e-01  0.2748070185 -
1.883272e-01
## [4417,] -0.7806233628  7.643720e-01  1.765963e+00  1.4060904658
2.378830e+00
## [4418,]  0.9948792187 -7.290915e-01  2.290928e+00  3.9587762179 -
8.979251e-01
## [4419,] -9.0971052167 -1.013778e+00  2.621090e+00  0.1773066496
1.461686e+00
## [4420,]  0.1134313505 -3.712016e-01  1.809166e+00  0.1092191295
1.216288e+00
## [4421,] -3.6353781422 -8.603598e-01 -4.397940e-01 -0.5477483328 -
1.300916e+00
## [4422,]  0.8424204274 -7.388664e-01  2.708281e-01  0.8522688214 -
3.833432e-01
## [4423,]  0.6292550840 -3.799841e-02 -7.306050e-01 -0.8132970022 -
3.355978e-02
## [4424,]  1.4989052672 -2.295404e+00 -4.063359e+00 -3.3906703479 -
```

```
1.956587e+00
## [4425,] -5.3736547229  8.118511e-01  9.634858e-01 -0.0395517723
1.840518e+00
## [4426,] -2.0375174088 -1.467948e+00 -1.436496e+00 -1.0445230298 -
1.011447e+00
## [4427,]  1.0851210756 -1.059779e+00  1.658342e+00  1.2725237687 -
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## [4428,]  1.0261188347 -9.553795e-02  5.461949e-01  2.1235878477 -
1.115270e+00
## [4429,]  0.9734424270 -4.446796e-01 -1.701611e-01 -1.3606345391 -
2.410896e-01
## [4430,] -7.2174269742 -3.815736e+00  4.803495e-04 -1.4008224484 -
4.271151e-01
## [4431,]  0.8177678914 -1.347300e+00 -6.913372e-01 -0.2167370984
9.732720e-01
## [4432,] -1.7712498558 -6.762108e+00 -2.310208e+00  3.0713728105 -
7.262754e-01
## [4433,]  0.7226872967  1.031521e+00 -8.052309e-01 -0.1529755851
2.881358e-01
## [4434,]  0.1531064118  4.777729e-02 -3.257403e+00  0.5107985913
4.919438e-01
## [4435,]  0.3130631561  4.371323e-01 -1.976089e+00  1.0140530431
1.801330e-01
## [4436,]  0.6480618798  1.012248e+00 -5.873293e-01 -0.0557804858
9.854803e-02
## [4437,]  0.7632437726  5.790414e-01  2.657264e-01 -0.4569790811 -
4.356598e-01
## [4438,] -2.5024926698  1.139101e+00  5.433710e-01 -0.3527887405 -
5.951193e-01
## [4439,] -5.3461432197  6.900534e-01  9.604017e-01  0.0196758123
1.797523e+00
## [4440,]  0.7785009386  4.224506e-01  1.132537e+00 -0.1236221728
1.178682e-01
## [4441,]  1.1884606827 -8.952470e-01  9.577849e-01  1.4039787652 -
6.643886e-01
## [4442,] -2.0683701442 -1.415067e+00 -1.553348e+00 -0.9739937577 -
9.719687e-01
## [4443,]  0.8000451285  2.559286e-01  3.704594e-01 -0.9355577511 -
1.006589e-01
## [4444,]  1.2266019547 -2.010376e+00  1.213055e+00 -0.1265289005
1.621748e-01
## [4445,]  1.0580745187 -1.064540e+00  1.616421e+00  1.0636396679 -
5.780455e-02
## [4446,]  1.0160584448 -8.794366e-01  5.992971e-01 -0.4956158206 -
2.596702e-01
## [4447,] -0.1634033017 -1.995560e+00 -8.150751e-02  2.1845368026 -
1.772600e+00
## [4448,] -0.4025712731 -2.808383e+00 -2.357391e-01  3.1753432528 -
8.580736e-01
## [4449,]  0.7866092774  5.472703e-01  2.612479e-01 -0.2773357486 -
```

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5.297837e-01
## [4450,]  1.0541685345 -1.021069e+00  1.379679e+00  0.8683775489
9.438048e-03
## [4451,]  1.1284971967 -1.120127e+00  1.006587e+00  0.3156317167 -
1.338611e-01
## [4452,]  0.8141255330  2.529506e-01  6.376133e-01 -0.7100592545 -
1.161946e-01
## [4453,]  1.4188166663 -5.213839e+00  4.668537e-02 -0.6532793705
1.479386e-01
## [4454,]  1.3753913345 -3.319940e+00  1.237401e+00 -0.6145362668
3.753643e-01
## [4455,]  0.8356224359  1.659837e-01  3.907384e-01 -0.7768818733 -
1.376695e-01
## [4456,]  0.1023792993 -3.553530e-01  1.888135e+00  0.1998252238
1.252991e+00
## [4457,]  1.1467667603 -1.198763e+00  1.050986e+00  0.4096072970 -
1.239136e-01
## [4458,]  1.1907107897 -2.220066e+00  9.638296e-01 -0.1658862628 -
1.958795e-01
## [4459,]  1.1647604080 -8.244760e-01  8.111248e-01  0.5276083522 -
3.483902e-01
## [4460,]  0.5934355896  1.410909e-01 -7.799773e-01  1.1651528999 -
8.310561e-01
## [4461,]  0.8543801559  3.702632e-01  7.355221e-01  0.2424344264 -
5.086891e-01
## [4462,]  1.0658933895 -1.718024e+00  1.219612e+00  0.2291957583 -
3.229129e-02
## [4463,] -1.6792537751 -3.697610e+00 -1.686052e+00 -1.0907680493 -
1.022759e+00
## [4464,]  0.1435168800 -3.607052e-01  8.349661e-01 -0.5475420605
9.494070e-01
## [4465,]  0.8072631211 -9.943630e-01 -7.351886e-01 -1.1318068394
3.359699e-01
## [4466,]  0.9653611195 -6.632825e-01  7.471920e-01  0.4457662661 -
4.362548e-01
## [4467,]  0.8276842921  1.184993e-01  7.524094e-02 -1.1113803867 -
2.872504e-01
## [4468,]  1.2484592638 -2.015891e+00  1.192860e+00 -0.0445241004
1.339586e-01
## [4469,] -0.5445891742  5.965927e-01 -4.578967e+00  2.3604486227
3.708486e+00
## [4470,]  0.6925723727 -3.658993e-01 -2.178264e+00 -1.1986187848
8.080535e-01
## [4471,]  0.9924512135 -8.656191e-01  2.179272e+00  4.0056602932 -
8.579080e-01
## [4472,]  0.1270055976 -3.658932e-01 -2.154660e+00  1.4570538158 -
3.335374e-02
## [4473,]  0.7385089610  1.233059e+00  4.929645e-01  0.5730459152 -
5.666875e-01
## [4474,]  0.8862610285 -4.777040e+00 -4.925456e+00 -6.4394739350 -
```

```
2.607576e+00
## [4475,] -0.0019860890 -3.801429e-01  1.421068e+00  0.3919224190
1.254206e+00
## [4476,] -7.5069520430 -1.724821e+00  9.982143e-01 -0.5856940266 -
1.631388e+00
## [4477,]  0.1248948409 -3.747529e-01  1.749868e+00  0.0982427033
1.166683e+00
## [4478,]  0.8549940000  6.373439e-01  8.042427e-01 -0.1950589764 -
2.554202e-02
## [4479,]  0.1352654075 -2.491716e-01  1.088304e+00 -0.3169103183
9.031749e-01
## [4480,] -7.5027195877 -1.730757e+00  9.632956e-01 -0.6151768145 -
1.647398e+00
## [4481,]  0.8276959031  2.775455e-02  2.250370e-01 -0.9919139330 -
1.987112e-01
## [4482,] -7.5065516037 -1.784006e+00  9.387729e-01 -0.7911619203 -
1.607941e+00
## [4483,]  0.8082327716  4.287903e-01  2.908252e-01 -0.2383512886 -
4.986156e-01
## [4484,]  1.0613672856 -1.645834e+00  1.144101e+00  0.2322582707 -
1.085500e-01
## [4485,]  0.9661824052 -7.857544e-01  4.755658e-01 -0.7256553636 -
1.132078e-01
## [4486,] -0.0449128045  1.122964e+00  1.265432e+00 -0.1043288701
8.137772e-01
## [4487,]  0.9491299721 -6.800607e-01  5.784343e-01 -0.4224483166 -
1.664199e-01
## [4488,]  1.1945497185 -9.470800e-01  6.722836e-01  1.2022741398 -
6.597071e-01
## [4489,]  1.0398573399 -8.699309e-02  4.403686e-01  1.9517864111 -
1.115918e+00
## [4490,]  0.9298918084 -3.177340e-01  5.988575e-01 -0.5568364345
6.205030e-02
## [4491,]  0.1675183933  8.669269e-01  1.270290e+00  0.0972990810
1.567924e+00
## [4492,]  1.1779097858 -9.182156e-01  6.408311e-01  0.9680656164 -
5.870451e-01
## [4493,] -0.9635902656  1.274235e+00  1.755423e+00 -0.1417799423
2.012189e-01
## [4494,]  0.7295880568  1.104819e+00  6.108754e-01  2.3080559745 -
8.694052e-01
## [4495,]  0.8087513334  4.888018e-01  2.454045e-01 -0.3368606408 -
4.849132e-01
## [4496,]  0.8102711062  2.521800e-01  4.497008e-01 -0.4771768261 -
4.312151e-03
## [4497,]  0.9110911921 -1.528068e+00  6.332893e-01 -0.3061485006
3.542057e-01
## [4498,]  0.8194870329  1.921987e-01  3.892613e-01  0.0968153908 -
4.186810e-01
## [4499,]  0.6355141863  5.052532e-01 -6.843340e-01  0.3214208937
```

```
4.378142e-01
## [4500,] -8.0978076306 -1.496008e+00  1.408713e+00 -0.2556299233 -
1.877609e-02
## [4501,]  0.1558334496 -4.565291e-02  1.116762e+00  0.1374368458
1.730780e+00
## [4502,] -1.6531924237 -3.776243e+00 -1.397118e+00 -0.7223912094 -
1.096342e+00
## [4503,] -2.0343765496 -1.502896e+00 -1.577537e+00 -0.9934537823 -
9.598460e-01
## [4504,]  0.1147942279  1.742078e+00  4.409760e-01  1.4500531965
2.142086e+00
## [4505,]  0.9714551948 -8.990761e-01  3.093569e-01  0.7181198949 -
3.161704e-01
## [4506,]  0.5330460625  1.594974e+00  9.230561e-01 -0.4462441486
7.657052e-02
## [4507,]  0.8086115946  1.589102e-01 -8.658302e-02 -1.1616544218 -
2.210113e-01
## [4508,]  0.6982874863 -8.639842e-01 -1.141598e-01  2.4909127991 -
7.821871e-01
## [4509,]  1.2250973356 -2.269335e+00  1.551221e+00 -0.8075624980
8.796228e-01
## [4510,]  0.6301410144 -8.111403e-02  8.565395e-02 -1.1645621262
1.991782e-01
## [4511,] -0.0848178363  1.825330e+00  1.396805e+00  1.6098357033
1.901064e+00
## [4512,]  0.8489357041 -1.921568e-02  6.391564e-01  0.1783270712 -
4.273934e-01
## [4513,]  1.3962594427 -3.396931e+00  1.208714e+00 -0.5843314062
3.521694e-01
## [4514,]  1.0227820045 -1.381345e+00  1.817679e-01 -1.1820679914
6.831234e-02
## [4515,]  1.0204111999 -3.807169e-01  5.339898e-03 -1.1016597563
1.908843e-01
## [4516,]  0.8032217591  2.978935e-01  5.944482e-01 -0.8155763053 -
1.068429e-01
## [4517,] -0.7987418984  1.008424e+00  1.731191e+00  0.1359862876
3.115439e+00
## [4518,]  1.0834934795 -1.084313e+00  1.323520e+00  0.9483757952 -
7.021947e-02
## [4519,]  0.7457787203  1.090554e+00  9.259570e-02 -0.1390105692 -
4.348952e-01
## [4520,]  0.9743352386 -2.916989e-01  3.004104e-01 -1.0671513311
2.507561e-01
## [4521,]  1.1394414480 -1.613928e+00  1.084000e+00 -0.4540268670
2.453608e-01
## [4522,]  0.0501833770  1.917503e+00  2.009162e+00  1.5794533723
1.816322e+00
## [4523,]  1.0304616036 -2.995363e-01  9.818527e-02  1.6291059450 -
9.579237e-01
## [4524,]  1.0650460240 -9.879967e-01  1.626616e+00  1.1374332001 -
```

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4.248209e-02
## [4525,]  0.8839314267  3.923903e-01  8.207043e-01  0.6828059885 -
5.992924e-01
## [4526,]  0.6811317640 -7.248208e-01 -2.140658e-01  2.3155983601 -
7.960565e-01
## [4527,]  0.6130105191 -5.974184e-02  2.203812e-01 -1.0534106069
2.783848e-01
## [4528,]  1.1245706906 -2.016131e+00 -3.549438e-01 -0.4392283756
5.448519e-01
## [4529,]  0.1565565839 -4.400646e-01  8.758786e-01 -0.4793729091
9.561577e-01
## [4530,]  0.9621496659 -4.019333e-01  6.375164e-01 -0.3700478568
2.786090e-02
## [4531,]  1.0370675507 -1.575916e+00  1.207719e+00  0.2053563014 -
1.815350e-02
## [4532,]  0.1548223478 -2.347245e-01  1.219720e+00 -0.3280170666
8.716311e-01
## [4533,]  1.3581268271 -2.046325e+00  1.064148e+00  0.6050897363 -
1.463787e-01
## [4534,]  0.8306769423  3.183046e-02  4.520910e-01  0.1159906759 -
3.824764e-01
## [4535,]  0.9874949049  9.741685e-02  6.058041e-01  0.0485609135 -
1.323115e-01
## [4536,]  0.0893720272  4.340328e-01  2.098077e+00  1.8274811880
1.310552e+00
## [4537,]  1.0110039384 -7.770874e-01  2.355090e+00  4.1665491374 -
9.211984e-01
## [4538,]  0.7420234435  9.836807e-01 -1.336549e-01 -1.4052537731 -
4.532787e-02
## [4539,]  0.1092679608  3.522625e-01  2.044341e+00  1.8246747247
1.252649e+00
## [4540,]  1.3629717845 -2.088750e+00  1.033299e+00  0.5035182297 -
1.367086e-01
## [4541,] -1.6681994432 -3.768393e+00 -1.681736e+00 -1.0841625107 -
1.013044e+00
## [4542,] -5.3787412482  8.307050e-01  1.028407e+00  0.0130187885
1.894929e+00
## [4543,]  0.8725130397  6.072127e-01  7.658946e-02 -0.7063941105 -
3.609543e-01
## [4544,] -7.4897790030 -1.781446e+00  9.366875e-01 -0.6536206915 -
1.646244e+00
## [4545,]  0.8967771498  5.078729e-01  8.333052e-01  0.0612232594 -
1.090682e-01
## [4546,]  0.6727585979 -6.292089e-01 -1.699013e+00 -0.5738720784
2.487852e-01
## [4547,]  0.1633414643 -3.835836e-01  7.631214e-01 -0.6390491990
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## [4548,]  0.9610632643 -9.326766e-01  8.085748e-02  0.5449107542 -
2.876184e-01
## [4549,] -8.1549191211 -2.428435e+00  1.495826e+00 -0.9679922134 -
```

```
3.997964e-01
## [4550,]  0.7344646793  1.053380e+00  6.247230e-01  2.3306673057 -
8.655458e-01
## [4551,]  0.7942748106  2.885028e-01  3.976042e-01 -0.9022356164 -
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## [4552,]  1.0481607883 -1.028914e+00  1.444751e+00  0.9202386076
6.415621e-02
## [4553,] -0.1497084781  1.964012e+00  1.441798e+00 -0.3220349363
2.355114e+00
## [4554,]  0.9338726847 -6.196784e-01  5.995805e-01  0.3544087171 -
3.438346e-01
## [4555,]  0.7386275346  9.929241e-01  1.686473e-01 -1.0096438467 -
1.405547e-01
## [4556,]  0.1363587661  6.626796e-01 -2.760801e+00  2.5982743600
1.444053e-01
## [4557,]  1.3597253718 -3.401049e+00  1.136553e+00 -0.5656903796
4.352537e-01
## [4558,]  0.9723603795  3.187109e-01 -4.639639e-01 -2.4797022409 -
2.280597e-01
## [4559,]  0.5443519299  1.680457e+00 -1.416088e+00  1.9743172048 -
4.649207e-02
## [4560,]  0.7470869896  1.058076e+00  1.631808e-01 -0.9934457317 -
1.165151e-01
## [4561,] -0.7852193559  8.078738e-01  1.781479e+00  1.3577901013
2.444412e+00
## [4562,]  1.0285533064 -8.176420e-01  7.151985e-01 -0.3453185793
6.771702e-02
## [4563,]  0.7380465657  9.605409e-01 -8.691891e-02 -1.1975881244 -
1.174040e-01
## [4564,] -0.0163051385  1.651727e+00 -2.428081e+00  0.6424209299
3.535418e-01
## [4565,]  1.6755146179 -5.152856e+00  7.624459e-01 -0.3929033655 -
1.272731e-02
## [4566,] -0.6609918947  7.676942e-01  2.191715e+00  1.1000168643
2.422701e+00
## [4567,] -0.6998123656  9.983515e-01  1.346756e+00  2.0180920002 -
9.482319e-01
## [4568,]  0.0317022030 -4.928574e-01  1.335226e+00  0.3612387232
1.191512e+00
## [4569,]  0.8851979938  4.403518e-01  7.177098e-01 -0.4175919847 -
1.365432e-02
## [4570,]  0.2111859453  1.676895e+00 -3.680554e-01  0.7089336830 -
2.388451e-01
## [4571,]  0.1002141169 -2.998400e-01  1.825361e+00  0.0487227907
1.294747e+00
## [4572,] -0.0747590042  1.229973e+00  1.405268e+00  0.1125852861
8.465646e-01
## [4573,] -8.3011951539 -9.812433e-01  1.369042e-01 -0.6565166414
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## [4574,]  1.0222424417 -7.110488e-02  9.250101e-01  0.3740110489 -
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1.715549e-01
## [4575,] -0.6664559488  9.193865e-01  1.334036e+00  2.1571557357 -
1.008010e+00
## [4576,] -7.4941878850 -1.689283e+00  9.557847e-01 -0.5316068812 -
1.675911e+00
## [4577,]  0.9557954853 -6.684799e-01  4.973492e-01 -0.6230705366 -
1.199937e-01
## [4578,]  0.8719011523  1.661600e-01  5.929754e-01 -0.0279009336 -
2.831574e-01
## [4579,]  0.0401561271  1.958905e+00  2.031341e+00  1.6512978946
1.805810e+00
## [4580,]  1.2706002546 -2.108299e+00  1.173311e+00 -0.0325424024
1.154909e-01
## [4581,] -0.1450870796 -2.079459e+00  1.810054e-01  2.2159037251 -
1.697723e+00
## [4582,] -9.0950742372 -1.032957e+00  2.657312e+00  0.1998426130
1.507043e+00
## [4583,]  1.0249888798 -7.298344e-02  5.316746e-01  2.0098753723 -
1.058757e+00
## [4584,]  0.9802614872 -4.792291e-01  5.249392e-01 -0.5031269697 -
2.325690e-02
## [4585,] -2.7256507592  9.841042e-01  2.456007e-02 -0.4691455726 -
4.740556e-01
## [4586,] -1.6588053026 -3.808195e+00 -1.600638e+00 -0.8731760230 -
1.028855e+00
## [4587,]  0.8273924430  1.070908e+00  1.577793e+00  1.7522945998 -
1.455630e-01
## [4588,]  1.0881790826 -1.102909e+00 -1.058517e+00 -2.1843123263 -
1.349336e-01
## [4589,] -1.8088012189  1.257471e+00 -2.288915e-01  0.5554087472
9.715306e-01
## [4590,]  0.7163287674  1.915953e+00 -5.528991e-01  0.9996536629
1.881670e-01
## [4591,]  1.1514563127 -2.030716e+00 -3.520775e-01 -0.5390782005
8.501707e-01
## [4592,]  1.0242702108 -1.291410e+00 -1.174942e-02  0.2956286930
5.316902e-01
## [4593,]  0.8159263013  7.748080e-01 -6.465953e-01  0.0367260839
4.721701e-01
## [4594,] -0.0112642852  8.912584e-01 -2.724393e+00  1.5862627939
3.586429e+00
## [4595,] -0.3705407860 -1.717121e+00 -4.997644e+00  3.8719303343
3.608400e+00
## [4596,]  0.5202891416  1.897005e+00 -1.383313e+00 -1.3683575185
6.842926e-01
## [4597,]  1.6479032512 -5.193292e+00  3.849666e-01 -0.6922823985
1.339732e-01
## [4598,]  1.1369754438 -1.204936e+00  1.085958e+00  0.3444825587 -
4.857936e-02
## [4599,]  0.6670231817  2.006484e+00  1.176289e+00  1.2394179362 -
```

```
2.572896e-01
## [4600,] -7.1827021802 -3.979862e+00  1.232225e+00 -1.6553819724 -
8.950655e-01
## [4601,]  0.8629992327  2.463067e-01  8.360761e-01  0.0999556911 -
2.768463e-01
## [4602,]  0.7606313130  1.082022e-01 -7.772438e-01  0.1158934318
5.885058e-01
## [4603,]  0.2144906724  1.494089e+00 -2.243895e+00  0.6788690323
5.835847e-01
## [4604,]  1.3761146026 -3.382561e+00  1.368694e+00 -0.3949642363
4.022976e-01
## [4605,]  0.8534122267  1.434597e-01  6.482448e-01 -0.1675407902 -
1.537326e-01
## [4606,]  0.7692421593 -2.652384e-03  2.850544e-01  0.3036582041
3.939650e-02
## [4607,]  1.1368722448 -1.170243e+00  1.008575e+00  0.2859201572 -
1.126693e-01
## [4608,]  1.1758531955 -9.280206e-01  9.026848e-01  1.2495918388 -
6.443670e-01
## [4609,]  0.8854928678  1.459540e-01  5.843344e-01  0.0054916006 -
2.889303e-01
## [4610,] -5.3554562918  7.328343e-01  9.801376e-01 -0.0220468038
1.870756e+00
## [4611,]  0.3360153408  2.820432e-01 -3.508466e+00  3.5325337919
2.669187e+00
## [4612,]  1.0384327675 -2.188880e-01  3.008719e-01  1.8577756412 -
1.028924e+00
## [4613,]  0.9781505729 -9.831674e-01  2.536979e-01  0.5302860850 -
2.855394e-01
## [4614,]  0.9341089371 -3.260549e-01  5.771203e-01 -0.5361761885
4.211535e-02
## [4615,]  1.4369873944 -5.354982e+00 -1.201635e-01 -0.7343033478
2.441542e-01
## [4616,]  0.7413057874  9.367176e-01 -6.725531e-02 -1.2758370196 -
3.941728e-02
## [4617,]  0.8257556697 -1.755049e+00 -1.449556e+00  0.4649295963
4.963040e-01
## [4618,]  0.1951573627  1.136947e+00 -2.340850e+00  1.2246653837
3.602530e+00
## [4619,]  0.2043758329  2.867984e-01 -2.101991e+00  0.8609079183
2.748148e+00
## [4620,]  0.8736543092  6.080871e-01  7.608686e-01 -0.0613283718 -
7.625169e-02
## [4621,]  0.6591676551  1.981024e+00  9.625185e-01  0.9967236756 -
1.500979e-01
## [4622,]  0.8730763961  6.760193e-01  6.466560e-01 -0.2572757050 -
9.797755e-02
## [4623,]  1.2457000717 -2.471846e+00  6.929850e-01 -0.8796358248 -
1.587891e-02
## [4624,]  0.9496712269 -7.362867e-01  5.673354e-01 -0.4503020919 -
```

```
1.621620e-01
## [4625,]  1.1203703160 -1.072258e+00  9.701662e-01  0.1833458421 -
8.631284e-02
## [4626,]  1.2035433715 -2.385168e+00  2.524981e-02  0.7069132364
3.406905e-01
## [4627,]  0.6958839139 -2.117071e-01 -6.005243e-01 -0.7597628157 -
6.706371e-02
## [4628,]  0.7651466917  9.074593e-01  1.511960e-01 -1.0172000311 -
1.252498e-01
## [4629,]  0.1094763945 -3.373278e-01  1.836951e+00  0.0760273448
1.298131e+00
## [4630,]  0.9613282409 -2.462574e-01  1.026698e-01  2.4165947778 -
1.108426e+00
## [4631,]  0.6034516591 -1.095062e+00 -9.496985e-01 -1.0486617163
5.368732e-01
## [4632,]  1.6425146140 -5.099008e+00  5.432482e-01 -0.6341122183
7.512637e-02
## [4633,] -9.1140066791 -9.471196e-01  2.674038e+00  0.2430189355
1.511867e+00
## [4634,]  0.8295620422  9.955768e-02  6.184343e-01 -0.4497666126 -
2.898727e-01
## [4635,]  0.6843675402  2.078349e+00  1.149075e+00  1.2289616759 -
2.137276e-01
## [4636,]  1.1173418778 -1.637307e+00  1.107996e+00  0.0412409806 -
4.878416e-02
## [4637,]  0.0489665615  1.822699e+00  1.943456e+00  1.4725843460
1.769387e+00
## [4638,]  1.0003949360 -3.676637e-02  6.053251e-01  2.0463524041 -
1.013079e+00
## [4639,] -1.8793051098 -2.641255e+00 -1.697934e+00  0.5873774310 -
6.156712e-01
## [4640,]  1.0771287402 -2.070369e+00 -2.306831e+00  1.9153744247
1.537713e-01
## [4641,]  0.8760037095 -1.124262e-01 -1.498502e+00 -1.1016284520
8.949861e-01
## [4642,]  1.4101218581 -5.226570e+00  4.694579e-02 -0.7766713279
2.162577e-01
## [4643,]  0.3415439194 -7.647863e-01 -2.657937e+00  2.8862500579
6.374102e-02
## [4644,]  0.7530519975  9.746138e-01  8.538528e-02 -1.2969236342 -
4.209377e-02
## [4645,] -7.4982654691 -1.788381e+00  9.157037e-01 -0.8068583591 -
1.599965e+00
## [4646,]  1.1238824276 -1.642715e+00  1.021572e+00 -0.0999614769 -
7.388441e-02
## [4647,]  1.2270053924 -2.330560e+00  6.577105e-01 -0.9123466567 -
7.000798e-03
## [4648,]  0.7203294546  1.206883e+00  1.450248e-01 -0.0698275544 -
3.992588e-01
## [4649,] -0.6614365031  8.272239e-01  2.095269e+00  0.9110997117
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2.447463e+00
## [4650,]  0.0619005770  1.827365e+00 -2.926246e-01  0.8542043119
2.076923e+00
## [4651,]  1.1666509001 -1.209924e+00  1.045323e+00  0.4987196897 -
1.380830e-01
## [4652,]  1.0201131143 -9.608218e-01  7.855419e-01 -0.1440836514 -
2.265450e-01
## [4653,]  0.8886522212  5.117186e-01  4.283211e-01 -0.4361345732 -
4.013495e-02
## [4654,]  1.2287117597 -9.708076e-01  7.683106e-01  0.6304649053 -
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## [4655,]  0.7309793577  1.249376e-01  6.229015e-01 -0.0232656842
2.089702e-01
## [4656,]  0.8482040133 -1.435024e-02  6.206793e-01 -0.5311702310 -
2.387950e-01
## [4657,] -1.5201768371 -6.794924e+00 -2.372631e-01  2.2454932030 -
1.161439e+00
## [4658,]  1.1679755051 -1.276383e+00  1.090999e+00  0.5750546281 -
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## [4659,]  0.9441127349 -7.372610e-01  6.033570e-01 -0.6018795297 -
2.756248e-02
## [4660,]  0.7440176598  1.148268e+00  4.057706e-01  0.1371485446 -
4.084899e-01
## [4661,] -9.1039630360 -1.002624e+00  2.690749e+00  0.2367822381
1.535722e+00
## [4662,]  0.7017415504  1.930639e+00  1.162542e+00  1.2811994454 -
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## [4663,]  1.0015285315  5.890576e-02  9.903325e-01  0.4024553279 -
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## [4664,]  1.1144724804 -1.603822e+00  9.899156e-01 -0.3019390373 -
2.139791e-03
## [4665,]  0.7837538936 -1.842969e-01 -5.165428e-01 -0.5672934472 -
1.519344e-01
## [4666,]  0.8911534616 -1.600905e+00  6.629952e-01 -0.4461657753
4.354930e-01
## [4667,]  0.7903940047 -1.551094e-01 -4.863583e-01 -0.4769594202 -
1.555489e-01
## [4668,]  0.8788899616  5.040801e-01  4.703351e-01 -0.3842733975 -
4.394075e-02
## [4669,]  0.7544643934 -4.492823e-01 -1.247718e+00 -0.9589074820
9.371601e-01
## [4670,]  0.6047685485  6.392464e-01 -1.148033e+00 -0.6252050608
4.830532e-01
## [4671,] -1.6491675107 -6.788727e+00 -6.526209e-01  2.5031288100 -
1.159976e+00
## [4672,] -5.3278683265  6.542955e-01  9.449693e-01 -0.0726450862
1.870266e+00
## [4673,]  0.7628159966  8.922385e-02  6.355935e-01  0.0860836081
2.139849e-01
## [4674,]  1.1267593080 -1.741245e+00  1.061055e+00 -0.1568833246 -
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1.634136e-02
## [4675,]  0.0632249242  1.789485e+00  1.176597e+00  0.7028280539
1.569169e+00
## [4676,]  1.1594095355 -1.327987e+00  1.086680e+00  0.3967923672 -
6.856248e-02
## [4677,]  0.7580587789  5.763775e-02  5.470778e-01 -0.0101617382
1.432042e-01
## [4678,]  0.8488869379 -8.455590e-02 -1.261142e-01 -1.4082800701 -
1.330795e-01
## [4679,]  0.8189925888  7.986692e-01 -7.963675e-01  0.8553353954
7.356753e-02
## [4680,]  0.8747320175 -1.542511e+00  6.946411e-01 -0.3691150940
4.282245e-01
## [4681,] -9.0917459251 -1.021343e+00  2.629722e+00  0.1846717359
1.504153e+00
## [4682,]  0.7493495602 -1.368106e+00 -1.540409e+00  0.3525242798
1.263666e-02
## [4683,] -1.6232899429 -6.941503e+00 -6.315563e-01  2.4646510186 -
1.116558e+00
## [4684,]  0.8887427143 -1.084905e-01  3.673261e-01  0.1100648922 -
4.113247e-01
## [4685,]  1.2982696342 -2.700127e+00  1.053757e+00  0.2341381181 -
2.218125e-01
## [4686,]  1.0400980781 -1.360196e+00  4.076916e-01  0.3950279014
7.600967e-03
## [4687,]  0.6931763138  1.917364e+00  1.164078e+00  1.1724398274 -
1.966420e-01
## [4688,]  0.8202033335 -1.030177e+00 -6.754520e-01 -1.0998931185
4.325638e-01
## [4689,]  0.8485821610 -1.478991e+00 -2.262141e+00 -2.4112116253 -
4.864616e-01
## [4690,]  0.8440381034  1.852397e-02  3.246011e-01 -0.1402943022 -
3.579755e-01
## [4691,]  0.7359840798  9.829292e-01  1.897946e-01 -1.1289091615 -
4.524202e-02
## [4692,]  1.2042361497 -1.028137e+00  6.651577e-01  1.0166394924 -
5.440062e-01
## [4693,]  0.8637631347 -8.044527e-01  3.280758e-01  0.9765354644 -
3.406169e-01
## [4694,] -0.7685876893  7.397517e-01  1.785026e+00  1.3242280083
2.489164e+00
## [4695,] -0.6343293477  7.111830e-01  2.091158e+00  0.9363613349
2.433233e+00
## [4696,]  1.2562324144 -2.447701e+00  6.644177e-01 -1.0538865210
2.875324e-01
## [4697,]  0.6306436203 -1.216908e+00 -1.138758e+00 -0.9765969278
5.203216e-01
## [4698,] -5.3432592539  7.383199e-01  9.306420e-01 -0.0921416620
1.877140e+00
## [4699,]  0.9616133459 -8.111874e-01  6.271300e-01 -0.4595128710 -
```

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6.111054e-02
## [4700,]  1.2232284589 -1.998957e+00 -1.049480e+00  0.3063225836
4.341661e-01
## [4701,] -0.2919027585 -2.154787e-01 -4.807933e+00  2.7166784347
4.057147e-01
## [4702,]  0.9657610859 -7.491215e-01  6.747819e-01  0.5353629487 -
3.323264e-01
## [4703,]  0.7493593615  1.002050e+00  2.986686e-01 -0.7575897398 -
9.387247e-02
## [4704,]  0.9652397105 -7.407817e-01 -3.882039e-01 -0.5866036075 -
5.807586e-01
## [4705,]  0.5308570567 -1.200720e-01 -1.194501e+00 -0.7375819764
6.032591e-02
## [4706,]  0.8669602294  5.847470e-01  1.136324e-01 -0.7487228760 -
2.877563e-01
## [4707,]  0.8546389022  9.602135e-02  6.361079e-01 -0.1643407387 -
1.696986e-01
## [4708,] -0.0155004074  1.597714e+00 -7.858109e-01  0.6818293664 -
2.422753e-02
## [4709,]  0.8994679711 -1.521167e+00  6.538150e-01 -0.4200461325
4.592248e-01
## [4710,]  0.9427383442 -1.002503e+00  1.184508e-01  0.3155128337 -
1.396456e-01
## [4711,]  1.0440906781 -9.789797e-01  6.743288e-01 -0.3741014276 -
1.965138e-01
## [4712,]  0.9813928316  2.730785e-01 -3.597577e-01 -2.2373046991 -
1.987091e-01
## [4713,]  0.4962493859  6.876699e-02 -2.167225e+00  0.0701414717
3.236193e-01
## [4714,]  0.9098186958 -1.652884e+00  6.925163e-01 -0.4110647707
4.735480e-01
## [4715,]  1.0246846653 -9.344601e-01 -2.682791e-01  1.1906844932 -
1.404935e-01
## [4716,] -5.3597594395  7.478157e-01  1.049789e+00  0.0513402711
1.920039e+00
## [4717,]  0.4953570713 -1.372293e+00 -3.195421e+00  1.7688778377 -
1.784293e-01
## [4718,] -0.6415340447  7.244829e-01  2.136760e+00  1.0360497679
2.427368e+00
## [4719,]  0.7907589121  4.007039e-01  4.685373e-01 -1.0651622902 -
5.250439e-02
## [4720,]  0.9988069078 -1.073848e+00  2.634513e-01  0.4137476277 -
1.889216e-01
## [4721,]  0.1684095394 -5.100290e-01 -2.720635e+00  2.0613686735 -
3.616749e-01
## [4722,]  0.0514368089  1.944438e+00  1.985074e+00  1.5380006441
1.849908e+00
## [4723,]  1.2105401242 -1.806520e+00 -1.031473e-01  1.3080813329
2.548150e-01
## [4724,]  0.8913336468 -7.050411e-01 -8.144414e-01  0.4625235881
```

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3.598596e-01
## [4725,]  1.1933175134 -1.173026e+00  1.971256e-01  1.0827995717
6.500235e-01
## [4726,]  1.2753184611 -2.639191e+00 -4.103689e-01  0.2769801028
6.019192e-01
## [4727,]  1.2865705397 -3.264986e+00 -7.912319e-02 -0.2565020223
8.804898e-01
## [4728,]  1.4105450433 -2.449996e+00  5.825048e-01  2.1837467001
6.605571e-01
## [4729,]  0.5333074866  1.843500e+00 -9.197454e-01 -1.0492455191
8.152289e-01
## [4730,] -0.7672083742  8.569126e-01 -2.292923e+00  0.2942995293
1.610830e+00
## [4731,]  1.0405570398 -1.496968e+00 -2.325270e-01 -1.0455782166
1.269191e+00
## [4732,]  0.8228105338  5.286920e-02 -9.494309e-01  0.9475457549
3.422627e-02
## [4733,]  1.2986364717 -2.824125e+00 -5.052767e-01 -1.2167137524
1.360897e+00
## [4734,]  0.8672764293 -4.518485e-01 -8.295836e-01 -0.6801267423
6.118451e-01
## [4735,]  1.0395663433 -3.207645e-01  1.827370e-01  1.0788079612
6.496361e-01
## [4736,]  0.9950019672 -1.578793e+00 -5.852032e-01  2.3215229855 -
5.589546e-01
## [4737,]  1.1862545825 -2.116026e+00 -5.848215e-01 -0.1143358136
8.242378e-01
## [4738,]  0.7205485340 -1.164099e+00 -1.734473e+00 -0.6544764699
4.102765e-01
## [4739,]  1.4082390189 -3.571477e+00 -5.101994e-01 -0.6884029291
8.190074e-01
## [4740,]  1.1317038817 -2.182507e+00 -7.338861e-01  0.4407947195
4.499042e-01
## [4741,]  0.9597465622  8.372405e-01 -2.274105e-01  3.1047256302 -
5.325886e-01
## [4742,] -0.0253064771  3.262060e-01 -3.190079e-01  0.6565154505
2.121956e+00
## [4743,]  0.9683437152 -5.240539e-01 -4.861739e-01  1.1486972775 -
1.135886e-01
## [4744,] -0.5562866096 -4.560102e-01 -1.457118e+00  2.6151715481 -
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## [4745,] -1.7728790260  4.693471e-01 -3.489042e+00  1.1113675657
3.887415e+00
## [4746,]  0.8715198829 -5.284155e-01 -3.510872e-01  0.1068105406
4.309331e-01
## [4747,]  0.8723300547 -2.193478e-01 -1.192004e+00 -0.8059352972
3.714811e-01
## [4748,] -3.3536261152 -3.132376e+00 -1.701070e+00 -0.7890851136 -
6.426948e-01
## [4749,]  0.8357150493  3.747012e-01 -4.136580e-01  0.0860635703
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4.084797e-01
## [4750,]  0.9367116864 -1.643103e+00 -1.861028e+00 -0.0760212347
1.648213e-01
## [4751,]  0.3071185613  7.141649e-01 -2.159240e+00  0.0634035156
8.031126e-01
## [4752,]  0.3910292259 -1.285816e-01 -1.842179e+00 -0.8497533801
7.691511e-01
## [4753,] -0.4397800347  5.026277e-01 -2.231007e+00  4.2100891306
4.832464e+00
## [4754,]  0.5954860758  1.352283e+00 -1.417090e+00 -1.2058719513
5.410194e-01
## [4755,]  0.2418016163 -3.825481e-01 -3.225965e+00  0.9181198720
3.763087e+00
## [4756,] -0.1351405707  3.491014e-01 -2.921445e+00  1.2148203847
4.360558e+00
## [4757,]  0.9631233474 -4.042408e+00 -2.184854e+00  0.7605051114
7.111870e-01
## [4758,]  0.6635974201 -3.422202e+00 -2.850768e+00  1.5352773043
8.324189e-01
## [4759,] -1.4513046847 -9.175524e-01 -8.043167e-01 -0.6012517187
1.020167e+00
## [4760,]  0.6274403493 -1.269092e+00 -1.651354e+00  1.7060487297
3.996581e-01
## [4761,]  0.5948101991 -1.061964e+00 -1.339041e+00  1.4680616351
8.811652e-01
## [4762,] -0.8634984314  7.934582e-01 -1.628525e+00  0.3578098662
2.713904e+00
## [4763,]  0.8573540759 -1.766400e+00 -1.354607e+00  1.7922387157
4.862127e-01
## [4764,]  1.0968144990 -2.000911e+00 -8.327313e-01  0.2597258837
6.237778e-01
## [4765,]  0.6800267345 -1.182350e+00 -2.757980e+00 -0.6202300007
4.654734e-01
## [4766,] -0.3919159067  1.791558e+00 -1.726956e+00  0.1358838750
2.773568e+00
## [4767,]  1.0847802976 -2.012047e+00 -1.285900e+00  0.1327286254 -
9.891027e-03
## [4768,]  0.9940762953 -3.848092e+00 -2.609921e+00  0.3234855131
4.759459e-01
## [4769,]  0.2969559929 -7.391951e-01 -3.433605e+00  2.1792555917
3.037220e+00
## [4770,] -0.3988910869  2.973594e-01 -4.780478e+00 -0.1496917170
9.782889e-01
## [4771,]  0.2578144687 -1.839848e+00 -3.058752e+00  1.5699848100
8.133026e-01
## [4772,] -1.1348765568 -7.687217e-01 -4.261482e+00  1.8133507722
2.731434e+00
## [4773,] -1.2664077305 -3.432888e+00 -1.534632e+00 -0.0340814823
1.979716e+00
## [4774,]  0.8216622208  1.075201e+00 -7.788484e-02  0.2595638833
```

```
8.632994e-01
## [4775,]  1.1293647379 -1.661552e+00 -3.755960e-01  0.0104870807
6.262915e-01
## [4776,]  0.1831368804 -2.249815e+00 -3.643051e+00  1.3536546807
8.437472e-01
## [4777,] -0.1894008915 -1.857833e+00 -4.553248e+00  2.3722993870
1.318122e+00
## [4778,]  0.2564522699 -3.843662e-01 -3.415756e+00 -1.5342036070
1.452119e+00
## [4779,]  0.1757257098  1.574898e-02 -2.998695e+00  2.1023994255
4.704219e-01
## [4780,]  0.5726951560  7.771166e-01 -1.737736e+00 -0.6912479571
5.069846e-01
## [4781,]  0.8751990335 -2.795780e-01 -8.757647e-01 -1.7668340072
1.479906e+00
## [4782,] -0.8442080182 -2.519693e-01  7.816794e-01 -1.2505971930
1.522951e+00
## [4783,]  0.5509359272 -5.679875e-01 -1.065192e+00 -1.4632048336
2.818211e-02
## [4784,] -5.3403138961  6.861718e-01  1.010551e+00  0.0713126571
1.867023e+00
## [4785,] -3.3220456023 -3.321302e+00 -4.418128e-01 -1.0082602307 -
1.117359e+00
## [4786,] -3.3035018066  1.057364e+00 -8.356201e-01  0.0755522669
1.711352e+00
## [4787,]  0.8859263376  4.116589e-02  9.312886e-01 -0.3164681185
1.311777e-01
## [4788,] -2.0381671281 -1.476235e+00 -1.326631e+00 -0.8341799698 -
9.555598e-01
## [4789,]  0.8013027098  1.204300e+00  1.554684e+00  1.6669281580 -
1.119466e-01
## [4790,] -7.5184791326 -1.719951e+00  9.924852e-01 -0.7224300928 -
1.551163e+00
## [4791,] -0.6391505027  8.190179e-01  1.380645e+00  2.2109935315 -
9.477626e-01
## [4792,]  1.1689061333 -1.745851e+00  9.169442e-01 -1.3197092570
5.637176e-01
## [4793,]  0.9747462497 -7.700734e-01  5.617269e-01  0.3414034307 -
3.504431e-01
## [4794,] -0.4223142731  1.012424e+00  7.235908e-02  0.0329706081
9.315567e-01
## [4795,] -0.6379893585  8.121251e-01  1.350412e+00  2.2254567344 -
9.885661e-01
## [4796,]  0.8801477842  5.520895e-01  6.071883e-01  0.7023373362 -
4.802487e-01
## [4797,] -0.6450215573  7.449508e-01  2.130333e+00  1.0159172910
2.435705e+00
## [4798,]  0.9388924916 -3.442399e-01  3.943555e-02  0.4569067688 -
5.692024e-01
## [4799,]  0.8878811584  6.285375e-01  6.020702e-01  0.8163723461 -
```

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5.164122e-01
## [4800,]  0.9066653091 -1.353220e-01  6.284853e-02  0.5343398637 -
5.677343e-01
## [4801,] -0.6411262023  8.107357e-01  1.395069e+00  2.3447264862 -
1.012945e+00
## [4802,] -1.7268797223 -3.095928e+00 -6.495339e-01  0.0707411185 -
1.310917e+00
## [4803,] -0.6582077052  9.179992e-01  1.389634e+00  2.3029670225 -
9.901049e-01
## [4804,]  1.0324328213 -1.379991e+00 -1.273168e-01 -0.9241991430 -
2.659469e-01
## [4805,]  0.5535247564 -2.284834e-01 -1.152432e+00 -0.5463400830
1.339315e-02
## [4806,] -0.6662680744  9.661388e-01 -5.894673e-01 -0.1901016693
1.183682e+00
## [4807,]  1.5128590367 -2.826034e+00  1.566827e+00  1.5825821477
1.002274e-01
## [4808,]  0.9958658788 -5.452409e-01 -2.835185e-01 -1.3404006779 -
2.714046e-01
## [4809,] -0.4670531664 -6.812573e-01 -2.635299e-01  2.2049010592 -
1.507151e+00
## [4810,]  0.6989045189  1.912697e+00  1.204867e+00  1.2625795013 -
1.793355e-01
## [4811,]  0.9022691082 -1.641991e+00  4.655513e-01 -0.4898752067
4.862469e-01
## [4812,]  1.1737368355 -1.173861e+00  1.693282e+00  1.2494239270
2.418631e-01
## [4813,]  1.0783356491 -9.561031e-01  5.568293e-01 -0.3212369069 -
3.058768e-01
## [4814,]  0.8287561473  6.049583e-02  6.315474e-01 -0.5514743911 -
2.142004e-01
## [4815,]  0.8557483270 -6.403308e-02  6.187764e-01 -0.5826341666 -
2.103968e-01
## [4816,] -0.5189006818  8.846440e-01 -3.561765e-01  0.2874639981
9.348652e-01
## [4817,] -0.4164037794 -8.850029e-01 -4.952672e-01  2.2177939228 -
1.524271e+00
## [4818,] -0.6799621116  8.654548e-01  1.335589e+00  1.9051148830 -
8.832428e-01
## [4819,]  1.2534741145 -2.248085e+00  8.431946e-01 -0.8776563551
2.210201e-01
## [4820,]  0.0651412573  1.851378e+00  2.043767e+00  1.6337817036
1.856001e+00
## [4821,]  0.9346648157 -1.758696e-02  6.530071e-01 -0.3462656780 -
1.446947e-01
## [4822,]  0.9022247507  1.236396e-01  6.880318e-01 -0.2569806986 -
1.561690e-01
## [4823,]  0.7784196355  5.173270e-01  3.606453e-01 -1.2971088401 -
3.939546e-02
## [4824,]  0.7620758206 -1.754050e-01 -6.998100e-01 -0.7538996096 -
```

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5.314569e-02
## [4825,]  0.8816546884 -7.842716e-01  5.039177e-01  1.0806784533 -
3.881833e-01
## [4826,]  0.8742342482  2.033865e-01  8.263197e-01  0.0624862569 -
2.366579e-01
## [4827,]  1.2632389297 -2.291162e+00  9.090728e-01 -0.7807139340
2.519277e-01
## [4828,]  1.4904705385 -2.742424e+00  1.718862e+00  1.8644374940
1.170546e-01
## [4829,] -1.7226299507 -3.128903e+00 -7.206394e-01  0.2543448451 -
1.274262e+00
## [4830,] -1.7099624690 -3.143984e+00 -5.352255e-01  0.2749255896 -
1.290728e+00
## [4831,]  0.0466685090  1.854239e+00  1.083858e+00  0.7533503155
1.681423e+00
## [4832,]  0.7090810386  1.883272e+00  1.121184e+00  1.1694285995 -
2.273269e-01
## [4833,]  1.1312367512 -1.660432e+00  1.015732e+00 -0.2443665008
2.789851e-02
## [4834,]  0.8212118889  7.850042e-02  4.326428e-01 -0.0427367002 -
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## [4835,]  0.8668884979 -3.004659e-03  6.538877e-01  0.2548386897 -
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## [4836,]  0.8543278447  7.350370e-01  9.041978e-01  1.0146656758 -
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## [4837,]  0.8561476597 -6.494387e-02  6.244324e-01 -0.5739965757 -
2.075500e-01
## [4838,] -0.1541911352 -1.302159e+00 -2.456858e+00  3.7895505516
3.211478e+00
## [4839,] -2.0414964274 -1.548558e+00 -1.549443e+00 -1.0497421210 -
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## [4840,] -0.0060232630 -2.009320e+00 -3.054581e+00  1.8074283502
7.259666e-01
## [4841,]  0.6674779447  4.214987e-01  1.900823e-03 -0.9971673276
1.603846e-02
## [4842,]  1.4067749276 -3.002336e+00  7.445377e-01 -0.0399423373 -
1.069344e-01
## [4843,]  0.7816611711 -9.282668e-01  1.704168e-01  0.6494509838 -
2.699621e-01
## [4844,]  0.9192672727  3.418365e-01 -5.246408e-01  1.4033815904 -
1.082862e-01
## [4845,]  1.4293139599 -3.109711e+00  6.823290e-01 -0.1949023411 -
8.073652e-02
## [4846,] -1.5396125323 -1.332749e+00 -4.017986e-01 -1.0661062779
4.416365e-01
## [4847,]  0.8959968933  5.169519e-01  6.057839e-01 -0.0375549504 -
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## [4848,]  1.4955791995 -2.694197e+00  1.809397e+00  1.8155580377
4.476811e-02
## [4849,]  1.0979797402 -9.103416e-01  5.226695e-01  0.8112136395 -
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7.448603e-01
## [4850,]  0.9262386412 -2.435727e-01  1.480520e-01  0.6528541846 -
5.257321e-01
## [4851,] -5.3465570907  7.368715e-01  9.738088e-01 -0.0452456574
1.908915e+00
## [4852,] -3.3143224816 -3.320084e+00 -4.482105e-01 -0.9789410685 -
1.129397e+00
## [4853,]  0.0543065324  1.762368e+00  8.276490e-01  0.6139404151
1.678044e+00
## [4854,]  1.3078912249 -2.666723e+00  1.092566e+00  0.4591756050 -
2.602166e-01
## [4855,] -1.0035168656  1.003316e+00  1.721125e+00 -0.9648105591
5.139893e-01
## [4856,]  0.8530320533  1.801572e-01  9.869263e-01 -0.3018169978
1.964070e-01
## [4857,]  0.8580682519  6.166755e-01  2.329054e-01 -0.5422662857 -
2.518707e-01
## [4858,] -1.6861128419  8.731469e-01  7.607820e-01  0.0854842800
4.077290e-01
## [4859,]  0.9842119576  1.910368e-01  7.812544e-01  1.1366841915 -
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## [4860,]  0.8649987356  1.361935e-01  9.797245e-01 -0.2101885922
1.328665e-01
## [4861,]  1.0697251026 -2.177713e+00  6.283245e-01  1.1882470985 -
1.775013e-01
## [4862,]  0.6359471635  1.561322e+00  3.054786e-01 -1.4155543054
2.069434e-01
## [4863,]  0.7878280855  2.377198e-02  6.478086e-01  0.2255505153
1.842593e-01
## [4864,]  1.6699322957 -5.294343e+00  2.495497e-01 -0.9374536862
1.309076e-01
## [4865,]  0.0186367460  1.851546e-01  8.204463e-01  0.2858018271
1.621367e+00
## [4866,] -5.3448359839  7.202358e-01  9.949381e-01  0.0100901265
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## [4867,]  0.7583016520  1.093961e+00  1.760365e-01  0.0756467293 -
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## [4868,] -5.3315095081  6.821980e-01  9.148876e-01 -0.0527534246
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## [4869,]  0.9651570188 -7.513438e-01  6.822985e-01 -0.2205611500 -
1.730693e-01
## [4870,] -5.3183114475  5.802126e-01  9.868433e-01  0.0283524504
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## [4873,]  1.4412382569 -3.236743e+00  6.308554e-01 -1.6516779153
7.085391e-01
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3.514903e-01
## [4875,]  1.0054291345 -9.299555e-01  7.180440e-01 -0.0734622943 -
2.066541e-01
## [4876,]  1.4565728933 -5.357905e+00  2.353925e-02 -0.7010596069
2.076922e-01
## [4877,]  1.0054201839 -1.070608e+00 -1.071558e+00 -1.0043605214
8.335158e-01
## [4878,] -0.0839921388  8.830002e-01 -2.749446e-01 -0.3815284652
1.676855e+00
## [4879,] -2.0240446907 -1.607394e+00 -1.634868e+00 -1.2131742097 -
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## [4880,]  1.0749110525 -1.867812e+00 -1.102385e-01  2.3306686733 -
7.142223e-01
## [4881,] -9.1089450485 -9.880956e-01  2.731325e+00  0.2747034607
1.582598e+00
## [4882,]  0.5864357054  3.381741e-02 -6.078863e-01  0.3190804187 -
4.128491e-01
## [4883,]  1.2950670871 -2.400242e+00  9.627103e-01 -0.5772196150
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## [4884,] -0.9826024703  8.908213e-01  1.662219e+00 -1.1185397494
5.235931e-01
## [4885,] -1.9963711658 -1.573555e+00 -1.191004e+00 -0.7914865153 -
1.007525e+00
## [4886,]  1.2825265458 -2.427268e+00  8.245703e-01 -0.8684514961
2.002453e-01
## [4887,]  1.0116717265 -6.048384e-01 -3.306307e-02 -1.1559113500 -
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## [4888,]  1.2682991217 -2.355718e+00  6.907805e-01 -0.8411895056
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## [4889,]  1.1812776348 -6.946031e-01  1.118256e+00  0.7667999593 -
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## [4890,]  0.7587813005  1.028322e+00  9.875140e-02 -0.1460000862 -
3.764818e-01
## [4891,]  0.7768894726  1.020295e+00  1.648996e-01  0.0911978272 -
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## [4892,]  1.4297234484 -3.139895e+00  6.794390e-01 -1.5322644450
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## [4893,]  0.6927814153  1.921497e+00  1.201356e+00  1.1565081457 -
1.228667e-01
## [4894,]  0.4819421249  2.891373e-01 -1.654162e+00  1.8893667758
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## [4895,]  1.4232704455 -3.245950e+00  4.275740e-01 -1.7535804554
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## [4896,]  0.8568282271  7.028035e-01  3.951866e-01 -0.3657878948 -
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## [4897,]  1.1181755884 -2.006955e+00  3.464042e-01  1.6715716517 -
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## [4898,]  0.7846008937  6.045543e-01  4.141695e-01 -0.4921744378 -
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## [4899,] -0.6357004071  8.001244e-01 -5.570468e-01 -0.0078259773
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1.117595e+00
## [4900,] -7.4915365086 -1.741197e+00  9.090743e-01 -0.7211011010 -
1.607964e+00
## [4901,]  1.1523935637 -7.828894e-01  1.121555e+00  0.4376950078
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## [4902,]  0.9387247882 -3.284078e-01  3.906118e-02  0.4118746984 -
5.292117e-01
## [4903,]  1.2570627426 -2.321447e+00  8.064354e-01 -1.0229883641
2.635076e-01
## [4904,]  0.0675069593  1.807428e+00  2.048262e+00  1.6633261477
1.837735e+00
## [4905,]  0.0918693422  1.757952e+00  1.965022e+00  1.5629441169
1.825934e+00
## [4906,]  1.1063755518 -9.814303e-01  5.021519e-01  0.7541067630 -
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## [4907,]  0.7810466935  3.683668e-02  6.275496e-01  0.1721028271
1.832072e-01
## [4908,]  1.2655587280 -1.961891e+00  1.285951e+00  1.1698998667 -
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## [4909,]  1.0267706765 -1.648061e+00  5.058124e-01 -0.3135194937
4.121764e-01
## [4910,] -5.3226961774  6.340160e-01  9.668798e-01 -0.0725885146
1.923375e+00
## [4911,]  1.5165683568 -3.880637e+00  6.510630e-01 -1.0974819465
1.684092e-01
## [4912,]  0.7054973450  7.521455e-01 -1.413132e-01 -1.2466992719
5.057724e-03
## [4913,]  1.0562309863 -1.204524e+00  1.380452e-01 -1.2031903581
3.400487e-01
## [4914,]  0.0668605982  1.827890e+00  1.057246e+00  0.7669716046
1.676747e+00
## [4915,] -0.4397812177  5.132413e-01 -1.026185e+00  3.8494660829
4.391816e+00
## [4916,]  0.8241442209 -1.127092e+00 -6.980216e-01 -1.2204242617
4.684139e-01
## [4917,]  0.6476996162  1.368950e-01 -2.593637e+00 -1.6595149107
7.324306e-01
## [4918,]  1.2757286663 -2.404750e+00  7.158225e-01 -0.9033760274
3.350103e-01
## [4919,]  0.7704895284  1.417289e-02  6.838734e-01  0.1657516969
2.289098e-01
## [4920,]  1.1499039083 -1.822478e+00  9.610540e-01 -1.4429378529
6.468296e-01
## [4921,]  0.7799829659  4.896763e-01  8.800096e-01  1.6797201170 -
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## [4922,]  0.6929681227  3.766154e-01  4.250011e-02 -0.7458343402 -
4.610282e-02
## [4923,]  0.6624080137  4.373474e-01  9.474148e-02 -0.7353643220 -
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## [4924,]  0.5759742548  1.708802e+00  1.259699e-01 -1.3785143176
```

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2.095885e-01
## [4925,]  0.8167446911  3.401705e-01  4.585393e-01 -1.0283264754 -
4.741196e-02
## [4926,]  0.1759320356 -5.017943e-01 -2.863107e+00  1.8657047706 -
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## [4927,]  1.2417238217 -2.441984e+00  6.717247e-01 -0.9379334729
4.020623e-02
## [4928,]  1.4170321468 -5.215609e+00  1.180825e-01 -0.5969152489
2.593678e-01
## [4929,]  1.1858859317 -1.227922e+00  1.652998e+00  1.1249284269
2.529970e-01
## [4930,]  0.6219104456 -1.175307e+00 -9.275981e-01 -0.9203523540
5.200561e-01
## [4931,] -0.3897867698 -6.530053e-01 -2.117196e-02  1.7116779249 -
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## [4932,] -1.5905679207 -7.030137e+00 -6.328429e-01  2.5696931057 -
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## [4933,]  0.9081711286 -1.638363e+00  6.929355e-01 -0.4932386786
5.496533e-01
## [4934,]  0.9330692977  2.560256e-02  7.270079e-01 -0.2294824932 -
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## [4935,] -0.1106574410 -1.457602e-01 -4.006533e+00  2.2205388017
3.645704e+00
## [4936,]  0.8721849452 -3.690886e+00 -2.986846e+00  0.3577976730
2.411242e-01
## [4937,]  0.8791776497  1.350738e-01  7.747960e-01 -0.1183285513 -
2.064201e-01
## [4938,]  1.1373445272 -1.637243e+00  1.125403e+00  0.0448106514
2.402879e-02
## [4939,]  0.8746538115  9.410295e-02  1.003017e+00 -0.2826443642
2.114495e-01
## [4940,]  0.7212454602  1.842814e+00  1.124193e+00  1.1690984267 -
2.098861e-01
## [4941,]  0.8586508480  6.345982e-01  3.643138e-01  0.4266895030 -
3.654154e-01
## [4942,] -3.1657078040  1.360840e+00  1.182926e+00  0.0888456041
1.303759e+00
## [4943,]  0.9482040920 -6.751249e-01  6.911033e-01  0.4989495327 -
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## [4944,]  1.2866154805 -2.063376e+00  1.128122e+00  1.2290987644 -
2.742134e-01
## [4945,]  1.4018791150 -2.909940e+00  6.672580e-01 -0.2076717825 -
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## [4946,] -3.1312645015  1.222207e+00  1.117562e+00  0.1297970143
1.205552e+00
## [4947,]  0.9147092756 -9.297422e-01  4.263644e-01  0.9654882556 -
3.828635e-01
## [4948,] -9.0889863378 -1.063773e+00  2.711594e+00  0.2347589916
1.594503e+00
## [4949,]  0.2438113418  2.061924e-01  1.265488e+00  0.1855856525
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1.510907e+00
## [4950,]  1.1679380488 -1.165952e+00  1.736917e+00  1.1912348595
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## [4951,] -0.3282381887 -8.824247e-01 -1.517664e-01  1.6421602432 -
1.480023e+00
## [4952,] -1.6104391936  6.650380e-01 -1.499703e+00  1.1266569505
3.445333e+00
## [4953,]  0.6950890206  1.873680e+00  1.001385e+00  1.1379348661 -
1.347439e-01
## [4954,]  0.5948947261 -1.041366e+00 -8.887597e-01 -0.9433749902
5.833931e-01
## [4955,]  0.9817889413 -6.154983e-01 -1.113441e-01 -1.2037839635 -
1.653672e-01
## [4956,]  0.9887292655 -5.147583e-01  3.728234e-02 -1.1039340281 -
2.270650e-01
## [4957,]  1.5079389417 -2.766691e+00  1.620660e+00  1.6626248919
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## [4958,]  0.7473776077 -8.308100e-01  5.420913e-01  0.1618556104 -
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## [4959,] -0.4387873197 -7.942123e-01 -2.263190e-01  2.2702333920 -
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## [4960,]  1.2609244444 -2.528323e+00  6.860066e-01 -0.8635154256
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## [4961,]  1.0331554306 -1.177923e+00  2.134586e-01  0.1007455236 -
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## [4962,] -0.0599443435  7.408221e-01 -2.556057e-01 -0.4505543154
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## [4963,]  1.4036873293 -3.069023e+00  4.625679e-01 -1.6655635294
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## [4964,]  0.7941111623 -9.949018e-02  6.503570e-01  0.0700521516
2.584736e-01
## [4965,]  0.0949041348  1.718721e+00  1.153792e+00  1.0905231063
1.628031e+00
## [4966,]  0.8093806687 -1.410059e+00 -3.753649e-01 -0.7014570668 -
1.977600e-01
## [4967,]  1.3138342061 -2.767244e+00  1.045925e+00  0.1801846408 -
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## [4968,]  1.2830769906 -2.064764e+00  1.087530e+00  1.0498108471 -
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## [4969,]  1.0608323798  6.353117e-01  9.233465e-01  2.6367873243 -
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## [4970,]  0.7875072786  5.415464e-01  9.396376e-01  1.8603177981 -
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## [4971,]  0.8863026194  9.430424e-02  5.956661e-01 -0.0392704664 -
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## [4972,]  0.4735825365  3.565319e-01  6.231818e-02  2.2368249885 -
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## [4973,] -5.3176008812  6.086033e-01  8.979579e-01 -0.1462161581
1.905523e+00
## [4974,] -1.7419316711 -3.080085e+00 -8.197962e-01 -0.0911760124 -
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```
1.202502e+00
## [4975,] -5.3286164908  6.476461e-01  9.689422e-01 -0.0039563224
1.897336e+00
## [4976,] -5.3328200071  6.990822e-01  9.521939e-01 -0.0573899078
1.913360e+00
## [4977,] -0.3953800572  7.721974e-01 -9.517538e-02 -0.0883224564
1.030428e+00
## [4978,]  1.2116613331 -1.832605e+00  7.266417e-01  1.4361938506 -
1.182593e+00
## [4979,]  1.4372425190 -3.228252e+00  6.007104e-01 -1.6838905944
6.915608e-01
## [4980,]  1.0326568263 -1.337103e+00  8.156365e-02 -0.8508517848 -
2.605719e-01
## [4981,]  0.8440064608  6.667193e-01  4.606797e-01  0.5658137819 -
3.373179e-01
## [4982,]  0.9851576268 -8.525583e-01  9.303074e-01 -0.0477822258 -
1.946746e-01
## [4983,]  0.9454322756  1.496369e-02  6.668650e-01 -0.2805716611 -
1.217798e-01
## [4984,]  1.1233584636 -1.956440e+00  9.936101e-01 -0.0368721820
5.721720e-01
## [4985,]  1.0823149323 -1.835201e+00  1.056514e+00  0.0188218783
5.908364e-01
## [4986,]  1.0223681395 -1.498567e+00 -5.160943e-01 -0.6609277973
9.305876e-01
## [4987,]  1.2046209745 -1.957682e+00  8.664029e-01 -1.4455903241
5.926521e-01
## [4988,]  1.4604740045 -5.392242e+00 -9.825043e-02 -0.5880729355
2.490194e-01
## [4989,] -3.2985276169 -3.381137e+00 -4.858025e-01 -1.0426428999 -
1.112583e+00
## [4990,]  0.8630262238  6.375404e-01  4.265129e-01  0.5409635033 -
3.412854e-01
## [4991,] -1.6912501818 -7.108593e+00 -1.077739e+00  2.8520443346 -
1.154437e+00
## [4992,]  1.4605874237 -3.295032e+00  6.313321e-01 -1.5983381710
7.121978e-01
## [4993,]  0.6061798824 -3.199854e-01 -1.112557e+00 -0.3722265897 -
2.056967e-01
## [4994,]  0.6162751190  1.542533e+00  1.363377e-01 -1.4979028474
2.844541e-01
## [4995,] -0.6323359365  7.817948e-01 -5.423175e-01 -0.0298114141
1.164707e+00
## [4996,]  1.1704594554 -1.835627e+00  7.938765e-01 -1.2882149870
6.265717e-01
## [4997,]  0.0518370329  1.864456e+00  2.084581e+00  1.6396439489
1.908734e+00
## [4998,]  1.0416163759 -2.426316e-01  5.015812e-01  0.3193569975 -
5.541499e-01
## [4999,]  1.6819457366 -5.207411e+00  7.474870e-01 -0.6128221472
```

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1.452024e-01
## [5000,] -3.3503754314  1.158420e+00  8.027354e-01  0.4692566515
1.351308e+00
## [5001,]  1.2870613183 -2.045697e+00  1.245614e+00  1.0924257623 -
2.963834e-01
## [5002,]  0.9936704071 -9.003808e-01  9.576750e-01 -0.0299908160 -
1.768188e-01
## [5003,]  0.0895119148  1.753115e+00  1.974587e+00  1.6355204409
1.809482e+00
## [5004,]  1.0151230266 -8.748533e-01  1.099061e-01 -1.0918222751 -
3.406049e-02
## [5005,]  0.4173826051  9.681800e-01  1.477184e+00  0.9335181736
5.050775e-01
## [5006,]  0.4860776082  1.023643e+00 -2.271232e+00 -0.7793970261
8.148421e-01
## [5007,]  0.5147216777  1.882575e+00 -5.643220e-01 -0.5324115739
6.881413e-01
## [5008,] -0.1224912349 -9.094979e-02 -3.198845e+00  1.3784079143
3.841476e+00
## [5009,]  0.9989352554 -5.955881e-01  3.375648e-02 -1.1640315496 -
2.098489e-01
## [5010,]  0.9176498912 -1.637111e+00  5.075523e-01 -0.3508881527
4.984840e-01
## [5011,]  0.0961432069  1.766469e+00  2.023137e+00  1.7921644963
1.786307e+00
## [5012,] -0.3091868843 -7.560503e-01  1.005765e-01  1.9991498576 -
1.540936e+00
## [5013,]  0.2478131490  2.362091e-01  1.341227e+00  0.3542435053
1.537399e+00
## [5014,]  0.3416363347 -8.207389e-01 -3.030495e+00  1.0521446022
3.102891e-01
## [5015,]  1.2561103498 -2.469952e+00  6.383544e-01 -0.9136993312
3.217170e-03
## [5016,]  0.9281869201 -2.334979e-01  7.629363e-02  0.5531705035 -
5.314799e-01
## [5017,]  0.8126931917 -1.417185e+00 -3.624673e-01 -0.8351643551 -
9.793638e-02
## [5018,]  0.8059056271 -7.907162e-01 -5.206547e-01 -1.2037878336 -
1.386310e-01
## [5019,]  1.2493221910 -2.332546e+00  7.851560e-01 -0.8087896819
3.508710e-01
## [5020,]  1.0556888128 -1.106044e+00 -2.822628e-01 -1.2121887185 -
3.809794e-01
## [5021,] -0.3270746069 -7.511363e-01  1.433470e-01  1.9412841598 -
1.476478e+00
## [5022,]  1.1013548017 -1.726324e+00  5.708973e-01 -0.9827931009
3.563359e-01
## [5023,]  1.1271097024 -1.696737e+00  1.034371e+00 -0.2160759950
4.198186e-02
## [5024,]  1.3356551298 -2.443593e+00  6.951202e-01 -0.3363598714 -
```

```
9.609074e-02
## [5025,]  0.5601734038  8.092883e-01 -8.464008e-01 -0.8204693400
2.477053e-01
## [5026,]  1.2424277965 -2.367494e+00  6.438815e-01 -0.9308005699
2.334154e-02
## [5027,]  1.0897026512 -9.733323e-01  5.806978e-01  0.6956544609 -
6.211986e-01
## [5028,]  0.2645847892  1.684546e-01  1.256578e+00  0.2417432277
1.499196e+00
## [5029,]  0.7724248810  2.082504e-02  6.297116e-01  0.1359048253
2.095886e-01
## [5030,]  1.0752228683  5.254723e-01  7.834793e-01  2.6928390459 -
1.103507e+00
## [5031,]  1.4279288990 -3.709830e+00  8.545864e-01 -0.8829355842
3.470500e-01
## [5032,]  1.0969946318 -1.716050e+00  8.612534e-01 -0.7573387880
3.492236e-01
## [5033,]  0.6966968227  1.915311e+00  9.703335e-01  1.0925356627 -
1.074027e-01
## [5034,]  1.3246043752 -2.783341e+00  1.185983e+00  0.4875597148 -
1.499015e-01
## [5035,]  1.1597434841 -1.638857e+00  9.240116e-01 -0.5110958503
4.029777e-01
## [5036,]  1.3708729588 -2.537984e+00  6.515093e-01 -0.3760496164 -
1.017605e-01
## [5037,]  1.1687031427 -6.628043e-01  1.161148e+00  0.7095230325
3.973369e-02
## [5038,]  1.3036277629 -2.791068e+00  1.101746e+00  0.2141120569 -
1.315383e-01
## [5039,]  1.1273435114 -1.605061e+00  1.140005e+00 -0.5212896331
4.035717e-01
## [5040,]  0.0716677999  8.289305e-02 -1.008723e+00 -0.4862171398
1.352590e+00
## [5041,]  1.0784689873 -1.652767e+00  6.627115e-01 -0.8429141248
3.757109e-01
## [5042,]  0.8668562592  6.460715e-01  5.889428e-01  0.6269432711 -
4.108849e-01
## [5043,]  0.7856485652  9.376904e-01 -4.940957e-01 -1.0040872875
9.719612e-02
## [5044,]  1.2951343189 -2.468344e+00  6.917163e-01 -0.9278506990
3.431645e-01
## [5045,] -1.6381899390 -6.812169e+00 -6.209213e-01  2.5417863399 -
1.097399e+00
## [5046,]  1.5877678050 -2.942122e+00 -5.001956e-01 -1.5309296356 -
5.005617e-01
## [5047,]  0.9226940272  8.123138e-01 -3.114043e-01 -1.7748262759 -
4.295863e-01
## [5048,]  0.9846417244 -8.210931e-01  9.597465e-01 -0.0282150922 -
1.641227e-01
## [5049,] -3.1743609208  1.329522e+00  1.171969e+00 -0.0366744877
```

```
1.348238e+00
## [5050,]  1.0981548587 -9.353767e-01  4.831705e-01  0.6232577285 -
6.763174e-01
## [5051,]  0.7811271943  4.987500e-01  3.900272e-01 -1.3599174472
6.906480e-02
## [5052,] -1.7262453930 -3.118359e+00 -8.299098e-01 -0.0059129775 -
1.232415e+00
## [5053,]  0.6616149851  1.656654e-01 -1.337351e+00 -0.9367887392
8.825052e-01
## [5054,]  0.8891814418  4.983028e-01  5.730625e-01 -0.2089605956
5.522196e-02
## [5055,]  0.8944915705  5.486344e-01  4.709951e-01 -0.3054062709 -
2.737467e-01
## [5056,]  0.8105210558 -1.501782e+00 -5.770745e-01 -0.9699833753 -
5.618704e-02
## [5057,]  0.5624171911  3.869825e-01 -3.748084e-01 -0.6050819609
2.511308e-02
## [5058,] -1.7265697499 -3.082219e+00 -5.568246e-01  0.1915952862 -
1.243953e+00
## [5059,]  0.9367807623  3.739735e-02  6.659720e-01 -0.3359148314 -
7.756504e-02
## [5060,] -0.3478697821 -6.947890e-01 -3.034032e-02  1.8806416875 -
1.433488e+00
## [5061,] -1.7122706753 -6.942826e+00 -9.644757e-01  3.0277125865 -
1.087216e+00
## [5062,]  1.0642236051 -1.036775e+00  9.039149e-01  0.8340919584 -
5.745309e-01
## [5063,]  0.9808104459 -5.991799e-01 -1.383831e-01 -1.3010584422 -
1.152539e-01
## [5064,]  0.8765487195  4.882395e-01  1.114137e-01 -0.7762741450 -
2.437055e-01
## [5065,]  0.1994961852  1.685673e+00 -2.461846e-01  0.6906687202 -
4.514411e-02
## [5066,]  1.3411322427 -2.760323e+00  1.057343e+00  0.4014829436 -
2.305247e-01
## [5067,]  0.6866245344  6.772298e-01 -1.145239e+00 -0.9284326240
6.704545e-01
## [5068,]  0.8587102836 -1.853312e+00 -1.436412e+00 -0.1740280697
7.038299e-01
## [5069,]  1.0159974679  5.199409e-02  7.727748e-01  1.0788015323 -
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## [5070,]  1.0175858462  1.052065e-01  7.742968e-01  1.2663078894 -
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## [5071,]  0.8372743757 -1.583293e-01 -4.934293e-01 -0.2494700988 -
4.076696e-01
## [5072,] -3.3487368725  1.121495e+00  6.252652e-01  0.0190604371
1.387740e+00
## [5073,]  0.7188398846  2.215210e-01  2.758340e-01  2.0250551580 -
2.342365e-01
## [5074,]  1.0881229140  4.633303e-01  7.544161e-01  2.6686220468 -
```

```
1.115029e+00
## [5075,]  0.0821301869  1.817524e+00  2.013296e+00  1.6283657948
1.868723e+00
## [5076,] -3.1585272728  1.289130e+00  1.194203e+00  0.0483477184
1.340143e+00
## [5077,]  0.5182717700  1.345171e-01 -1.319447e+00  0.1730403281
6.496181e-01
## [5078,]  1.4803468538 -2.736453e+00  1.421458e+00  1.5091210553
2.223799e-01
## [5079,]  0.5596402733  7.266861e-01 -1.041698e+00 -1.0075205585
3.430715e-01
## [5080,] -0.3819343440  8.131136e-01  7.554825e-02  0.0107570279
9.892926e-01
## [5081,]  0.0872802762  1.699500e+00  1.036817e+00  0.7856498074
1.649768e+00
## [5082,]  0.6456656931  1.444663e+00  1.673005e-01 -1.4918340521
3.436793e-01
## [5083,]  0.6900225715  2.018050e+00  1.126164e+00  1.0631197051 -
1.120050e-01
## [5084,]  0.9757975837 -1.472818e+00 -2.842524e-01 -0.9925615150
3.595595e-01
## [5085,] -0.5405434499  9.602679e-01 -2.179928e-01  0.3803932498
1.072015e+00
## [5086,]  0.9066351631  9.358087e-02  7.339093e-01 -0.2624083726 -
7.754674e-02
## [5087,]  1.2485514844 -2.396023e+00  6.380494e-01 -1.0059276011
7.314810e-02
## [5088,]  0.7740618723 -9.447701e-02  5.355265e-01 -0.3135185341
3.127686e-01
## [5089,]  1.2840816274 -2.015991e+00  1.068875e+00  1.0391622525 -
2.153187e-01
## [5090,]  0.9555725169 -3.828295e-01  9.135316e-02  0.6054336649 -
5.381552e-01
## [5091,]  1.0350476305 -1.219991e+00  1.634534e-01 -0.0741471642 -
1.826485e-01
## [5092,]  0.8080508382 -1.478884e+00 -5.819548e-01 -0.9560911224 -
6.186712e-02
## [5093,] -0.2292564436 -1.877498e-01 -3.933116e+00 -0.6501152740
2.940060e-01
## [5094,]  1.0643703736  5.515494e-01  1.033888e+00  2.8030642766 -
1.092570e+00
## [5095,]  0.4595602643  2.502821e-01 -1.935117e-01  1.8050287260
6.007696e-03
## [5096,]  0.9487006048  1.013830e-01  6.429757e-01 -0.1807095071 -
1.662139e-01
## [5097,]  1.0257928896 -6.168657e-01 -1.580007e-02 -1.1210894958 -
2.529394e-01
## [5098,] -0.4630497057 -7.106585e-01 -2.253026e-01  2.2862957548 -
1.464275e+00
## [5099,]  0.9883574430 -9.724385e-01  1.808037e-01 -0.0796421086 -
```

```
1.511925e-01
## [5100,]  0.8021884323  4.518823e-01  8.117450e-01  1.5016695125 -
1.716881e-01
## [5101,]  0.7745449432  5.355704e-01  4.331660e-01 -1.1720368849
1.219258e-02
## [5102,] -3.2787598908 -3.442298e+00 -4.071446e-01 -0.9088845882 -
1.071537e+00
## [5103,]  1.1445923520 -2.150847e+00  1.765720e-01  0.0937711082 -
4.864080e-01
## [5104,]  0.7554486927  8.913918e-01 -6.946263e-01 -1.2650707044
1.979551e-01
## [5105,]  0.0803773503  1.705661e+00  1.038212e+00  0.6207738593
1.735752e+00
## [5106,]  1.1313050724 -2.017801e+00  1.012835e+00  0.0126620421
5.624746e-01
## [5107,] -3.1301775581  1.159349e+00  1.241270e+00  0.2325237498
1.300741e+00
## [5108,]  1.3340625354 -2.822914e+00  1.075599e+00  0.3503053490 -
1.921432e-01
## [5109,]  0.2735577167  2.215009e-01  1.385094e+00  0.5936750721
1.496317e+00
## [5110,]  1.3675542357 -2.481854e+00  5.922238e-01 -0.3726150277 -
1.542150e-01
## [5111,]  1.1460733101 -6.636831e-01  1.222087e+00  0.6185199914
1.370193e-01
## [5112,]  0.7848958378 -1.218504e+00  2.122200e-01  0.8446839173
4.407964e-01
## [5113,] -3.3453859209  1.161359e+00  7.711585e-01  0.3654741358
1.401111e+00
## [5114,]  0.0250588351  1.292037e-01  8.321027e-01  0.2225848822
1.695991e+00
## [5115,]  1.4180621650 -3.147244e+00  7.039083e-01 -1.6484364198
8.290483e-01
## [5116,]  0.7194733304 -2.527156e-01 -8.378433e-01 -0.8980415873 -
2.251990e-01
## [5117,]  0.5088548379  1.405009e+00 -7.175255e-01  0.1920323026
5.841087e-01
## [5118,]  0.8049325636  3.999195e-01  4.629080e-02 -1.2043469479
1.097776e-03
## [5119,]  1.1820007326 -7.908187e-01  1.098891e+00  0.4369390883
1.107412e-01
## [5120,]  0.8844908939  6.324323e-01  6.332081e-01  0.7123331822 -
3.853281e-01
## [5121,]  0.8386136041 -2.011475e-01 -6.980782e-01 -0.3981490116 -
3.425583e-01
## [5122,]  1.1687667992 -6.636434e-01  1.202790e+00  0.6479752799
1.368505e-01
## [5123,]  1.2649785461 -2.373183e+00  9.575534e-01 -0.8171372303
3.590496e-01
## [5124,]  0.8178333222 -1.644170e+00 -8.400448e-01 -0.8049349461
```

```
1.334720e+00
## [5125,] -0.7007292172 -8.739177e-01  9.767418e-01 -0.9142196181
1.687855e+00
## [5126,]  1.1926208075 -1.914074e+00  1.011946e+00 -1.2180998041
6.552784e-01
## [5127,] -3.3737282349  1.175649e+00  7.828530e-01  0.1680458732
1.478971e+00
## [5128,]  0.9861964912 -5.349699e-01 -1.840415e-01 -1.2322394169 -
1.752168e-01
## [5129,]  1.0363134366 -1.251407e+00 -1.814903e+00 -1.0596805196
5.179881e-01
## [5130,]  1.1236319473 -1.932686e+00  1.300309e+00  0.2508311548
5.693430e-01
## [5131,]  0.7043747673  1.931083e+00  1.192351e+00  1.2461055596 -
1.252734e-01
## [5132,]  1.0316486480 -6.865223e-02  6.649482e-01  1.2241547544 -
5.990205e-01
## [5133,]  1.0855691666 -9.169643e-01  5.757964e-01  0.7868584376 -
6.385087e-01
## [5134,]  0.7880041906  4.098259e-01  4.645384e-01 -1.1239561707
2.201506e-02
## [5135,]  1.1455203944 -1.735018e+00  1.023723e+00 -0.2396992355
6.668325e-02
## [5136,]  1.1557388420 -1.152722e+00  5.263968e-01 -0.3538281989 -
2.107071e-01
## [5137,]  1.1145026145 -1.903186e+00  6.488187e-01 -0.9726970991
4.327049e-01
## [5138,]  1.1974040286 -1.950427e+00  7.578650e-01 -1.4429402053
7.042116e-01
## [5139,]  0.8930365959  5.425659e-01  8.267790e-01  0.0342322740
1.308297e-02
## [5140,]  1.4129595721 -3.054932e+00  5.288846e-01 -0.2380791982
1.776087e-02
## [5141,]  0.7939220359  4.143442e-01  4.272941e-01 -1.1618439492
4.299901e-03
## [5142,]  0.2827744488  1.644773e-01  1.296575e+00  0.4281057618
1.488264e+00
## [5143,]  0.5020479741  1.952799e-01 -1.993306e-01  1.9788850968 -
6.130558e-02
## [5144,]  1.1561999963 -1.751954e+00  1.097959e+00 -0.0950096909
9.560215e-02
## [5145,]  1.1233823336 -1.686326e+00  1.096720e+00 -0.2430277196
1.478551e-01
## [5146,]  1.0981911345 -9.607565e-01  5.970365e-01  0.7782921418 -
6.134489e-01
## [5147,]  1.0433942701 -1.216493e+00  1.989355e-01 -1.1657564655
3.828655e-01
## [5148,] -3.3013565003 -3.343830e+00 -3.880159e-01 -0.8800057028 -
1.060530e+00
## [5149,]  1.0064869285 -5.991692e-01  5.393080e-02 -1.0614603853 -
```

```
2.060169e-01
## [5150,]  0.9306533838 -3.498526e-01  1.453724e-01  0.5682278450 -
4.629959e-01
## [5151,]  1.2080692748 -1.258807e+00  1.656790e+00  1.1866749905
2.970290e-01
## [5152,]  0.7044324534 -8.119419e-01  9.161843e-01  2.5608538340
1.878376e-01
## [5153,]  0.8377231001 -2.041492e-01 -6.874719e-01 -0.4331799277 -
3.059967e-01
## [5154,]  1.0903135080 -8.879323e-01  6.552562e-01  0.5987603032 -
6.585598e-01
## [5155,] -0.0903261813  3.152840e-01 -1.104704e+00  2.5075485069
1.793109e+00
## [5156,]  1.3429297544 -2.942744e-01 -5.017280e-01 -1.6264900197 -
3.578236e-01
## [5157,]  0.7092471922  1.871102e+00  1.204975e+00  1.1569886088 -
7.377429e-02
## [5158,]  0.8706576207  1.663799e-01  9.742052e-01 -0.3365022131
2.545665e-01
## [5159,]  0.8103151141  2.729196e-01  1.107528e-01 -1.1100804023
7.103426e-04
## [5160,]  1.3451861870 -2.813149e+00  1.130274e+00  0.4639837022 -
1.563512e-01
## [5161,]  0.2043968133  9.836034e-02 -2.244940e+00  1.5282969042 -
3.967461e-01
## [5162,] -0.1456443209 -5.210363e-01 -4.051619e+00  4.3147558711
3.545470e+00
## [5163,]  1.1203367658 -1.326018e+00  9.025869e-01  0.9513124517 -
6.370941e-01
## [5164,]  0.9904903635 -8.931630e-01  7.226235e-01 -0.2359061275 -
9.153377e-02
## [5165,] -3.3458386604  1.156269e+00  8.296599e-01  0.4045326168
1.446344e+00
## [5166,] -1.7034274248 -3.251192e+00 -7.619400e-01 -0.0174431893 -
1.138341e+00
## [5167,]  1.1740530510 -2.058655e+00  5.531219e-01 -1.3703076998
5.684625e-01
## [5168,]  0.7774498993  9.289412e-01 -5.039681e-01 -1.0366667792
1.089628e-01
## [5169,]  1.0727434102 -7.764424e-01  7.704794e-01  0.8730778870 -
6.801655e-01
## [5170,]  1.1395062605 -1.561749e+00  1.058593e+00 -0.0012028259
2.454671e-02
## [5171,]  1.0312357709 -1.329170e+00  1.424146e-01 -0.7145922324 -
2.226513e-01
## [5172,]  0.7075017286  1.842483e+00  1.000103e+00  1.1125378954 -
8.225714e-02
## [5173,]  0.6697090932  3.668889e-01  1.770589e-01 -0.1089179359
2.115012e-01
## [5174,]  1.1160478998 -1.739937e+00  8.675166e-01 -0.6706864167
```

```
3.470162e-01
## [5175,]  1.3159077971 -2.690488e+00  1.052759e+00  0.3145211419 -
1.813440e-01
## [5176,]  1.4424010755 -3.652160e+00  1.028327e+00 -0.7094190991
2.711224e-01
## [5177,]  0.6813592599  3.454649e-01  8.690950e-02 -0.8327345811
6.177751e-02
## [5178,]  1.0850884887 -9.482416e-01  5.982323e-01  0.6804996078 -
5.642358e-01
## [5179,]  1.2557729435 -2.341591e+00  7.655444e-01 -0.7950135631
3.511106e-01
## [5180,]  1.0529027431 -8.468146e-01  5.889712e-01  0.6559929739 -
5.950902e-01
## [5181,]  1.0161634875 -5.731950e-01 -1.736974e-02 -1.0688829094 -
2.707526e-01
## [5182,]  0.1301712116 -1.350854e-01 -3.186051e+00 -1.2054691072
1.864033e-01
## [5183,]  1.1578221378 -1.901059e+00  7.649940e-01 -1.6591052710
7.941438e-01
## [5184,]  1.2173248347 -2.506630e+00  2.774240e-01 -0.1843515221 -
3.052045e-02
## [5185,]  0.8165771487  3.489558e-01  6.597268e-02 -1.1893243763
2.476807e-02
## [5186,]  1.0805126651 -1.253630e+00  3.218191e-01 -1.0745981597
3.003199e-01
## [5187,]  0.9273358874 -2.002512e+00  2.169678e-01 -1.0763018552
6.976535e-01
## [5188,]  0.0205530470  1.745992e-01 -1.184636e+00 -0.7881795871
1.522763e+00
## [5189,]  0.8444848354 -1.887477e-01 -4.629374e-01 -0.2982339436 -
3.227632e-01
## [5190,]  0.9681712575 -2.887458e-01 -3.552278e-01 -0.8339615301 -
3.376516e-01
## [5191,]  1.2811163205 -2.367085e+00  9.409168e-01 -0.7620261843
3.369159e-01
## [5192,] -0.4373137870 -8.720274e-01 -3.449832e-01  2.3408737120 -
1.391227e+00
## [5193,]  0.8498866945 -4.206136e-01  4.257946e-02  0.3759743479 -
4.071447e-01
## [5194,]  1.0169249260 -5.626810e-01  8.823485e-02 -0.9883248671 -
1.651811e-01
## [5195,] -2.1718812680 -1.124018e+00 -3.907773e+00 -1.8846313193
3.075895e-01
## [5196,]  0.5887200356 -1.599703e+00 -3.004503e+00  0.9150911414
4.717486e-01
## [5197,] -0.0684985727  2.371214e-01 -4.016633e+00  1.2518129330
4.760823e-01
## [5198,]  0.8102924449 -1.477605e+00 -5.317569e-01 -0.9078069788 -
1.935899e-02
## [5199,]  1.1974853458 -1.258637e+00  1.614796e+00  1.0198556905
```

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3.238023e-01
## [5200,] -3.3014081255 -3.395503e+00 -3.685318e-01 -0.9524700958 -
1.002360e+00
## [5201,]  1.0243402466 -1.126659e+00  1.537491e-01 -0.0217769595 -
2.013069e-01
## [5202,]  1.2343146352 -1.949583e+00  8.042185e-01  1.4852126384 -
1.070237e+00
## [5203,]  1.0885443439  4.120326e-01  1.090754e+00  2.8688412070 -
1.052019e+00
## [5204,]  0.7778221292 -1.559374e-01 -1.249030e+00  0.0667281152
3.275966e-01
## [5205,]  0.2067464856 -1.750038e+00 -3.397356e+00  1.6729626994 -
1.640006e-01
## [5206,]  1.0781083946 -1.254655e+00  3.929517e-01 -1.0352129299
3.558261e-01
## [5207,] -0.8292781470 -1.262466e+00 -3.060406e+00  0.9612648806
2.062517e+00
## [5208,]  0.9123083100 -1.022748e+00 -2.633602e-01 -0.8728399555
6.948676e-02
## [5209,]  0.9862775213 -8.122626e-01  1.023704e+00  0.0248853392 -
7.861463e-02
## [5210,]  0.9320378554 -2.064909e-01  1.320688e-01  0.6635824947 -
4.824212e-01
## [5211,]  0.5920244317  6.916282e-01 -1.100522e+00 -0.9295744446
2.962503e-01
## [5212,]  0.9519331623 -2.577937e-01 -2.844532e-01 -0.7757926555 -
2.912634e-01
## [5213,]  1.0980845099 -1.347009e+00  3.504206e-01 -1.1191043411
3.624134e-01
## [5214,]  1.1844034069 -1.222510e+00  1.703966e+00  1.0259393501
4.395835e-01
## [5215,]  0.8825027072  5.858412e-01  4.480930e-01  0.7057551308 -
3.572886e-01
## [5216,]  1.4494296603 -3.748772e+00  1.085943e+00 -0.5855127791
2.659423e-01
## [5217,]  0.2427221927  2.589343e-01  1.429257e+00  0.4770158694
1.598449e+00
## [5218,]  1.1739352343 -1.904743e+00  1.025959e+00 -1.2924190167
6.938615e-01
## [5219,]  1.1017485496 -1.005404e+00  6.237672e-01 -0.4172835995 -
8.869975e-02
## [5220,]  0.8304030102  4.225256e-01  8.084643e-01  1.7038020015 -
2.402969e-01
## [5221,]  1.2155549065 -2.028613e+00  7.479931e-01 -1.2921788308
6.152593e-01
## [5222,]  1.0420039347 -6.285122e-01 -4.756136e-01 -0.9333638270 -
3.504499e-01
## [5223,]  1.0182403141 -5.766977e-01  3.042011e-02 -1.0302236033 -
2.146765e-01
## [5224,]  0.0963759785  1.747951e+00  1.018562e+00  0.7384328890
```

```
1.707029e+00
## [5225,]  1.0799996751 -1.663305e+00  9.282181e-01 -0.7337101323
4.263828e-01
## [5226,]  1.0007351867 -6.606980e-01 -2.770587e-01 -0.2035280552
9.794211e-01
## [5227,]  1.0009419092 -6.374419e-01 -2.004713e-01 -1.3228131317 -
1.407706e-01
## [5228,]  1.0938526488 -8.810976e-01  5.343655e-01  0.7077132545 -
6.193180e-01
## [5229,] -3.2794335680 -3.328507e+00 -4.986321e-01 -0.9329289499 -
1.109704e+00
## [5230,] -3.3102758512 -3.362680e+00 -3.682436e-01 -1.0460377483 -
9.401226e-01
## [5231,]  1.5276324902 -2.862878e+00  1.858752e+00  1.8352121840
1.509187e-01
## [5232,]  0.6806315289 -8.851082e-01  1.085926e+00  2.2635652876
2.843376e-01
## [5233,]  1.0392906475 -9.642041e-01  3.156477e-01 -1.0714312087
1.439774e-02
## [5234,]  0.9535700593  4.442364e-02  6.761966e-01 -0.2563822778 -
5.988703e-02
## [5235,]  0.8903378238  5.333306e-01  4.249049e-01  0.5456960048 -
3.014191e-01
## [5236,]  1.1753107594 -1.961267e+00  7.310757e-01 -1.7012882385
7.937138e-01
## [5237,]  1.4621352925 -3.349062e+00  5.110466e-01 -1.5367610008
7.955289e-01
## [5238,]  1.5665383289 -4.028876e+00  7.132036e-01 -1.0097784972
2.742206e-01
## [5239,]  1.1878116041 -1.236923e+00  1.656010e+00  0.9648050602
4.101373e-01
## [5240,]  1.3088851144 -2.122133e+00  1.031693e+00  1.0629351091 -
2.428423e-01
## [5241,]  0.8035483920  5.068461e-01  9.085635e-01  1.7738934949 -
1.678786e-01
## [5242,]  1.4491346375 -3.744593e+00  8.871582e-01 -0.7391932418
3.520356e-01
## [5243,]  0.5594367100  7.446229e-01 -1.095566e+00 -1.0115028600
2.990089e-01
## [5244,]  1.5658261843 -4.022537e+00  4.319475e-01 -1.1609970644
2.679356e-01
## [5245,]  1.0308740358  5.147613e-02  8.050488e-01  1.2125827669 -
6.212797e-01
## [5246,] -2.0148909290 -1.635649e+00 -3.054945e+00 -2.4652677522 -
3.816229e-01
## [5247,]  1.1533016080 -1.160565e+00  5.586150e-01 -0.2793572645 -
2.209056e-01
## [5248,] -3.3189507492  1.108826e+00  7.923252e-01  0.4201297549
1.433184e+00
## [5249,]  1.1155946461 -1.909839e+00 -1.206882e-01 -0.4098543860 -
```

```
2.436097e-01
## [5250,]  1.2424379475 -1.922117e+00  7.499719e-01  1.4949871375 -
1.105164e+00
## [5251,]  0.8001880195  6.982198e-01 -6.462419e-01 -1.1088007551
1.980009e-01
## [5252,]  1.1174073533 -1.030212e+00  5.867888e-01 -0.3814861321 -
1.245517e-01
## [5253,] -3.2667109463 -3.485779e+00 -4.577107e-01 -1.0233313604 -
1.029401e+00
## [5254,]  0.6421125211  1.538488e+00  4.203796e-01 -1.2849850948
3.400567e-01
## [5255,]  1.0893938370  4.443987e-01  1.038984e+00  2.7808078771 -
1.041269e+00
## [5256,]  1.0246247812 -1.068359e+00  1.065649e-01 -0.1709835869 -
1.492788e-01
## [5257,]  1.0072782921 -8.198936e-01  4.066646e-01 -0.9711659359
5.838651e-02
## [5258,]  1.1517125270 -1.987364e+00  3.326383e-01 -1.6096192986
6.822523e-01
## [5259,]  1.0788502252  5.444852e-01  1.073176e+00  2.9332766923 -
1.076361e+00
## [5260,]  0.5430977973  7.810975e-01 -1.089663e+00 -1.1937052670
4.022823e-01
## [5261,]  1.0519418724 -8.632999e-01  9.073165e-01 -0.4593316874
4.512473e-01
## [5262,]  0.7084324027  1.381505e+00  3.814448e-01 -1.1262795754
2.567988e-01
## [5263,]  1.0338414302 -1.862071e+00  5.918642e-01  1.6139986277
5.580553e-02
##                   PC6           PC7           PC8           PC9
PC10
##    [1,] -0.9929702400  0.5026395766  6.715742e-01  3.453284e-01 -
1.0481757576
##    [2,] -1.4662429230 -0.6533268780  6.613880e-01  7.800966e-02 -
1.7168938590
##    [3,] -0.8508115372 -0.0902530102  1.017749e+00  5.184164e-01 -
0.5542043484
##    [4,] -3.6375764477  0.7690174314  2.722716e+00 -1.369846e+00
3.1765441061
##    [5,] -1.8142862682 -0.5981151908  6.587597e-01  3.021448e-01 -
1.3038555716
##    [6,] -0.2802111955  0.1521632875  1.810668e-01 -5.047840e-01 -
0.0450724369
##    [7,] -0.2641229848 -1.0760086990 -4.149818e-01  2.915522e-01 -
1.3333078663
##    [8,] -0.4737401236  0.1253129905  1.380167e-01 -8.699160e-01 -
0.3559489125
##    [9,] -0.9315781791 -0.7610469244  1.052791e+00  6.106593e-01 -
0.9959790887
##   [10,] -0.6325414967 -0.3664345087  7.013757e-01  7.240958e-01 -
```

```
1.7846432986
##   [11,] -5.1126612430  3.1529821557  1.015642e+00 -2.150522e+00
3.3347620237
##   [12,] -0.8661274484  0.3399539983  6.911573e-01  2.927498e-01 -
1.2294824253
##   [13,] -0.9247714969 -0.1950780617  8.372237e-01  8.869947e-01 -
0.2824749369
##   [14,] -1.4396887855 -0.8209614649  1.070855e+00  5.082408e-01 -
0.6981369436
##   [15,] -1.4671884570 -0.3961062868  7.177049e-01  2.102752e-01 -
1.4551674788
##   [16,]  0.2836330414 -1.0036880476  2.974036e+00  7.125480e-01 -
0.9271868886
##   [17,] -0.7936203264 -1.7854448943 -3.512511e-01  1.523093e-01 -
2.5534638091
##   [18,] -5.5206557321  2.2707785865 -2.169955e+00 -1.083771e+00
4.7379905489
##   [19,] -1.0664427883  0.0025642485  6.794445e-01  2.934369e-01 -
0.7835140501
##   [20,] -1.3254137770 -1.0082335783 -3.252147e-01 -2.549842e-01 -
0.2905041992
##   [21,] -1.0660930914 -0.4303738030  8.112618e-01  4.226097e-01 -
0.9313298158
##   [22,] -2.2029266382  1.0941687235  1.191385e+00  1.372901e+00 -
0.8588324046
##   [23,] -0.7131146565  0.6766508341  6.456560e-01  6.981571e-01 -
0.6186644473
##   [24,] -3.2096766636  1.0255895919 -1.403744e-01 -3.409446e+00
2.1226543960
##   [25,]  0.9727000916 -0.5421586161  1.830237e+00  1.350416e+00 -
1.3110244550
##   [26,] -0.1892920769  0.2364430066  2.626963e-01 -5.395507e-01
0.0759296614
##   [27,] -1.3274882186 -0.8815936804 -4.850665e-01 -1.554544e-01 -
0.2991237937
##   [28,] -0.6175302531  0.9004365817  8.695411e-01  5.077281e-01 -
0.8155823511
##   [29,] -0.5726205676 -0.6407005075  8.757816e-01  4.195599e-01 -
1.2771785713
##   [30,]  0.2304062237 -0.6400108456  2.779148e+00  5.172318e-01 -
0.7736510627
##   [31,] -1.2675618876 -0.3752522701  1.218526e+00  7.186925e-01 -
0.8932007137
##   [32,]  0.3326879744 -1.9184066463 -9.448727e-01 -5.410548e-02 -
4.4013423998
##   [33,]  0.6213276865  0.4602920698 -7.232109e-01  7.365005e-01 -
0.8950023821
##   [34,] -0.7722971548 -0.3942741419  6.089879e-01  1.280776e+00 -
0.3823079124
##   [35,] -1.3457496408 -1.1185108684 -4.147317e-01 -1.604160e-01 -
```

```
0.2014420009
##   [36,] -1.3582020309 -1.0521176544 -4.340212e-01 -1.299104e-01 -
0.2429914220
##   [37,]  0.9868061099  0.3901325403 -9.728308e-01 -6.709153e-02
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##   [39,] -1.3016658067 -0.9914550948 -3.092880e-01 -2.975280e-01 -
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##   [45,]  1.9231703874  2.0596586513 -3.027216e-01  4.746118e+00
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##   [46,] -0.6238635689 -1.6261263105  1.008387e+00  7.495005e-01 -
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##   [47,] -0.0502764381  0.4861552536  1.079873e+00  2.342547e+00
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##   [57,] -0.3739566100 -0.5465972442  1.140993e+00 -4.989117e-01 -
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##   [71,] -0.4679603987 -0.3641223830 -4.714913e-01  1.448510e-01
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##   [81,] -1.3434568419 -1.0982702540 -4.938144e-01 -1.464967e-01 -
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##  [117,] -0.9941629044 -0.5139083202  1.083463e+00  7.379358e-01 -
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##  [205,] -1.0277669819 -1.5007888826 -7.715448e-01  6.023811e-01
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##  [206,]  0.1231795192 -1.4594274490  2.976295e-01 -1.763914e-01
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##  [209,] -0.4780102603 -0.6149850036  7.685956e-01 -1.026903e+00 -
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##  [215,] -1.1609253544  1.3941258397  3.489043e-01  5.398121e-01 -
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## [1035,] -0.3992739438 -0.0038218672  1.963707e-01  4.884398e-01 -
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## [1046,] -0.4134521419 -1.0042205873 -4.391518e-01  1.321135e-01 -
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## [1058,] -0.1033047495  0.5162468334 -1.208211e-01  9.286057e-03 -
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## [1083,]  0.1246955059  1.7266311156  2.750486e-01  1.513468e+00 -
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## [1086,] -0.2838679502 -0.6845650329  5.371128e-01 -5.153970e-01
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## [1091,] -0.9020564670 -0.9238942711 -6.785528e-01  2.497565e-01 -
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## [1103,]  2.0162315686 -0.0086209426  3.230366e+00 -2.403733e-01
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## [1113,] -0.4218265652 -0.0957760321  1.030648e+00  9.109397e-01
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## [1114,] -0.3711378647 -0.7730491017 -2.079083e-01  2.882786e-01
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## [1117,] -0.5542553143 -0.2075372717 -1.004467e+00  5.075823e-01
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## [1118,] -0.8650078633 -0.7401378561 -5.364765e-01  2.200563e-01
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## [1125,] -0.4102302892  0.5023236072 -5.526532e-01  2.224143e-01 -
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## [1126,] -0.3002215987 -0.6653859522 -9.962641e-01 -8.245605e-02
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## [1127,] -0.2200611988  0.7560658753 -6.047643e-01 -5.000013e-01 -
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## [1128,]  0.5243595239 -0.7101312676 -7.303144e-01 -1.373855e+00 -
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## [1131,]  0.1716088571 -0.8704898776  8.044665e-02  1.199889e+00 -
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## [1132,] -0.4442959667  0.4433163318  8.372187e-01  9.828263e-01 -
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## [1133,] -0.4374748841 -0.6728874314 -1.805431e-02 -3.685906e-01
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## [1136,]  1.4712212269 -1.2808867056 -1.227762e-01  1.211045e+00
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## [1139,] -0.2380329394  0.7623239766 -3.829215e-01 -7.642633e-02 -
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## [1140,] -0.9031762092 -0.0820109407  8.155169e-01  5.697166e-03 -
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## [1141,] -0.8508183075  0.3878734564  2.822319e-01  9.832282e-01 -
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## [1142,] -0.4652969096  0.7510139407  7.259889e-01  7.456108e-01 -
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## [1145,] -3.3770485026  1.0457481316  2.572854e+00 -1.543268e+00
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## [1146,] -2.1533269837 -0.3057358185 -3.615567e-01  3.159113e-01 -
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## [1147,] -0.4415478655  0.8374477098  2.260184e-01  1.009237e+00 -
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## [1149,] -0.7344832929  1.1124637013  7.387943e-01  1.807426e-01 -
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## [1151,] -0.6959854035  0.9090651058  2.958540e-01  4.987595e-01 -
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## [1152,] -0.7217016967  0.0276211636  1.224848e+00  4.778004e-01 -
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## [1153,]  0.3063470301 -1.1742038871 -5.515492e-01 -3.016128e-01 -
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## [1155,]  0.9487489106 -1.3202413795 -8.691898e-01 -1.379420e-01 -
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## [1156,] -0.3165557885  1.0038564111  9.614477e-01  7.343648e-01 -
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## [1157,] -0.9747785723  1.5195964125  2.433584e+00  7.440413e-01 -
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## [1158,] -1.0984196036 -0.3710507196  1.025724e+00  5.246965e-01 -
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## [1159,] -0.3997958301  0.3688721339  9.882532e-01  1.584727e+00
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## [1166,] -0.8280309065 -0.5037614877  1.258885e+00  4.273864e-01 -
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## [1167,] -0.9913972819 -1.4326278205  1.776313e+00  1.895708e+00
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## [1168,] -1.3618997414 -1.0176287665  1.155751e+00  1.423281e+00 -
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## [1170,] -1.2452340902 -0.2829491260  5.437748e-01  4.063776e-01 -
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## [1172,] -0.8172642694  0.1502198734  6.253419e-01  6.921021e-01 -
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## [1173,] -0.8368343348  0.6745799690  6.542704e-01  1.074847e+00 -
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## [1175,] -3.1683672045  1.7306055106 -9.804403e-02 -2.260911e+00
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## [1176,]  0.8200681431 -0.7333578738 -1.158329e-01  1.107358e+00 -
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## [1177,] -0.6177765575 -0.2025966091  7.847316e-01  2.734012e-01 -
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## [1180,] -0.9522379136  0.2472303403  3.969883e-01  1.167624e-01 -
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## [1181,] -1.0593658088  0.5576150541  7.658999e-01  4.057904e-01 -
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## [1182,] -5.2120360730  2.2617662810  1.002523e+00 -2.187186e+00
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## [1183,] -0.9315342936  0.6039020014  3.096152e-01  1.133328e+00 -
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## [1184,] -1.4032132589 -0.6543173029  8.951049e-01  1.034674e+00 -
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## [1188,] -0.6107232731  1.4335079550  1.030837e+00  1.254198e+00 -
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## [1189,] -0.8043551370 -0.5318260380  1.387300e+00  6.498160e-01 -
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## [1192,]  0.4054407403 -0.9096157322  6.639705e-02  1.238094e+00
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## [1194,] -0.7180074671 -0.0209879854 -4.628880e-01 -3.900600e-01 -
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## [1199,] -1.9891349202 -0.1339771261 -1.641114e-02 -1.342089e+00
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## [1204,] -0.7447165814 -1.4136448959  1.020493e+00 -9.628611e-02 -
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## [1209,] -0.9204639797 -0.9491378485 -1.017893e-01 -3.284214e-01 -
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## [1375,] -0.6542400365 -0.9420274660 -3.031389e-01 -1.759099e-01 -
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## [1537,] -0.6713994096 -0.2252660027 -9.112762e-01  1.397272e-01
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## [1702,]  0.1945224248 -1.2877154795 -1.165255e+00  1.155998e+00
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## [1704,]  0.0842601600  0.7280706732 -3.725437e-02  1.747696e-02
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## [1708,] -0.5437251558 -0.6769303315  1.070755e-02 -8.043814e-02
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## [1709,]  0.1574279124  0.3619365007  1.022530e+00 -1.240918e+00 -
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## [1802,] -1.5280555130 -1.0335268489 -4.506254e-01  3.682872e-01 -
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0.5029558398
## [2036,]  0.1749231050  0.7717088450  6.789004e-02 -5.687781e-02
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## [2037,] -0.0264240615 -0.1271491862  9.643570e-01 -5.158637e-01
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## [2038,] -0.9096857836 -0.3044887435  6.039308e-01  5.084376e-02 -
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## [2039,] -0.4681315954  0.0267015749  7.502553e-01  7.350877e-01 -
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## [2040,] -0.2381708042  0.3738599540  9.239212e-01  1.324984e+00
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## [2041,] -0.5057752025 -0.3170090643  1.455775e+00  5.736858e-01 -
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## [2042,]  0.3573196493 -0.7744834214  2.863406e+00  8.227357e-01 -
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## [2043,] -0.7610525823  0.2059753430  9.870005e-01  8.489410e-01 -
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## [2044,]  1.1970922347 -0.2523236863 -9.619975e-01  8.525985e-02 -
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## [2045,] -0.0665219115  1.4244623872  6.635072e-01  7.045938e-01 -
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## [2046,]  2.1006476580 -2.2072620002 -1.946462e+00  1.943285e-01 -
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## [2047,]  0.8005066151  1.2003315877 -1.106449e+00  8.186142e-01 -
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## [2048,] -3.4654032442  0.6739634922  5.197389e-01 -2.844904e+00
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## [2049,] -0.6994349793  1.5826552841 -1.810375e-02 -1.795181e-01 -
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## [2050,] -1.4203750595 -0.6591092885  7.238746e-01  2.996900e-01 -
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## [2052,] -1.7160811270  1.5280648361  1.466022e+00  1.916779e+00
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## [2053,] -1.5652289124 -1.5232663904  8.334168e-01  1.176451e+00 -
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## [2055,]  0.0020472466 -1.2248076553  2.280948e-01  1.641614e+00
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## [2056,] -0.4747700961  2.7784099600 -6.954242e-01  2.075273e+00 -
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## [2057,]  0.0082894318  0.6132497644 -7.131479e-01  5.007070e-02
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## [2058,] -0.5202213645 -1.5934552371  8.248248e-01  3.971093e-01
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## [2059,]  0.8291965907 -1.2697676738 -2.390547e-01 -1.617114e-01
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## [2063,] -0.0182279824 -0.8561068866 -5.947543e-01  1.924892e-01
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## [2064,] -1.3358962324 -0.7317960517 -7.263642e-01 -1.223828e-01 -
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## [2065,] -0.3601027248 -0.4862579070 -8.246710e-02  3.333613e-01
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## [2066,] -0.2717352907  0.0703832621 -1.930675e-01 -2.903817e-01
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## [2067,] -0.2405316799  1.3147859471  1.757490e+00 -8.749300e-02
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## [2068,] -0.2312667569 -0.1845322176  6.920122e-02 -4.590485e-02
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## [2071,]  0.6281519093  1.0180531597 -3.829401e-01 -3.939657e-01 -
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## [2072,]  0.6997212513  0.2485131682  9.050091e-01  6.099146e-01
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## [2074,] -0.6192194687 -0.7372816304 -4.551443e-01  6.809162e-02
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## [2075,]  0.1530760254 -2.0618592603  7.396006e-03  9.768195e-01
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## [2076,] -0.1199108452 -0.0003083397 -1.504254e-01  9.132987e-02 -
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## [2077,]  0.2447162992  1.4217656829 -8.128872e-01  1.107368e+00
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## [2079,] -2.2617518689 -0.8676898676 -1.698926e+00  2.451920e+00
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## [2080,] -0.1515231923 -0.3583733651  5.130408e-01 -7.573447e-01
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## [2081,] -0.2525743024  0.2066729860  3.946120e-02 -3.637588e-01 -
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## [2088,] -0.6601674054 -1.2794773047  4.625964e-01  6.068307e-01
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## [2089,] -2.0268051660 -1.1257779578 -2.183754e+00  2.607482e+00
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## [2090,] -0.1253116472 -0.6209319709 -4.480748e-02  8.701236e-01
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## [2091,]  0.7690655565  0.4205012603  9.920250e-01  5.643208e-01
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## [2099,] -0.3391100568  0.1840201376 -4.452169e-01 -1.377352e-01
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## [2100,] -0.5520867856 -0.1008015528 -3.739518e-01 -3.151472e-01 -
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## [2101,]  0.0567224429 -0.6456636224 -2.877218e-02  1.189141e+00
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## [2102,] -1.2391990629  1.3594069224  6.213975e-01 -4.375658e-01
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## [2103,]  0.8293690933 -1.1510876141  1.772124e+00  3.704742e-01
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## [2104,] -0.0701899373 -0.6752918130 -1.162597e+00 -3.372367e-01 -
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## [2106,] -0.4675130400 -1.3577429802  3.888984e-01 -8.705875e-01 -
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## [2111,] -0.0126130740 -0.1253406571 -2.975902e-02  3.905347e-01 -
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## [2114,] -2.2620391753 -0.7789293621 -1.722159e+00  2.445970e+00
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## [2116,] -0.5521462621 -1.1440540038 -6.938103e-01  1.020112e+00
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## [2117,]  0.3212024867 -0.5028026171  8.143262e-01 -4.711565e-02
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## [2118,] -0.1978577190  1.1452133995  4.015053e-01  1.255952e+00 -
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## [2119,]  0.5028863777 -0.2766017379 -3.075458e-01  1.632269e-01
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## [2121,] -0.2128815456  1.3384821150  1.772522e+00 -1.114746e-01
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## [2122,] -0.8952817065 -0.7397716570 -7.766626e-01  1.008091e-01
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## [2124,] -0.4785374036 -0.4493982800  3.314801e-03 -3.671058e-01 -
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## [2125,]  0.5311975209  0.5359063980 -9.895927e-01  8.743675e-01 -
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## [2126,] -0.2236464559  0.3090177767 -2.428973e-01 -2.522872e-01
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## [2127,]  0.9177717614 -1.5069866365 -1.547638e+00 -8.991554e-01
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## [2128,] -0.2370222667 -0.3482210447  4.760087e-02 -6.854627e-02
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## [2130,] -0.4323810186 -0.8347962906  1.862460e-01 -2.671881e-01
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## [2131,] -0.5506778685 -0.6614346493 -3.575610e-01 -1.281363e-01
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## [2132,] -0.0175941002  0.7635344510 -4.287523e-01 -2.189356e-01 -
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## [2133,]  1.0398344819 -0.3439721696  1.878177e+00 -1.147666e+00 -
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## [2136,]  0.2280315144 -0.3246532097  5.561655e-01 -4.596614e-01
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## [2138,] -0.2957161641 -0.7180420091  4.230868e-01 -5.153552e-01
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## [2139,]  0.2907000081  1.2786444750 -5.927736e-01  1.031598e+00
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## [2141,]  0.1495545407 -0.1442194241 -9.034561e-02 -3.366396e-01
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## [2143,] -0.3247601008 -0.1471203536 -3.415839e-01  7.733563e-01
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## [2144,] -0.8611312897  0.6768925782  5.624801e-01  1.095859e+00 -
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## [2145,]  0.6717573379 -0.7238591930 -1.816357e-01  2.234596e-01
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## [2146,] -0.4029713891 -1.1914142875  1.641346e-01  2.066873e-01
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## [2147,] -0.6276166820 -0.7521469488  1.895021e-01 -5.549273e-01
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## [2148,]  1.9512225062  0.6932616266 -4.358863e-01  8.219736e-01
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## [2149,] -0.3238918732  0.2356228981 -2.490804e-02 -1.219666e+00 -
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## [2150,]  0.1387098661 -0.9839459219 -2.046383e+00  2.652691e-01
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## [2151,]  0.6834246756 -1.0064154939 -1.703820e+00  1.305150e+00
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## [2152,]  0.1030597141  0.1595560183 -9.889387e-02  1.746729e-01
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## [2153,] -0.3627294213  0.0848717150  3.393148e-01 -1.595367e-01 -
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## [2154,]  0.8439497052 -1.4560318926 -1.695673e+00 -8.524306e-01
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## [2155,]  0.2667694012 -0.6089282103  8.156268e-01  2.304935e-03
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## [2156,] -0.5188536849 -0.5592276955  3.794802e-01 -6.715531e-01 -
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## [2157,]  1.7459256531 -0.6125230045 -1.876863e+00 -4.157276e-01 -
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## [2158,] -0.2613564120 -0.0960726155 -8.541181e-02 -1.144730e-02 -
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## [2159,]  0.2054537851  1.6234973885  1.736087e-01 -6.308272e-01 -
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## [2163,] -0.3038135002 -0.5350769784  9.355145e-02  2.361250e-01
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## [2164,]  0.2853892084  0.1101499541  7.780274e-01 -1.394604e-01
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## [2165,]  0.7853292615 -1.1922956419  1.642186e+00  4.902446e-01
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## [2166,] -0.1612513214  1.3908934644  1.936402e+00 -2.384176e-01
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## [2167,] -0.3180875101 -0.9902367993  2.272915e-01  1.375957e-01
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## [2170,] -0.4112647009 -0.8444667318  3.303097e-01 -8.501876e-01 -
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## [2171,] -0.6357967563 -0.7138801546 -1.363636e-01  1.918956e-02
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## [2172,] -0.7307500723  0.1055083146  3.645363e-01  2.664800e-01 -
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## [2173,] -0.5500717819  0.6964080412  1.197844e+00  8.116716e-01 -
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## [2174,]  0.1116077384  0.0446014474  1.272463e+00  2.558846e+00
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## [2175,] -0.5246167428  0.5472031698  6.513384e-01  7.224009e-01 -
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## [2176,] -2.9612075184  1.3385219011  5.262102e-01 -1.629335e+00
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## [2177,] -0.8357352139 -0.7293480791  3.376679e-01  4.907276e-01 -
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## [2178,] -0.3293851513 -0.8734301393  1.335169e+00  1.883394e+00
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## [2179,]  2.2736346507 -1.5885986750 -1.162193e+00  2.260010e+00
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## [2180,] -0.2589727709  0.3231714375  1.458726e-02 -1.459081e-01 -
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## [2181,] -0.5172749977 -1.5542747953  7.975726e-01  4.441884e-01
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## [2182,] -0.5567936720 -0.8967349682 -2.103209e-01  2.701510e-02
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## [2183,]  0.2919069035  0.8060656056  2.804640e-01  3.850140e-01
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## [2185,]  0.2041046216 -0.3012277933 -9.632183e-01  1.701374e-02
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## [2188,]  0.1918497270  0.6070882429  1.561014e-01  4.994497e-01
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## [2190,] -0.2418537271  0.2800226995  7.320258e-02 -7.356620e-01 -
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## [2191,] -1.3027922800 -0.7040854771 -1.052981e+00  3.462674e-01 -
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## [2192,]  1.5497808556 -0.9440775907 -1.742749e+00 -8.172775e-01 -
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## [2193,] -2.2797631223 -0.8583896811 -1.748789e+00  2.469568e+00
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## [2195,] -0.2967082379 -0.4014741165  4.738420e-01 -3.002945e-01
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## [2204,] -2.3594648306  2.2498964465  1.165314e+00  8.106289e-01 -
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## [2205,]  0.2936765356  0.7369907956  2.939776e-01  3.584537e-01
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## [2206,]  0.1272862892  0.6503176840 -2.286748e-01 -4.227306e-02 -
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## [2207,] -0.3488807915 -0.7218247607  6.710253e-01 -8.237162e-01
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## [2214,] -0.3644736008 -1.4687044754  7.199500e-01  6.158976e-01
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## [2324,] -0.6336134746 -0.4578380572 -1.000961e+00  8.130405e-01
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## [2325,] -0.1443310994 -0.0663598319  1.763483e-01  1.382968e-01
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## [2535,] -0.9017501912  0.6015672720  8.110747e-01  4.848389e-01 -
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## [2536,]  0.7083369081 -0.0634597992  2.081442e+00  6.622877e-01 -
0.8375629985
## [2537,] -0.7606579139  0.9754699110  3.637645e-01 -3.499863e-01 -
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## [2538,] -0.8581512605 -0.0692443544  4.009987e-02 -3.044387e-01 -
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## [2539,] -0.8327545713  0.0498330023  8.470058e-01  1.656156e-01 -
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## [2540,] -2.5791126828 -0.9619608582 -5.396246e-02 -2.224350e+00
2.8635869137
## [2541,] -1.3401430103 -0.8547063185  5.063367e-01  1.378692e-02 -
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## [2542,] -0.6195880949  1.1013556548  2.276467e-01  3.972084e-01 -
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## [2543,] -2.1775435112  2.3194130033  6.461098e-01  5.918206e-01 -
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## [2544,]  0.1526502367  1.0936424801  7.090221e-01  1.453209e+00
0.1434310096
## [2545,]  1.8522925648  0.7616199695  2.159394e+00  2.578482e+00
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## [2546,] -0.9753177874  1.3312506721 -2.061777e-01  3.667837e-01 -
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## [2547,] -0.9303707042  0.1720300613  2.018886e-01 -7.065043e-01 -
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## [2548,]  0.0620551858  0.6658999797  6.458717e-01  1.403265e-01 -
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## [2549,] -0.8936833489  0.4648732342  5.049969e-01  4.068439e-01 -
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## [2550,] -1.2831447624 -0.2419419914  4.743977e-01  4.813181e-01 -
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## [2551,] -0.3741390022  0.6974264219  2.304891e+00  1.247691e+00 -
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## [2552,] -0.5397689191 -0.3726749232  1.394636e+00  4.943974e-01 -
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## [2553,]  0.1633159600  0.5523590621  1.044210e+00  1.182058e+00 -
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## [2554,] -0.5842312490  0.3891121178  6.289433e-01  7.714349e-01 -
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## [2555,] -0.7722452786 -0.2318745311  1.319127e+00  7.687833e-01 -
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## [2556,] -0.4500249395  1.2737803962  8.227749e-01  8.018217e-01 -
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## [2557,] -0.8040994922  0.8008685798  8.904813e-01  5.648260e-01 -
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## [2558,] -0.0487245542 -0.4900429553  4.273067e-01  1.000243e+00 -
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## [2559,]  0.0890588325 -0.9294216111  2.657777e-01  2.511836e-01 -
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## [2561,] -0.2241590639 -0.7548009875  2.361517e+00  7.295450e-01 -
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## [2562,] -1.4172789961 -0.0722508506  7.977070e-01  7.414496e-01 -
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## [2564,] -1.0467560387  0.0996452462  5.887927e-01 -1.208890e-02 -
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## [2565,] -2.0310694081  1.7814301949  1.405843e+00  1.279610e+00 -
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## [2566,] -0.5948674993  0.2543115746  1.041266e+00  1.417690e+00 -
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## [2567,] -0.6161892126  0.8476574391  8.035661e-01  2.265038e-01 -
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## [2568,] -1.3455901449 -0.0788817635  4.816383e-01  6.671383e-01 -
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## [2569,] -0.1700198151 -1.0327790866 -2.311732e-01 -1.665226e-01 -
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## [2570,] -1.0297502476 -1.3238968823  1.544350e+00  1.114383e+00
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## [2571,] -0.7814277933  1.1917361590  2.644397e-01  6.927021e-01 -
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## [2572,]  0.9203087887 -0.8618681159  3.069498e+00  1.206261e+00
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## [2575,] -1.1512284196 -0.3963324429  8.140736e-01  8.362284e-01 -
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## [2576,] -0.2117752674 -1.6410576600  2.222707e-01  4.202724e-01 -
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## [2577,]  0.2395382379 -0.1387652804 -9.863691e-01  2.050999e-01 -
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## [2578,] -0.4207181889  1.5433356452  8.254009e-01  3.001216e-01 -
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## [2579,] -1.3056599746 -0.7051088773  7.819595e-01  3.512030e-01 -
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## [2580,] -1.6055894976 -0.4321681678  6.732422e-01  5.539520e-01 -
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## [2581,] -0.6234079303  1.0172961924  8.699953e-01  9.423138e-01 -
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## [2582,] -0.6208077129 -0.3410387623  1.137514e+00  2.320536e-01 -
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## [2584,]  1.0310428165 -3.1466043825  1.160171e-01  1.137297e+00 -
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## [2586,] -0.4191044872 -1.4806000158 -5.766165e-01  4.721754e-01 -
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## [2587,] -3.6990879843  0.5533039438  7.528601e-01 -2.989328e+00
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## [2588,] -0.6933472398 -0.9077591653 -7.226900e-01  6.902900e-02 -
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## [2589,] -1.6029219840 -2.1739934519 -1.623761e+00 -3.172124e+00
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## [2590,] -0.8919041950  0.3522959851  7.852817e-01  9.848980e-01 -
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## [2591,] -0.4995861049 -0.0242537779  2.487125e-01 -3.056568e-01 -
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## [2594,]  3.0708238377  2.2662470946 -1.682799e-01  5.912467e+00
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## [2596,]  2.1334171339 -1.2174115397 -1.061301e+00  1.725429e+00
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## [2597,] -1.0220297231 -0.1568647014  3.165179e-01 -2.392641e-01 -
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## [2598,] -0.6167998351  0.1899386808  5.686111e-01  6.017720e-01 -
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## [2600,]  3.6150629263  0.2766563124 -2.591645e+00  3.782817e+00
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## [2601,]  2.5218249762 -1.1997476085 -1.493577e+00  2.131132e+00
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## [2602,] -0.3413245726 -0.6532922167 -1.261407e+00  8.962427e-01 -
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## [2603,] -0.8020829202 -0.1351605389  6.167000e-01  3.099790e-01 -
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## [2604,] -0.5862415217 -1.0268846113 -2.511862e-01 -3.556340e-01 -
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## [2605,]  0.8376462221  2.1232544705 -5.360964e-01  2.794314e+00 -
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## [2606,] -0.7013881228 -0.6567196401  5.057325e-03  1.539049e-01 -
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## [2607,] -0.2361934926 -1.5137835773 -2.728513e-01 -6.365688e-01 -
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## [2608,] -0.2230823496 -0.5562687286  1.603434e+00  2.166538e+00
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## [2609,] -0.5423080713 -0.7162196631 -4.153549e-01  5.090178e-01 -
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## [2611,] -3.3374775677  1.8608877753  8.261062e-01 -2.317651e+00
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## [2612,]  0.2254064597  1.1674128458 -4.064533e-01  7.499468e-01
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## [2613,]  0.3010837931  0.8256343714 -2.356240e-01 -2.144560e-01 -
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## [2614,]  0.2807389267 -0.6200154205  1.175160e+00 -4.616864e-01
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## [2615,]  0.4218603917 -0.1390428916 -9.032063e-04  8.317273e-01
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## [2616,] -0.1722138366  0.1559091111 -2.142831e-01 -1.773642e-01
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## [2617,] -0.1073705278  0.7153582732 -5.156937e-01 -2.186091e-01 -
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## [2618,] -2.2574542303 -0.7638169071 -1.888181e+00  2.512008e+00
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## [2619,]  1.8184415477 -1.0007581010  3.013245e+00  6.206697e-02
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## [2620,]  0.2085909969  1.3452308204 -9.338550e-01  1.071657e+00
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## [2621,]  0.2318166483 -0.5991643456 -9.746996e-01 -1.075846e+00 -
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## [2622,] -0.3377890538 -1.0696230447  8.685291e-02  2.316214e-01
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## [2623,] -0.9512915456 -0.4607483972 -2.873762e-01  2.816804e-01 -
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## [2624,] -0.2647322957 -0.6319664476  6.392122e-01 -7.890667e-01
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## [2625,]  1.6048173811  1.7448969528 -2.058496e-01  1.846021e+00
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## [2626,]  3.1979985534 -2.3544626289  5.855288e-01 -8.963568e-02 -
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## [2627,] -0.1725303886  0.2921920760 -2.800650e-01 -2.642764e-01
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## [2628,] -0.2284236734  0.2533816982 -4.360205e-01 -1.575545e-01
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## [2629,] -0.1986507949 -0.5219367980  3.305882e-01 -6.327308e-01
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## [2630,] -0.6886731577 -0.5257269819 -1.132537e+00  4.645858e-01
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## [2631,]  0.4913934586 -1.0442779098  1.131775e-01 -2.870980e-01 -
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## [2632,] -0.5952213526 -0.7279151949  1.445797e-01 -5.351042e-01
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## [2633,] -0.3374779673  0.3045058203  2.082436e-01  3.439934e-01 -
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## [2634,] -2.2719525815 -0.8471451491 -1.898011e+00  2.530490e+00
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## [2636,] -4.6518041753  0.6784668475  1.603125e+00 -1.551327e+00
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## [2637,] -0.7506422897 -0.3841134747 -8.462364e-01 -2.516385e-01 -
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## [2638,]  0.1038880032  0.0676463412  1.635796e-01 -1.498533e-01
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## [2639,]  0.8364502899  1.2584821615  6.447559e-02 -5.968450e-02
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## [2640,]  0.2047117889  0.9560295102 -2.736956e-01  6.778918e-01
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## [2641,]  1.1270023889 -0.3090978379  1.912392e+00 -1.177812e+00 -
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## [2642,] -0.1355031744  0.3870473516 -6.787815e-01 -3.345269e-01
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## [2643,] -1.2468596673 -0.8678360149 -8.740702e-01  1.422759e-01 -
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## [2644,] -0.5189301267 -0.2319954974 -5.127663e-01 -4.523002e-01 -
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## [2645,] -0.0311100909 -0.1446786953 -1.067433e+00 -2.117228e-01
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## [2646,]  1.6398804967 -0.6995418793 -1.780236e+00 -9.650825e-01 -
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## [2647,]  0.1467393020 -0.1463209279  8.586220e-01 -2.848219e-01
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## [2648,]  1.5455975467 -1.3725074887  1.361259e+00  6.685591e-01 -
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## [2649,] -0.1071859280 -0.0509687970  3.657115e-01  1.171138e+00
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## [2650,]  0.2870084247 -0.3925259010  1.083835e+00 -5.627714e-01
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## [2651,]  0.1181180554 -0.0654799017 -1.163202e+00  2.213640e-01
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## [2652,] -0.6810451446 -0.3427808797 -7.039431e-01 -3.276008e-01 -
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## [2653,]  0.2543994209  1.4245632654 -9.170007e-01  1.190376e+00
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## [2654,] -0.4283490432  0.5422560252 -9.650170e-01  1.916311e-01 -
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## [2655,] -0.9906149491 -0.5038674886 -3.641657e-01  3.865503e-01 -
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## [2656,] -0.6076645070 -0.6694563988  1.147149e-01 -5.460035e-01
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## [2657,] -0.4663027817 -0.1153188398 -7.532462e-02  2.837082e-01
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## [2658,]  0.5476383141  1.5192637314  4.304184e-01 -2.174456e-01 -
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## [2659,] -0.1879201351  0.6823112976 -7.443369e-01  6.434547e-03 -
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## [2668,]  1.3266131714 -0.2683059045  1.899290e+00 -5.555020e-01
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## [2669,] -0.3518193686 -1.1091073671  5.134378e-01 -9.097845e-01 -
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## [2670,]  1.1558627378 -0.3342402187  1.954778e+00 -1.097014e+00 -
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## [2671,] -0.0369575071 -0.1787350924 -4.741078e-02 -2.693309e-02
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## [2673,] -0.6070263130 -0.7754669361  2.065915e-01 -4.901366e-01
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## [2674,]  1.4051256777 -1.5009942544  1.546036e+00  1.758629e-01 -
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## [2675,]  0.7055859726 -0.9867556284  3.621010e-01  1.458123e-01
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## [2676,]  0.0352057469 -0.6739646195  2.239866e-01  6.720786e-01
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## [2677,]  0.1363620440 -0.5903774840  8.591009e-01 -4.494132e-01
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## [2678,] -0.7169360543 -0.9870074044 -5.523127e-01  1.841682e-01
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## [2679,]  0.5304109685 -1.3126816784 -7.266113e-01 -9.637242e-01 -
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## [2680,] -1.7999853687  1.6983750772 -6.326542e-01  3.146382e-01
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## [2681,]  0.2213693667  0.0774405079 -3.781686e-01  9.642680e-01
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## [2682,]  0.1796938827 -0.5174040622  8.663751e-01 -8.162126e-01
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## [2683,] -0.3771370300 -0.5938518014  2.727889e-02  4.369784e-01
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## [2684,]  0.4206705134  0.4130664511  6.825502e-03  2.844566e-01
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## [2688,] -1.9750932140  0.9965819005 -1.051301e-02  7.793306e-01
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## [2691,]  1.1643843513 -0.2611745730  1.925106e+00 -1.236955e+00 -
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## [2692,] -0.3596533237 -0.9683211603 -1.822811e+00 -2.252891e-02
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## [2695,] -0.3327081133  0.9556382772  3.843644e-01  8.430197e-01 -
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## [2696,]  0.4404464511  1.5942233989  6.669340e-01  1.424221e+00 -
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## [2697,] -3.8436157864 -0.1309063314  1.154666e+00 -2.452787e+00
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## [2698,] -0.2910641124 -0.5776578195  4.403407e-01 -4.652718e-01
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## [2699,]  0.4593343239 -0.9916706007  1.743937e+00 -1.233788e-01 -
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## [2703,]  0.0647012434  0.1331783922 -5.160723e-02  3.899154e-02
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## [2704,] -0.2821472034 -0.4024528534 -2.051773e-01 -1.253034e+00 -
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## [2705,]  0.5303475634 -0.9653102932  1.105922e-01 -3.147946e-01 -
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## [2709,] -0.6990046550 -0.7044058999 -1.543212e+00  3.987490e-03 -
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## [3038,] -0.4456965814  2.1031974173  8.834658e-02  4.520565e-01 -
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## [3039,] -0.0024779137 -0.1949511745 -3.424554e-01  5.910627e-01
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## [3047,] -0.5694340897  1.2925512050  1.402441e+00  6.688135e-02 -
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## [3203,]  1.2306565428 -1.0478785284 -7.263469e-01 -2.719296e-01
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## [3704,]  0.4757439909  1.7848436732  6.051491e-01  1.884831e+00
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## [3705,]  0.1625131086  1.8585362791 -9.312486e-01 -1.582735e-01 -
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## [3707,] -1.2744106225 -0.0528027161 -2.801450e+00  8.316360e-01 -
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## [3709,]  0.4964362981 -0.0908899417  7.572281e-01 -2.495958e-01
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## [3722,]  0.2993487752  1.0178223548  2.241919e-01 -1.260453e+00 -
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## [4038,]  0.1273902788  0.1102940786  4.056925e-01  6.703709e-03
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## [4039,] -0.1623450968  0.5713188371  1.156340e-01  1.025500e+00 -
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## [4040,]  0.0641818196  0.6945460818 -1.163468e-01 -3.489558e-01 -
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## [4042,]  0.5227722613  1.7176999693 -2.952670e-01  8.206351e-01
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## [4044,]  0.4135202722 -1.4681223065 -1.575937e+00  5.585103e-01
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## [4045,] -0.6753336216  0.1269965356 -2.149660e-01 -3.087726e-01 -
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## [4047,]  0.2629080201  1.0936771436 -6.123521e-01 -2.647026e-01 -
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## [4048,] -0.3054495030  0.0563329399 -2.328696e-01 -1.402286e-01
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## [4059,]  0.2157246143  0.8271161999 -2.136615e-01 -1.189746e-01
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## [4114,] -1.2596531296 -0.6244653138 -6.659341e-01  6.807917e-03 -
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## [4115,] -0.0488701953  0.7711311086  4.218228e-01 -3.090355e-01 -
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## [4125,] -0.4345485668 -0.4966304234 -1.774036e-01 -6.329595e-01
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## [4126,] -0.1173750026  2.0070821793  6.024342e-01  4.786863e-01 -
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## [4129,]  0.1721002540  0.7803442172 -3.082293e-01 -3.616444e-02
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## [4203,]  0.0655942521 -0.5008654516 -5.382165e-01  4.384609e-01
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## [4204,]  0.7519830258 -0.1296792092 -8.205387e-01 -1.193418e+00 -
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## [4205,]  1.9352269055  0.3794799767  1.659704e+00 -7.015210e-01
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## [4206,] -0.7285754778  0.5635912510  7.461323e-01  8.903915e-01 -
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## [4208,]  0.5950452579  0.0785412306  7.994917e-01 -3.613119e-01
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## [4209,]  0.7246667412 -0.1513815575 -9.409629e-01 -1.077605e+00 -
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## [4215,] -0.5723631888 -0.1624439386 -4.219237e-01 -4.059220e-01 -
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## [4217,] -0.2502828179  0.0300619017 -4.822504e-01 -6.019860e-01 -
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## [4221,]  0.2419810580  1.1104989057 -7.768376e-01 -1.967742e-01 -
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## [4230,] -0.2429499683 -2.5181049034 -8.276968e-01 -4.911553e-01 -
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## [4707,]  0.2464104121 -0.0253175272  1.459203e-01 -1.414347e-01
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## [4709,] -0.2351646589 -0.4165643533 -4.655043e-01 -3.734541e-01 -
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## [4716,]  2.8236692286 -1.6444966454 -1.219219e+00 -7.312349e-01 -
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## [4718,]  2.2686634496 -1.4977627634  2.451633e+00  1.482305e-01
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## [4733,] -1.3833763038  0.5546256534 -8.527567e-02  9.154011e-01 -
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## [4879,]  2.2532764135 -0.0214194019 -7.099186e-01 -1.674532e-01
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## [4880,]  0.6785771962  0.8812794892  1.422888e-01  3.128137e-01 -
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## [5204,] -0.3915037580  0.3244020784  4.311479e-01  1.924988e-01 -
0.8058488620
## [5205,]  1.0742582901  0.0296174855 -7.560078e-01  5.450252e-01 -
0.5102577963
## [5206,] -0.0901413222  0.3719383123 -6.547296e-01  4.794671e-02
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## [5207,] -1.0375463056  1.1788739648  1.210689e-01 -3.698878e+00
5.0934117201
## [5208,]  0.4587216955 -0.1674966961  3.755444e-01 -3.752183e-01
0.3648540839
## [5209,]  0.0834129964 -0.6539597408  5.241560e-01 -2.637479e-01
0.5848208173
## [5210,]  0.3247875275  0.7279925926 -9.939276e-02 -1.120688e+00 -
```

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0.4149601425
## [5211,]  1.6955820932  2.2501601392 -1.170060e+00  7.715705e-01
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## [5212,]  0.8799278225  0.8367148823  1.030595e-01 -4.685256e-02
0.8487545100
## [5213,] -0.0641157512  0.3918317111 -5.579871e-01 -3.726889e-02
0.1758543603
## [5214,] -0.6831496311  1.0569318346 -1.472557e+00  4.630639e-02 -
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## [5215,]  0.7646088101  1.4574120071 -4.297691e-01 -5.530946e-03
0.4025887958
## [5216,] -0.4750176960 -1.1436814719  8.675159e-01 -1.595358e-01
0.2272997808
## [5217,]  0.5979001256 -0.7699991490 -3.299711e-01  5.348121e-02 -
0.1647619447
## [5218,] -0.5480180509 -0.4671237885  8.271512e-02 -7.131573e-01 -
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## [5219,] -0.0468495460  0.1583585315  6.660735e-02 -8.563223e-01 -
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## [5220,]  0.0819918133  1.1508077107 -1.040870e+00 -4.748531e-01 -
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## [5221,] -0.1535386552 -0.0466760119  3.693317e-01 -5.619798e-01 -
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## [5222,]  0.8525315367  0.6262906583  1.660727e+00 -2.439683e+00 -
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## [5223,]  0.2653978848  0.2936351068  5.070114e-02 -8.232368e-01
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## [5224,]  1.2402175905  1.2150810512 -1.073874e+00  1.739508e-01 -
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## [5225,] -0.2755415701 -0.6240463175 -9.331855e-02  1.723386e-01
0.4524747843
## [5226,] -0.7252076336  0.9107316044  2.455145e-01  3.678414e-01 -
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## [5227,]  0.4412907346  0.3486170145  4.576998e-02 -4.857517e-01
0.5526438213
## [5228,]  0.6948734733  0.4032387980  6.887132e-01 -2.075578e-01
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## [5229,]  0.7629739537 -1.1372401230 -2.068324e+00 -1.254733e+00 -
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## [5230,]  0.5471833864 -1.3719241055 -2.366248e+00 -1.036650e+00 -
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## [5231,] -0.1324573582  1.2184026163  1.738829e-01 -9.626403e-02 -
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## [5232,] -0.7734531290 -0.6795247463 -2.337779e+00  1.640959e+00
0.2309715515
## [5233,]  0.2994173865 -0.1568116142  5.919326e-01 -6.628777e-01
0.4098582277
## [5234,]  0.1419589128  0.5522986888 -6.691046e-02 -1.020877e+00 -
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## [5235,]  0.7729092927  1.4300738329 -3.441514e-01 -9.074755e-02
```

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## [5236,] -0.3289689258 -0.2429510043  1.327012e-01 -5.580622e-01 -
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## [5237,] -0.4252532973  0.5452838480 -3.222903e-01 -2.127327e-01 -
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## [5238,] -0.7619663189 -0.4064289727  8.269397e-02 -5.861693e-01 -
0.3989948354
## [5239,] -0.6016956549  1.0134804341 -1.291777e+00 -2.795997e-02 -
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## [5240,]  0.2221319952  0.5691875596  2.190490e-01  2.088059e-01
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## [5241,]  0.0002621651  1.1131917347 -1.241945e+00 -3.405447e-01 -
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## [5242,] -0.2875853030 -0.7969958520  7.368870e-01  1.144474e-01
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## [5243,]  1.7158869693  2.0041281243 -1.072512e+00  8.400187e-01
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## [5244,] -0.5344838112 -0.0896278609  1.548296e-02 -3.346249e-01 -
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## [5245,]  0.5474997690  1.1569948237  1.361805e-01 -7.770613e-01 -
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## [5246,]  3.4728943473  2.0580144234 -1.412926e+00  1.229101e+00
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## [5247,]  0.1542234940  0.2733893384  4.359226e-01 -9.945700e-01 -
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## [5248,]  1.3539828842 -0.6433882277 -2.760541e+00 -3.369694e-01 -
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## [5249,]  0.5859000359  0.0966168475 -2.421474e-01  1.324146e+00
1.5758865096
## [5250,]  0.6634810324 -0.4380336642  1.391632e+00 -5.924163e-02
1.0905874770
## [5251,]  1.4125951437  2.1988335788 -6.812990e-01  7.828853e-01
0.9837552157
## [5252,] -0.0126635319  0.2529259696  6.483910e-02 -9.066984e-01 -
0.1106561153
## [5253,]  0.6815434988 -1.2463825003 -2.120012e+00 -1.196719e+00 -
0.1643448727
## [5254,]  0.3780954526  0.4904397970 -2.320621e-01 -9.776119e-01
0.0984631203
## [5255,]  1.0892543083  2.2796810185  4.196217e-01 -8.059659e-01 -
0.2561417959
## [5256,]  0.1141808907  0.1687222665  2.176835e-01 -1.218355e+00 -
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## [5257,]  0.2523200474 -0.1694834094  4.189904e-01 -5.447039e-01
0.4395581376
## [5258,]  0.1988624664  0.0841729957  1.541463e-01  2.771678e-01
0.4941127571
## [5259,]  1.1073627472  2.3518272172  3.561449e-01 -7.588239e-01 -
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## [5260,]  1.6334045651  1.9556406349 -1.200366e+00  8.286314e-01
```

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0.9880304643
## [5261,] -0.1588056530  0.5095910967 -5.660837e-01 -2.571470e-01 -
0.1646356596
## [5262,]  0.5239903230  0.7837128674  2.300854e-04 -1.153550e+00 -
0.0420573650
## [5263,] -0.2866019004  0.1951606860 -6.404341e-01 -2.979146e-01 -
0.8474559828
##                   PC11          PC12          PC13          PC14
PC15
##    [1,] -0.4566717301  5.220010e-01  4.556279e-01  0.3013484620
6.230414e-01
##    [2,] -0.1700520187 -4.121260e-01 -3.379518e-02 -0.1174615761
4.409574e-01
##    [3,] -0.1071618180  2.795503e-01  1.032201e+00 -0.0592149767
5.153971e-01
##    [4,] -1.5372892917  6.069701e-01 -6.394276e-01  0.9629769465
2.207945e-01
##    [5,] -0.4042678877  6.326919e-01  4.380239e-01  0.3718485039
6.003907e-01
##    [6,] -0.6299296876  2.568295e-01 -5.725969e-01 -0.4377678043
3.272833e-01
##    [7,]  1.0088686061  1.737848e+00 -6.198344e-01 -0.4435233554 -
3.276290e-01
##    [8,] -0.5499081043  4.345089e-01 -6.268204e-01 -0.2573596382
2.465808e-01
##    [9,]  0.0773879805 -7.081105e-01  6.408308e-01 -0.8840669541
5.579412e-01
##   [10,] -2.4531779470  7.692461e-01  2.431720e-01  0.8089745667 -
1.230214e+00
##   [11,] -0.8512147260  9.659102e-01  3.706880e-01  0.0670521984
4.363485e-01
##   [12,] -0.2957167676 -2.237482e-02  3.175750e-01 -0.0746022916
5.769050e-01
##   [13,] -0.2398721766  8.650768e-02  5.254574e-01  1.0855116014
1.523091e-01
##   [14,] -0.0714930633  4.687416e-01  8.074352e-01  0.7288419910
1.915339e-01
##   [15,] -0.2775861562  1.500822e-01  2.103092e-01  0.2504066553
4.438747e-01
##   [16,]  0.9475543199  1.347300e-01 -7.013735e-02 -0.2579672079
2.290898e+00
##   [17,]  0.8286546088 -1.006355e+00 -1.757772e+00 -1.1865557972 -
1.694835e-01
##   [18,] -0.0182784091  2.964801e-01 -8.487171e-01  0.3792332495
9.069567e-01
##   [19,] -0.1482634839  2.429535e-01  5.447706e-01  0.8256437379
2.808932e-01
##   [20,] -0.4227829340  3.134955e-01 -6.704466e-01 -0.1667953878
4.525470e-01
##   [21,] -0.0458329023 -2.496486e-01  5.433457e-01  0.0237627253
```

```
4.131583e-01
##   [22,]  0.8503190568  1.267146e+00  3.815756e-02 -2.0337026260 -
4.260121e-01
##   [23,] -0.4858388651  3.067715e-01  1.937976e-01  1.2425478265
2.266522e-01
##   [24,] -1.8419647339  9.796455e-01 -2.477266e-01 -0.0914161819
2.109241e+00
##   [25,] -1.6560121135  3.613195e-02 -1.196201e+00  1.4334809258
6.205702e-01
##   [26,] -0.6529002084  2.561988e-01 -8.730000e-01  0.5771752734 -
1.508328e-01
##   [27,] -0.4060946679  3.337619e-01 -7.207737e-01 -0.0782572563
4.966569e-01
##   [28,] -0.4983064172  6.211874e-01  3.893451e-01  0.9001388904
2.764691e-01
##   [29,]  0.3675679514  4.708325e-01  5.613092e-01 -1.3980548896
4.266296e-01
##   [30,]  0.9566056596  5.607585e-01 -1.022854e-01  0.7559938174
2.087401e+00
##   [31,] -0.3805375127  7.782466e-01  1.061712e+00 -0.4931751066
7.344459e-01
##   [32,]  1.3337934502 -5.780922e+00 -5.075974e+00 -1.7095933353 -
1.080433e+00
##   [33,]  0.8237582885  3.818181e+00 -3.674181e-01 -0.6688419665 -
5.001164e-02
##   [34,] -0.1385788406  1.188395e+00  3.422665e-01  0.4443024920
2.153493e-01
##   [35,] -0.3180456222  2.389110e-01 -5.851549e-01 -0.1634326048
4.526325e-01
##   [36,] -0.3553153101  2.870329e-01 -6.201246e-01 -0.1799770525
4.943528e-01
##   [37,]  0.2490372289  2.788029e+00 -1.296587e+00 -1.1446404407 -
7.703679e-02
##   [38,] -0.8461027087 -5.422180e-02  6.318859e-02 -0.3104818943 -
5.283806e-01
##   [39,] -0.4159585751  2.999179e-01 -6.811147e-01 -0.0873751596
3.932137e-01
##   [40,] -0.5542426851 -3.571791e-01  4.661299e-01  0.1791094564
7.732261e-01
##   [41,] -1.8846047899 -2.629560e-01  5.348463e-01 -0.0863621867 -
1.231945e+00
##   [42,] -2.0185097282 -4.043962e-01  2.530550e-01  0.0403933977 -
1.098251e+00
##   [43,] -0.5610737516  8.766172e-01  1.497335e-01  0.9646024744
4.755902e-01
##   [44,]  0.1402784940  3.599544e-01  1.328112e+00 -0.1507242730
4.039872e-01
##   [45,] -3.9398245248 -1.524968e+00 -4.973526e-01 -0.3278920806
4.333865e-02
##   [46,] -1.7916320760  1.488785e-01  9.006065e-01  0.9776612214 -
```

```
1.718831e+00
##   [47,] -0.7295003564 -4.785935e-01  3.992595e-01 -0.1497803377
6.671838e-01
##   [48,] -0.0141120155 -5.150872e-01 -8.889157e-02  0.0567153338
3.866248e-01
##   [49,] -0.3719201767  2.936706e-01  5.859929e-01 -0.1663537143
5.400399e-01
##   [50,] -0.6201518838  9.884918e-01  4.288262e-01  0.6552954615
3.810069e-01
##   [51,] -0.0681321158  2.238763e-01  1.053555e+00  0.0791754999
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##   [52,] -0.4207418143  2.463004e-01 -4.102392e-01  0.7601591434 -
9.100728e-01
##   [53,] -0.8391710638  6.539929e-01 -2.948428e-01 -0.5755373091
1.825607e-01
##   [54,] -0.5495377364 -1.134672e+00 -1.441206e+00  0.5256670307
1.501996e-01
##   [55,]  0.6824123000  4.168307e-01 -8.981257e-01 -0.6230935465
2.067297e+00
##   [56,] -0.3447856751 -4.277233e-02  6.802541e-01  0.5146877141
4.254890e-01
##   [57,] -0.7455274485  6.038778e-01 -3.264429e-02 -1.2539829503
2.760577e-01
##   [58,] -0.8124637231  1.741683e-01 -1.360412e+00  0.1965919895
2.660155e+00
##   [59,] -0.1363553064  1.562664e+00  1.543524e-02  1.3574156844 -
2.099111e-01
##   [60,] -0.0800074786 -2.579850e+00 -2.528640e+00 -0.9962707198 -
2.151051e-01
##   [61,]  0.0976044890 -6.838782e-02  9.563212e-01 -0.7886700659
6.582314e-01
##   [62,] -0.1736381409  6.162266e-01  8.423135e-01  0.3096102077
3.898571e-01
##   [63,]  0.0080093698  3.864954e-01  8.905567e-01  0.2634432041
3.903030e-01
##   [64,]  0.3503873382  4.127166e-01  7.949086e-01 -0.3212037685 -
7.331534e-01
##   [65,] -0.3787784066  1.861751e-01  6.193173e-01 -0.1333833884
8.259748e-01
##   [66,] -0.3399064117  4.918461e-01  6.937867e-01  0.7048568691
2.832978e-01
##   [67,] -0.6937559937  9.209956e-02 -5.246125e-01 -0.8603856458
1.002795e-01
##   [68,] -0.4273353302  3.539346e-01 -7.949006e-01  0.0758178380
4.495196e-01
##   [69,]  0.4157920477 -6.110807e-01 -9.805771e-01 -0.3496581262 -
5.151341e-03
##   [70,] -0.2718180783  5.082252e-01 -6.862208e-01  0.4498328375
4.643219e-01
##   [71,]  0.0197409638 -1.018328e-01 -1.774073e-01 -0.3082384833
```

```
4.365828e-01
##   [72,]  1.1658708512 -2.098752e+00 -5.308822e-01 -1.5921811508 -
8.023525e-02
##   [73,] -0.2451916089  4.949723e-01 -6.774439e-01  0.4654717759
4.668685e-01
##   [74,] -0.1318350135 -2.003500e-01 -1.541223e+00  0.5534671394 -
8.874328e-01
##   [75,]  0.5906666274  3.904502e-01 -1.200714e+00 -0.0214758931
1.657797e+00
##   [76,] -0.0092795149  2.168297e-01 -3.908909e-01  0.1253980357
3.684201e-01
##   [77,] -0.4616501421 -8.061476e-01  5.470908e-01 -0.6836614666
8.874468e-01
##   [78,]  0.2449769089 -1.761772e+00 -4.450769e-01  0.1535233800 -
1.395150e-01
##   [79,] -0.2913308789  2.398130e-01 -6.420298e-01 -0.0652744036
4.637175e-01
##   [80,] -0.0748348373 -4.464755e-01  4.141629e-01  0.2121550824
4.022886e-01
##   [81,] -0.2639332096  2.079579e-01 -5.620465e-01 -0.1347396420
4.491360e-01
##   [82,] -0.3569337968  5.567963e-01 -7.077061e-01  0.3718131864
4.637137e-01
##   [83,] -2.0648615382 -1.117975e+00  1.174789e-01 -0.3426343106 -
1.049256e+00
##   [84,] -0.5897734587  4.437281e-01 -4.088846e-01 -0.5130063774
9.770085e-02
##   [85,]  0.4609926201  2.741500e+00 -7.638204e-01 -0.3209545973
1.363545e-02
##   [86,] -0.0376194221  2.005908e-01  6.453802e-01  1.2819096642 -
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##   [87,]  0.4293210581 -1.232571e+00  1.724438e-01 -0.5269768499
2.955397e-01
##   [88,]  0.0610142859 -6.290192e-02  7.004681e-01  0.0457791636
3.014604e-01
##   [89,]  1.0405288120  3.156947e-01 -7.975315e-01  2.2216702619
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##   [90,] -0.3958859945  5.072263e-02  8.257778e-01  0.0497752359
6.154195e-01
##   [91,] -0.3972503227 -1.542514e-01 -1.042297e-01  1.1420250370
9.447971e-02
##   [92,]  0.4576745922  2.117529e+00  1.077935e+00 -1.6528561945
5.685162e-01
##   [93,] -0.9910199209  2.376258e-01  5.598418e-01 -1.5808559904 -
2.221760e+00
##   [94,] -0.1336211382  4.915853e-01  7.214862e-01  0.4376879748
4.050503e-01
##   [95,]  0.5048750674  1.984945e+00  4.427670e-01  0.1759974166 -
1.783532e-01
##   [96,]  0.1975674663 -3.188168e-01  4.784255e-01 -0.9442594724
```

```
1.015594e+00
##   [97,]  0.4258008245  2.300203e+00  2.185008e-01  0.4260671769 -
2.277444e-01
##   [98,] -0.8153365706  6.684743e-01 -2.983107e-01 -0.5657983202
2.235427e-01
##   [99,] -0.6644994292  9.956482e-02 -4.735113e-01 -0.9112498001
1.754874e-01
##  [100,] -1.8284281294 -1.726822e-01 -1.722919e-01  0.4568999300 -
1.982111e+00
##  [101,]  0.0475602979  5.079591e-02 -4.877054e-01 -0.0321343199
2.481788e-01
##  [102,]  0.5232351973 -2.226604e+00 -1.591379e+00 -0.0427296108 -
1.225364e-01
##  [103,] -0.3203658165  3.189174e-01 -6.823533e-01  0.3759045501
5.682291e-01
##  [104,]  0.2282945396  1.080798e+00  6.882326e-01 -0.3773795107
4.841262e-01
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##  [106,] -0.6145589900  4.690301e-01  1.150229e+00  0.6916006071
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##  [107,] -0.5351634100  3.336610e-01 -3.617171e-01 -0.3669269089 -
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##  [112,]  0.5300116031 -1.555740e+00 -1.208545e+00  0.1867322505 -
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##  [117,]  0.0413643259  2.079280e-01  1.119494e+00  0.2421505157
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##  [119,] -0.3672144668 -3.522278e-01 -5.980379e-01 -1.5069123924 -
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##  [120,] -2.0769914783  8.881927e-01  1.835660e+00 -0.3777683535
2.715583e+00
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##  [197,] -0.0420534095  1.199668e+00  2.273089e-01 -2.0284275346
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##  [245,]  0.3000612631 -1.816767e+00  1.384726e-01  0.0280324820 -
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##  [251,] -0.2393149428  1.195485e-01 -4.262856e-01  0.3075812494
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##  [252,]  0.8183640786 -1.803486e-01 -1.805477e-01 -0.6234694284 -
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1.594903e+00
##  [268,] -1.2801464199  9.870802e-01 -1.282044e+00 -0.0552893632
3.944359e-01
##  [269,] -0.1292967238 -2.097902e-01 -1.479787e+00  0.5045732869 -
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##  [270,] -0.2273143637  4.874132e-01 -6.105083e-01  0.4851937960
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##  [275,] -0.2287047804 -3.301274e-01 -1.536560e-01  0.1616975028
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##  [277,] -0.1945591564  1.497118e-01  8.746215e-01  0.6329508124
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##  [278,] -0.3977361709  7.184422e-01  4.110708e-01  0.4843541357
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##  [431,] -0.1688866569 -1.419405e+00 -6.377190e-01 -0.5231568908 -
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##  [591,]  1.9892225591 -5.958179e-01 -2.240396e+00 -1.8479873791 -
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##  [592,] -0.1857993458  4.224214e-01 -3.385439e-01 -0.0995103682
4.804912e-01
##  [593,] -0.6150415444 -1.910161e-02 -8.123950e-01  0.6085369343 -
2.015432e-01
##  [594,] -0.7411792434  7.056913e-01 -8.528471e-01 -0.0170201185
7.288500e-01
##  [595,] -0.1337712421 -1.577569e+00  1.386166e-01 -1.9752115645
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##  [598,] -0.2525351755 -6.947708e-01 -6.613087e-01 -0.5646728335
2.151116e-01
##  [599,] -0.5514089523  1.638509e-01 -4.019513e-01  0.5650474635 -
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##  [600,] -2.4975688989  4.782885e-01 -5.698498e-01  0.2368298430 -
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##  [601,] -0.6398371807  1.181884e-01  1.034785e-01  0.1891777250
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##  [602,] -0.0669873485  1.016594e-01 -2.551742e-01  0.3658101056 -
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##  [603,] -2.1651088516 -5.131167e-02  3.504121e-01 -0.3585169598 -
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##  [605,]  0.1712431811  1.431238e-01 -1.706357e-01 -0.0062871801
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##  [606,] -0.0413003889  3.247270e-01 -5.244104e-01  0.8344481021
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##  [607,] -0.4148315983 -1.266748e+00 -1.214472e+00 -1.7541886138
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##  [608,] -0.0869214941  3.630732e-01  1.029349e+00  0.5382700221
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##  [609,] -0.2529050567  1.425451e-01 -2.596123e-01  0.7821093168 -
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##  [610,]  0.1176686832  2.882771e-03 -2.276283e-01  0.7818599863 -
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##  [611,] -1.0569835717 -1.479584e+00 -9.388068e-01 -0.5991939871
1.059159e+00
##  [612,]  1.1378695792 -3.551857e+00 -8.902497e-01 -0.8532491333 -
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##  [613,] -0.2891987186  5.712574e-01 -2.644821e-01  1.0997967861 -
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##  [615,] -0.2749953579  4.894148e-01 -7.138844e-01  0.8850877762
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##  [616,] -0.0639841912  4.877041e-01  5.688096e-01  1.2303971068
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##  [617,] -1.6871332625 -6.467720e-01 -3.845647e-01  0.2677977274 -
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##  [618,] -0.2064823317 -7.527987e-01 -5.821200e-01 -0.3583121045 -
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##  [620,] -0.3336452138 -1.333289e+00 -9.966884e-01 -0.6882098688
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##  [621,] -0.2010288167  3.416641e-01 -2.165049e-01  0.6305961024 -
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##  [623,] -0.3193364119  3.074194e-01 -5.638328e-01  0.5396398903 -
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##  [624,] -0.8235246857  5.497768e-01  5.268519e-01  0.6854294317
3.549946e-01
##  [625,]  0.1716247926  3.015278e-01  7.895226e-01  1.6320224907 -
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##  [627,] -1.0079881630  4.883284e-01 -6.044158e-01  0.1581920893 -
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##  [628,] -1.4482636142 -1.505175e-01  6.149351e-01 -0.6911832653 -
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##  [629,] -0.1827579221  1.184146e-01  4.548277e-01  0.0486117320
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##  [630,] -0.2650036008 -3.581842e-02 -1.476042e-01 -0.1478145351
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##  [631,] -0.1520485934  1.144590e-01 -3.776295e-01  0.4351786259 -
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2.651949e-01
##  [648,] -1.1750156307  3.696953e-01 -6.537227e-01  0.0667807082 -
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##  [652,]  0.0330829657  3.548589e-02 -3.430417e-01  0.8879254019 -
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##  [662,] -0.0412816581  4.619907e-01  5.884144e-01  1.0522546076
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##  [665,] -0.1039648411  4.947995e-01  6.013890e-01  1.0445772100
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2.025841e-01
##  [669,]  0.4572812162  3.902782e-01  8.593937e-01 -0.4397644911 -
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##  [670,]  0.0399088309  4.618261e-01  1.231411e+00 -0.0495990905
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##  [675,]  1.2341231712  4.802131e+00 -1.092016e+00 -0.3934623817 -
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##  [678,] -0.4857936095 -7.026770e-01 -1.267191e-01 -0.8820900429
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1.228530e+00
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##  [706,] -1.9901070488  8.642070e-01 -8.751521e-02 -1.1709304026 -
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##  [710,]  0.6202869498 -1.076914e-01  6.453934e-01 -0.7801570518
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##  [712,] -2.2028499558  1.401951e-01  2.210486e-01 -0.8798560319 -
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##  [713,] -1.2123527747  4.571822e-01  1.237470e+00 -0.1305971906
3.319661e-01
##  [714,] -0.1439752891  4.002549e-01 -3.358314e-01 -0.0087700075
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##  [715,] -0.2773140908 -1.830735e-01 -6.154307e-01 -0.5560370514
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##  [716,] -0.3184317022  4.239083e-01 -3.187085e-01  0.7404242971 -
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##  [726,] -1.9837182253  1.378317e-01  5.447138e-01  0.1411334648
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##  [737,]  0.1206037966  2.122740e-01 -2.217891e-01 -1.2061184771 -
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##  [740,]  0.4843915087  9.638350e-01 -7.660912e-03 -1.4056946061
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##  [741,] -0.5790603329  5.873278e-01 -6.179845e-01 -0.2275207849
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##  [744,] -0.8665643959  7.455901e-01 -1.088712e-01 -1.1644241838
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##  [745,] -0.0147590573  2.754223e-02 -2.244996e-01  0.2755830078 -
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##  [915,] -0.0041148557  1.946913e-01 -8.233305e-03  0.0954135431 -
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##  [916,] -0.1796009602  6.148578e-01  4.718934e-01  1.0666828993
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##  [917,] -0.3200841954  3.633874e-01  5.355082e-01 -0.0876444402
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##  [918,] -0.1034097147  1.788039e-02  6.003930e-01  1.3970468848 -
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##  [919,] -0.1150171590  6.408237e-01  9.669687e-01  0.3465893046
3.382891e-01
##  [920,] -0.9332436354  5.643638e-01  4.954454e-01 -0.1907622049
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##  [921,]  0.1211919048  5.001636e-02  1.000500e+00 -0.7579806214
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##  [922,] -0.9174398871  3.237622e-01  2.256772e+00  1.2609705843
1.494963e+00
##  [923,] -0.6877710849 -3.408223e-01 -2.759565e-01 -0.3120663791
7.243030e-01
##  [924,] -0.3266928890  4.886791e-01  5.137748e-01  0.7512230810
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##  [925,] -0.6663289145  1.159709e+00  4.510649e-01  0.6266174622
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##  [926,]  0.1606938951 -1.756684e+00 -3.442268e-01  0.6167177507 -
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##  [927,] -0.9093207282 -7.687209e-01 -1.691234e+00 -0.2698584532
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##  [928,] -0.1245353683  1.779822e-01 -2.670263e-01 -0.0082678624
2.816160e-02
##  [929,]  0.4944853736 -5.445535e-02  1.639902e-01 -1.1530118364 -
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##  [930,] -0.5320666117  1.836589e-01 -8.729786e-01  0.2629413906
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##  [931,]  0.0147376636 -9.425252e-02 -3.832119e-01  0.1304166538
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##  [932,] -1.2121595620  1.309999e-01  1.175394e+00  0.4752419591
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##  [933,]  1.8408259505 -2.135686e-01 -1.129092e+00  0.1575747677
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##  [934,] -0.6082766726 -2.228377e-01 -6.713865e-01  0.8898563901 -
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##  [936,] -0.5001328166  4.704955e-01 -4.322220e-01  1.1276868621 -
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##  [937,] -0.2529686776  2.373231e-01 -5.582425e-01  0.6221244963 -
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##  [938,] -0.4540911769 -7.145159e-01 -6.081829e-01 -1.0663947370
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##  [941,] -1.1436176707  1.708686e-01 -6.795213e-01  1.3118674251
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##  [942,] -0.0938523058 -1.643183e-01  9.403263e-01  1.0082767494
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##  [943,] -0.3081160345 -1.170853e+00 -6.912077e-01  1.0293415778
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##  [945,]  0.6308153799 -1.229892e+00 -6.282054e-01 -0.0613562493 -
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##  [948,] -0.6268824769 -2.268182e-01 -7.258353e-01  0.9589027435 -
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##  [949,] -0.0341136049  1.258057e-01 -5.946912e-01  0.7662279356 -
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##  [951,] -0.5367326167  4.209120e-01 -4.737130e-01 -0.1823506578
3.229818e-01
##  [952,] -1.4428904134  1.408927e-01 -6.277140e-02 -0.0412186542
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##  [953,] -1.2992550985  8.257441e-01 -1.201488e+00 -0.2245916932
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##  [954,] -0.1413413958 -6.619440e-01 -1.080141e-01 -1.1618870266
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##  [955,] -0.3926722092 -6.291771e-01 -1.064997e+00 -0.5192963009
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##  [956,] -0.0846809575  1.020133e-01  1.150221e+00  0.0251584008
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##  [962,]  0.4968257372 -1.909399e+00 -1.442773e+00  0.0898482143 -
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##  [963,]  0.1325722580  9.948308e-02  1.646373e-01 -0.5104629084
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##  [964,] -0.4667316986 -1.421733e-01 -6.152174e-01  0.3440257752 -
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##  [966,] -0.3938638525  7.052546e-01 -6.889819e-01  0.4111124857
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##  [991,] -0.2286634604  2.205693e-01 -4.523407e-01  0.5028085157 -
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##  [992,] -2.1885627748  9.587489e-02 -2.216821e-01  1.0084926822
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##  [998,] -0.3673799116  6.342114e-01 -3.081184e-01  1.0562067413 -
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##  [999,] -0.1408805352  1.258764e-01  1.048879e+00  0.0821789822
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## [1000,] -0.0268284866  4.585816e-01  8.105270e-01  0.1236551343
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## [1001,] -2.4685783514  4.392766e-01 -3.704817e-01  0.0217813987 -
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## [1002,] -0.0080422951 -1.328430e+00 -7.941822e-01 -0.6215847563 -
1.856650e-02
## [1003,] -0.3184154983 -1.359625e-01 -6.742501e-01 -0.5109412650
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## [1004,] -0.5202105999  5.536469e-01 -3.052116e-01 -0.6114364226
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## [1005,] -0.6159414380 -2.479603e-01 -6.190027e-01  0.1557138489 -
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## [1006,]  0.3472449923  1.687912e+00 -5.466516e-01 -0.3165491741 -
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## [1007,] -1.1115443331  7.261180e-01 -8.151683e-01  0.5489679282 -
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## [1008,]  2.3444557871  3.303655e+00 -1.306743e+00 -3.0152142707 -
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## [1009,] -1.5627745043  3.549247e-02 -6.685083e-03 -0.2876774015
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## [1010,] -0.2736953321 -4.352391e-02 -5.182146e-01  0.4308407558 -
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## [1011,] -1.2986634478  1.878751e-01  1.180113e+00  0.4428523156
1.084383e+00
## [1012,] -0.5599244772  6.290105e-01 -4.541293e-01 -0.2230640644
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## [1013,] -0.4847852025  2.027385e-01 -5.685722e-01  0.1319120796
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## [1014,] -1.0417873719  3.199256e-01 -5.553698e-01 -0.0072131039
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## [1015,]  0.7828812033 -2.286734e-01  2.245144e-01  0.8364173526 -
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## [1017,] -0.9412599842 -5.524615e-01 -1.474656e+00 -0.8652671308
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## [1018,] -0.7663719592 -8.560705e-01  4.117689e-01  0.4820247165
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## [1019,]  0.4645498563 -2.199718e-01 -1.153610e-02 -0.0896167566
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## [1020,] -0.3975027448  3.922468e-01 -3.948820e-01 -0.2062966613
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## [1025,]  0.5144467669 -1.919647e+00 -1.452703e+00  0.1072549670 -
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## [1026,] -0.2048359377 -4.265834e-02  5.565485e-01 -0.3058432857
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## [1027,] -0.1252067614  2.787637e-01  5.003777e-02  0.3121118789 -
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## [1028,] -0.3259831538  4.678047e-01  3.768693e-01  0.7250331563
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## [1029,] -0.0766379754  7.053445e-02 -5.484585e-02 -0.7262029631
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## [1030,]  0.1142995084 -1.166072e-01 -4.833187e-01  0.9532525788 -
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## [1031,] -0.3485832333  1.334482e-01  8.710848e-01 -0.0179227086
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## [1032,] -0.3228247684 -1.336469e+00 -1.084910e+00 -1.8072146114
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## [1033,] -0.0637544865  1.453654e-01 -4.945692e-01  0.5086177215 -
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## [1034,] -0.4329391069  4.027009e-01 -1.443275e-01 -0.7336561836
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## [1035,] -2.2265814396  2.928799e-01  4.259639e-01  0.3732044202 -
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## [1036,] -0.0012984182 -1.363893e+00 -8.783476e-01 -0.4940843692 -
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## [1037,] -0.2770380420  3.263068e-01 -6.784179e-01  0.2824011279
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## [1039,]  0.1032740840 -1.301336e-02  2.603506e-01 -0.2538838258 -
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## [1040,] -0.4588946812  3.115443e-01 -8.121464e-01  0.9135809611
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## [1041,]  0.3167084035 -5.704312e-01 -2.222801e-01  0.1784984147 -
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## [1042,]  0.9608938488 -1.120578e+00 -6.199710e-01 -1.8220955714 -
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## [1043,] -1.1212654218  3.297028e-01 -6.175551e-01 -0.8344183518
3.701664e-01
## [1044,]  0.1404452755 -3.623576e-01  2.979143e-01  1.4037746416 -
2.306564e-01
## [1045,]  0.5652954097 -1.920946e+00 -1.468469e+00  0.1615325803 -
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4.305682e-01
## [1047,] -0.0464942885 -1.185544e-01  1.383906e-01 -0.3006798189 -
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## [1048,]  0.3391507333 -4.637665e-01 -1.345351e+00  0.8080849739 -
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## [1049,]  0.1450687424 -9.514381e-01 -3.499599e-01  0.3266072977
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## [1050,]  0.0876912629 -6.767448e-02 -6.618998e-02  0.1771580792 -
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## [1051,]  0.1237307323 -5.396502e-01 -4.570907e-01 -0.0392134204 -
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## [1052,]  0.1618812661  1.231876e-03  2.353478e-02  0.4279297160 -
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## [1054,] -0.2711535845  3.709115e-01 -7.562595e-01  0.0287287057
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## [1055,] -0.2910043089  6.587008e-01 -6.260322e-01  0.4238195671
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## [1056,]  0.0968674145  3.407444e-02 -3.174404e-01  0.0672527653
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## [1057,] -0.5148903060 -3.006931e-01 -4.938540e-01 -0.2707330255
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## [1058,] -0.9294052352 -5.335747e-01 -1.430555e+00 -0.9540920312
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## [1059,] -1.1136672743  3.283885e-01 -5.624368e-01 -0.8947064633
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## [1060,] -0.9032916797  7.432633e-01 -1.359938e-01 -1.1371954339
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## [1061,] -0.5425514055  2.764533e-01 -6.038610e-01  0.1903063484
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## [1062,]  0.1620375514 -5.243960e-01  8.883110e-01  0.3889626205
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## [1063,] -0.3158930618  5.251492e-01  5.681372e-01  0.0588265228
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## [1064,]  1.0577364970  1.440476e+00  1.202604e+00 -1.1044122809 -
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## [1065,] -0.2047052309  4.987576e-01  9.009051e-01  0.9336162822
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## [1066,] -0.4455325872 -4.340074e-01  5.463884e-01  0.5356737506
5.197721e-01
## [1067,]  0.3882468250 -1.156198e+00 -2.645362e-02  0.6077973401 -
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## [1068,] -0.2224694567  2.731805e-01 -5.247297e-01  0.1058017275
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## [1069,] -0.1506445727  1.794590e-01 -3.911087e-01  0.4830087348 -
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## [1070,] -0.2781091680  9.408729e-02  2.407234e-01 -0.9050202461
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## [1076,]  1.2078258025  1.274435e-01 -7.763278e-01  0.8282318241
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## [1077,] -0.1164828635  1.962719e-01 -3.749486e-01  0.3132366831 -
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## [1078,]  0.5407750091 -3.948385e-02  6.036935e-01 -0.8096622056
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## [1079,] -0.6532324026  5.358917e-02 -9.113565e-01  0.2062301775
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## [1080,]  0.5944745883 -3.515024e-01  1.498408e-01  0.8142486861 -
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## [1081,] -0.5354576394  5.794938e-01 -6.455572e-01 -0.1515560560
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## [1082,] -0.0851089670 -5.910169e-01 -8.810866e-01  0.8058367703 -
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## [1083,] -0.7696802347 -5.301050e-01 -1.757115e-01  0.5340288017
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## [1084,] -0.4794784842  2.916364e-01 -7.545177e-01  0.8283174755
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## [1085,]  0.0019331488 -2.805792e-01  5.594604e-02 -0.4452034421
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## [1086,] -0.0276117152  6.223496e-02 -2.635638e-01  0.9640381159 -
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## [1087,]  1.0548393994  2.008374e+00 -7.886220e-01 -0.8214281822 -
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## [1088,] -1.4610890761  1.601530e-01 -2.148756e-02 -0.1630978556
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## [1089,] -0.2190090307  1.203146e-01 -5.493089e-02  0.3933493482 -
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## [1090,] -0.2762929730 -8.902140e-01 -6.309537e-01 -0.3885258031
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## [1091,]  0.3547292661 -3.778782e-01 -1.001957e-01 -1.1176818180
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## [1092,] -0.4966865587  3.309276e-01 -8.547603e-01  0.9797432960
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## [1093,] -0.3247682850 -2.117314e-01 -4.756197e-01  0.3252195207 -
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## [1094,] -1.8905531331  1.063599e-01  6.343504e-01  0.1416642771
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## [1095,] -0.3821736527 -1.130821e-01 -6.545189e-01  1.0758692684 -
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1.437420e-01
## [1097,] -0.2882203329 -7.083144e-02  2.596165e-01 -0.9971399778
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## [1098,] -0.0575717483  3.254154e-01 -5.800243e-01  0.9725927190 -
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## [1099,]  2.3583449761  3.293922e+00 -1.267185e+00 -2.9861034364 -
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## [1100,] -0.5229040230 -1.153651e-01 -8.174410e-01  0.7545457739 -
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## [1101,]  0.1897673914 -5.989146e-01 -3.389895e-01 -0.1323407954 -
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## [1102,]  0.0964473951 -1.677399e-01 -3.655116e-01  0.1671657418
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## [1103,]  0.0570323965  5.609945e-02 -1.610426e+00  0.7544790497
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## [1104,] -0.2192966818  5.771812e-02  2.733328e-01 -0.8648807652
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## [1105,] -0.1876960339  1.014376e-01 -2.794418e-02  0.3154934683 -
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## [1106,] -0.4860208409  3.361598e-01 -7.592962e-01  0.8180716107
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## [1108,] -0.0515988073  7.993749e-02 -4.263795e-01 -0.5166214928
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## [1109,] -0.0289491555  9.971873e-02 -3.852663e-01  0.5807057943 -
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## [1110,]  0.2027096412 -3.433986e-01  2.844720e-02  0.6304119808 -
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## [1111,] -0.1104570157  1.713299e-01 -9.087445e-01  0.1426830427 -
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## [1112,] -0.8249428057  8.647473e-01  3.189670e-01  0.7497126266
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## [1113,]  0.2429378633 -1.517685e-01  1.201136e+00  0.8047732117 -
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## [1114,]  0.5819275642 -9.304522e-02  6.252341e-01 -0.7445239646
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## [1115,] -0.0331196167  2.648478e-01 -4.653200e-01 -0.3198780238
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## [1116,]  0.6077798867  1.710889e+00 -4.885660e-01 -0.8375573503 -
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## [1118,]  0.2845172523  1.115454e-01  1.772258e-01 -0.7526345489
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## [1119,] -0.2238427681  1.752198e-01 -5.597290e-01 -0.3322116733
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## [1120,]  0.7751751343 -2.211463e-01  2.339633e-01  0.8050332730 -
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## [1122,] -0.4467898833  5.680009e-01 -3.944168e-01 -0.1625889346
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## [1123,] -0.5119249720  3.079022e-01 -8.025716e-01  0.9245278179
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## [1124,] -0.5115124889 -1.448199e+00 -1.223980e+00 -1.8129233934
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## [1125,] -0.1467157101  5.262525e-01 -2.247969e-01 -0.4613550170
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## [1127,] -0.3436515412  1.338899e-01 -7.023960e-01  0.1407215607
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## [1128,] -0.4950321124 -7.608959e-01 -8.828315e-01 -1.4981852610
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## [1131,]  0.8484352457 -1.087908e-02 -3.399245e-01 -0.3761188166 -
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## [1132,] -0.1878447964 -2.221971e-01  3.335460e-01  0.9402641009
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## [1135,] -0.4970324910  4.805423e-01 -1.953004e-01  0.2876526515 -
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## [1136,] -1.5532186618  1.621168e+00 -5.813906e-02 -1.5780858460 -
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## [1137,] -1.1845484088  7.802170e-01 -7.880779e-01  0.4042472715
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## [1138,]  0.3202634852 -4.702343e-01 -1.317938e+00  0.7902329827 -
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## [1139,] -0.6091154319  4.027117e-01 -6.452264e-01 -0.2388963311
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## [1140,]  0.3388298623  2.050421e-01  1.012985e+00  0.9921903963 -
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## [1141,] -0.4336044442 -4.000586e-01  7.805691e-02  0.2596293733
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## [1142,] -0.2057234922  2.181804e-01  9.956637e-01 -0.1756938432
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## [1143,] -1.8765802926 -1.812273e+00  6.590681e-01 -1.2785691153 -
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## [1145,] -1.2302536240  4.257352e-01 -3.703879e-01  0.9949969766
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1.750564e+00
## [1147,] -0.2467003127 -3.090839e-01  5.359489e-01  0.4647447483
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## [1148,]  0.0901325398  4.279056e-01  5.508669e-01  1.8899646144 -
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## [1149,] -0.3350349843  8.387251e-01  5.931326e-01  0.5926189955
3.725189e-01
## [1150,]  0.4290853948 -3.329187e-01  9.054333e-01 -0.2819741793
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## [1151,] -0.3959532403 -1.541414e-01  1.977233e-02  0.4529876542
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## [1152,]  0.2526376396  4.950062e-01  1.557703e+00 -0.3519852444
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## [1153,] -0.7250674575  2.123186e-01  2.511991e+00  1.5498523199
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## [1155,] -2.8757639293  2.994731e-01  2.548598e+00  0.3259953702
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## [1156,] -0.3267207002  2.029105e-01  3.003465e-01  0.8345038676
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## [1157,]  1.8051498330  1.434240e-01 -7.360356e-02  0.5782063487
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## [1160,]  0.1944274549  3.230838e-01  8.259915e-01  1.6229596205 -
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## [1161,]  0.0033400294  1.734437e-01  1.293465e+00 -1.3538418552
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## [1162,]  0.0421266478 -4.210068e-01  9.420251e-02  0.5313639117
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## [1163,] -0.2514312545  2.640061e-01  3.346440e-03  1.1333079379
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## [1164,] -2.7706570004  8.808805e-01  3.870414e-01  0.1025266957 -
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## [1165,] -0.0221339718  5.954032e-01  1.148746e+00  0.5665734265
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## [1166,]  0.4141794037  2.634325e-01  1.796918e+00 -0.5852098110
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## [1167,] -0.0443902410 -6.558818e-03  1.224847e+00  0.0304171919
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## [1168,] -0.2010412773  3.806219e-01  4.409567e-01  2.3568510693 -
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## [1169,]  0.4059804479 -6.960660e-01  7.324419e-01 -0.6052762863
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## [1172,] -0.1463356142  1.760705e+00  6.437660e-01 -0.3351768468
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## [1173,] -0.6259920666  5.163929e-01  5.169671e-01  0.2637697726
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## [1174,] -0.0971247041 -2.428899e-01  9.641922e-01 -1.5136842861
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## [1175,] -1.2796029435  1.312806e+00 -1.268482e-01  0.2618189191
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## [1176,]  1.4123457424  7.909377e-01 -5.041249e-03 -1.6472605498 -
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## [1179,] -0.1400051491  8.428710e-03  6.044459e-01  0.3031715792
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## [1180,] -0.0088166135 -2.465408e-01  3.898634e-01  0.2323783060
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## [1181,] -0.3866486187  8.234980e-01  4.702992e-01  0.9434924543
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## [1182,] -0.2927053204  4.631257e-01  1.016284e+00 -0.2166297711
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## [1183,] -0.6378974614  1.919306e-01  1.706724e-01  0.8316944926
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## [1184,] -0.2426058897  4.200019e-01  9.189768e-01  0.1764562532
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## [1185,]  1.1735976776 -1.214737e+00 -1.081684e+00  0.0282136017
2.057657e+00
## [1186,]  0.9638250416  1.095823e+00 -1.501428e-01  0.8103132560 -
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## [1187,]  1.9540533331  2.540285e+00 -1.040297e+00  0.5295518853
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## [1188,] -0.9985640683  1.242488e+00  4.151762e-01  0.2519513467
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## [1189,]  0.2786918883  3.611373e-01  1.666330e+00 -0.1880417009
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## [1190,] -0.4148731152 -3.240517e-02  4.858382e-01 -0.1073765930
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## [1191,] -0.3118628069 -3.969581e+00 -2.506074e+00 -1.8942168903
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## [1192,]  1.2035646523  1.963649e+00 -2.324965e-01  1.5146110412 -
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## [1193,]  3.5393655558  4.859181e+00 -1.880420e+00 -2.1162186278 -
1.901379e+00
## [1194,]  0.6799428733  2.022311e+00  2.780619e-01 -0.2833159505
2.033140e-01
## [1195,] -0.4671323224  8.061092e-01  8.643672e-01  0.0859317816
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2.139448e-01
## [1197,]  0.2769125723  4.507675e-01 -1.048075e+00 -0.6098349877 -
3.056697e+00
## [1198,] -2.5739228558  6.169316e-01  8.924399e-01 -0.5675908914 -
7.273785e-01
## [1199,] -2.4792069601  9.641266e-01 -9.017797e-01  1.0433383631 -
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## [1200,] -0.0353096594 -2.350558e-01 -9.102947e-01 -0.0529305254
1.622356e-01
## [1201,]  0.1721028593  2.785194e-01  1.033973e+00  0.3698015027
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## [1202,] -0.0200301599  2.412913e+00 -1.772957e-01 -0.4568990059
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## [1203,]  0.0646100223  3.025745e-01  1.784479e+00 -1.3259600955
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## [1204,] -0.4089197469  4.119505e-02  8.552511e-02 -1.9997440132
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## [1205,] -0.4442368757 -7.837006e-01 -6.503819e-01 -0.7524710655
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## [1206,] -0.1076808885 -2.805491e-01  5.288848e-02 -0.4522870674 -
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## [1207,] -0.9027931627 -1.889449e-01  2.595571e-01  0.2850515232
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## [1208,] -0.7794128731  1.918866e-02 -5.086040e-01  0.3177632842 -
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## [1209,] -0.2157010351 -2.192912e-01 -6.480307e-01 -0.4157324964
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## [1210,] -0.0195035664 -2.901510e-01 -1.332348e+00  0.4887601286 -
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## [1211,] -0.2539038810  3.107642e-01 -6.411996e-01  0.2737796700
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## [1212,] -0.1203407277  3.057659e-01 -5.101477e-01 -0.3052495287
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## [1213,] -0.4583520465  9.823534e-02 -6.147813e-01 -0.4586259351
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## [1214,] -0.9588958424  3.615750e-01 -4.279866e-01 -0.7564441613
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## [1215,] -0.2187920030  2.176999e-01 -3.715970e-01 -0.4393733560
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## [1216,] -0.0195590967  8.347117e-02 -6.828673e-01 -0.4348532369 -
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## [1217,] -0.7185429823  1.025072e+00 -5.752665e-01  0.7924636925
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## [1218,]  0.1772911922  2.404970e-02 -4.129003e-01  1.2955442120 -
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## [1219,] -0.2353960227 -8.012416e-02 -4.347961e-01  0.3660899681 -
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## [1220,] -0.5908142344  3.213025e-04 -8.783449e-01  0.2315637814
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4.107028e-01
## [1222,] -0.6268255235 -9.004657e-01 -1.874640e+00 -0.1742567781 -
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## [1224,] -0.6863441061 -1.426034e-01  1.397878e+00  1.0780281029
1.083292e+00
## [1225,] -0.2435218755  3.433752e-01 -8.036825e-01  0.1367479355
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## [1226,] -0.1611211345 -4.128372e-01 -1.436781e-02 -1.2011685426
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## [1227,]  0.1399309810 -1.004281e-01 -5.126431e-02  0.2209075576 -
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## [1228,]  0.0006828028  1.749753e-01  6.309698e-02 -0.5134166954
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## [1230,] -0.5726642972  3.786247e-01 -5.297522e-01 -0.3438941068
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## [1231,] -0.1351307850 -4.468995e-01 -1.094106e-02 -1.2255521063
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## [1232,] -0.2512018952 -3.716735e-02 -1.316436e-01 -0.7766881731
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## [1233,]  0.1282991708 -1.691024e-01 -4.017341e-01  0.2411911977
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## [1234,] -1.1200697617  2.390571e-01 -5.761455e-01 -0.7474617976
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## [1235,] -0.1411728812  1.833177e-01 -5.681920e-01  1.8694823257 -
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## [1236,]  0.0892043224 -3.379128e-01 -1.335159e+00  0.5757915829 -
1.018771e+00
## [1237,]  0.4320935596  7.962501e-01  1.198341e+00 -0.5306272551
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## [1238,]  1.8386918958 -2.189935e-01 -1.073666e+00  0.1122734314
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## [1239,] -0.7030570701  6.909988e-01 -2.649979e-01 -0.7526243839
3.360162e-01
## [1240,] -1.3903067871  1.395238e-01  7.553410e-02 -0.2388322539
1.678739e+00
## [1241,]  0.6381605660 -3.977096e+00 -2.972920e+00 -0.7158905354 -
8.169926e-01
## [1242,] -0.2041812214 -9.484945e-02 -3.341978e-01  0.6796825838 -
5.425688e-01
## [1243,]  0.0582357689 -8.357817e-02  2.656857e-02 -0.2643882194
2.384045e-01
## [1244,] -1.2878222512  1.632692e-01  1.176012e+00  0.4512921170
1.058309e+00
## [1245,] -0.5168447560  1.115806e-01 -3.008579e-01  0.3368654238 -
2.410088e-01
## [1246,] -0.1474410671 -1.346535e-01 -3.417586e-01  0.7566203252 -
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5.221919e-01
## [1247,] -0.0452478241 -1.295419e+00 -4.246160e-01  0.2655675757
1.541803e-01
## [1248,] -0.1119772467  1.242984e-01 -4.946049e-01  1.0925737091 -
6.014003e-01
## [1249,] -1.2915923429  1.570998e-01  1.210109e+00  0.3779531543
1.088607e+00
## [1250,]  0.2373952252 -3.928132e-01 -9.571168e-01 -0.4990052977 -
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## [1251,] -0.1414474819  5.915829e-01  5.130298e-01  1.2317634911
4.789622e-02
## [1252,]  1.4548397430  1.423340e+00  4.225644e-01 -0.9869364189
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## [1253,]  0.6343331333  5.997258e-01 -5.602638e-01  0.6855255549 -
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## [1254,]  0.8128417889  4.697619e-01 -1.630418e+00  0.3881136995
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## [1255,]  0.1366700226  6.411158e-02  9.832835e-02 -0.3742432938
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## [1256,] -0.8632941226  4.314572e-01 -9.466134e-01 -0.5897977578
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## [1257,]  1.6146642390 -9.725089e-02 -1.222872e+00  0.0191934857
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## [1258,] -0.7013076733  4.298003e-01 -6.676241e-01 -0.2616238680
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## [1259,] -0.2546993267  2.433243e-01 -2.657425e-01 -0.6082307761
2.675197e-01
## [1260,] -0.2400993458 -2.535465e-01  6.419069e-03  0.0831933725 -
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## [1261,]  0.5059606974  6.943827e-02  3.562146e-01 -0.5309381757
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## [1262,] -0.6415470657  4.301610e-01 -6.686671e-01 -0.1804910731
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## [1263,] -0.9668660019 -1.247439e-01 -5.912609e-01 -0.3309496004
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## [1264,] -0.2156712039 -1.493634e-01 -7.010700e-01  0.1094872869 -
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## [1265,] -0.2797546448  3.901133e-01 -3.356249e-01  0.8211470277 -
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## [1266,] -0.0913162209  7.380313e-02 -3.961632e-01  0.9311243428 -
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## [1267,] -1.1388785016  3.207856e-01 -6.261022e-01 -0.8065838350
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## [1268,] -0.4727509401  1.076796e-02  7.867714e-01  0.9834554258
8.651123e-02
## [1269,] -0.8466259478  4.511877e-01 -3.099243e-01 -1.0460946428 -
1.829791e-01
## [1270,]  0.3483221141 -5.120390e-01 -8.410274e-02 -0.8052714716
2.798018e-01
## [1271,] -0.4222802902  5.382807e-01 -3.458965e-01 -0.2458945086
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1.984655e-01
## [1272,] -0.3095416485  4.001283e-01 -8.630947e-01  0.2004981732
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## [1273,] -1.0870404473  3.266897e-01 -5.062324e-01 -0.9103257343
3.468278e-01
## [1274,]  0.0623822643 -3.227264e-01  1.507127e-01 -0.6383907484
4.058730e-01
## [1275,] -0.1202574315 -2.470511e-01 -4.789725e-01  0.0952050720
3.719081e-01
## [1276,] -2.6208207891 -1.364927e-01  1.440844e+00  0.0425205851
2.143197e-01
## [1277,] -0.0302736017 -1.498314e-01  1.192163e-01 -0.1824953601 -
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## [1278,] -0.0304882930 -9.752312e-02  1.518965e-01 -0.5189196504
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## [1279,] -0.6976359783 -7.313122e-02 -2.358868e-01 -0.1953644303 -
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## [1280,]  0.0094712330  7.251041e-02 -1.931151e-01  0.3464366127 -
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## [1281,] -0.3864104894 -7.688347e-01 -9.823914e-01  0.8081099038 -
4.767444e-01
## [1282,] -0.6983902799  4.536900e-01 -6.607296e-01 -0.2761686404
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## [1283,] -0.2623261578  1.711505e-01 -2.841459e-01  0.7302971755 -
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## [1284,] -0.4335312691 -1.664428e-01 -5.102470e-01  0.3097279183 -
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## [1285,] -0.0823479999  1.170565e-02 -1.949605e+00 -0.3391088771 -
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## [1286,]  0.1273436990  8.852459e-02  2.499142e-01 -0.6236777065
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## [1287,] -0.1742921399  5.647043e-02  2.735934e-01 -0.8731378753
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## [1288,]  0.3220205846 -7.197427e-01  6.020809e-01  1.1971612094 -
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## [1289,] -1.9366492008  8.140709e-01  8.475602e-02 -1.3036624744 -
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## [1290,]  0.0187975584 -1.240833e-02 -1.341600e-01  0.2287508970 -
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## [1291,] -0.2103069502 -1.790715e-01 -2.989862e-02 -0.4719811264
2.227993e-01
## [1292,] -0.5131712628  4.740159e-01 -7.631399e-02  0.0629028142 -
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## [1293,] -0.3760443487  3.163730e-02 -7.033463e-01  0.7663112645 -
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## [1294,]  0.0352663810  2.569099e-01 -1.475020e-03  0.1805305610 -
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## [1295,] -0.0815051682  3.732203e-01 -5.635672e-01  0.8852481671
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1.334136e+00
## [1297,] -0.8103296625 -1.845659e-01 -3.252420e-01  0.2782387241 -
3.482380e-01
## [1298,]  0.7297582623 -1.070017e-01 -1.316085e+00 -1.0389445137 -
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## [1299,] -0.2168599620  3.024199e-01 -5.902186e-01  0.1934098815
1.908380e-01
## [1300,]  0.2388148264 -4.618132e-01 -1.742227e-01 -0.8091846949
2.653469e-01
## [1301,] -0.1171638215  5.845342e-01  7.256372e-01  0.5870525979
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## [1302,] -0.2935310957  1.300123e+00 -5.492446e-01 -0.4745293066 -
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## [1303,] -1.0548729006 -7.375971e-02 -6.154329e-01 -0.3578130638
1.890178e-01
## [1304,] -1.2418657005 -3.892771e-01 -8.847154e-01 -0.3783039820
4.157800e-01
## [1305,]  0.2727725444 -1.029561e-01  2.661587e-01 -0.1327230352 -
2.014071e-01
## [1306,]  0.1199516833 -1.731690e-01  1.062511e-01 -1.4715429354
9.019917e-01
## [1307,] -2.2790075873 -1.210895e-02  2.616042e-01 -1.0208521250 -
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## [1308,]  0.1108214287 -4.185428e-02 -1.868450e-01  1.0058941425 -
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## [1309,] -0.5793795841  5.879638e-01 -6.136025e-01 -0.2091982810
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## [1310,] -0.3460382765  1.016533e-01 -6.983006e-01  1.7794848481 -
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## [1311,] -0.3811907931 -1.520848e-02 -4.328052e-01  0.2374997387 -
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## [1312,] -1.0883766698  3.235556e-01 -5.582847e-01 -0.8450093572
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## [1313,]  0.5621946623  4.616820e-02  3.696348e-01 -0.5006786351
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## [1314,] -0.8980161472 -4.475677e-01  5.761853e-01  0.3188814602
7.197601e-01
## [1315,] -1.0084092101  2.012517e-01 -5.588548e-01 -0.7389777327
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## [1316,] -0.3768197141 -1.564592e-01 -3.739890e-01 -0.3382654149
2.083605e-01
## [1317,]  0.4657143244 -1.401258e-01  2.621700e-01  0.0924612458 -
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## [1318,] -1.3022167102 -9.293414e-01 -7.204396e-01 -0.4033091928
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## [1319,]  0.2869422324 -8.889385e-01  5.349039e-02 -1.9356350120
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## [1320,]  0.1647677839 -1.216587e-01  1.033348e+00  1.2739587435 -
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## [1321,] -1.6882011374  4.928619e-01  5.274032e-01  0.3313690171 -
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2.676218e+00
## [1322,] -0.1830354908  1.293301e-01  7.026396e-01  0.9565669560
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## [1323,] -0.0015967371 -4.807565e-01  2.489370e-01  1.0137519642
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## [1324,] -0.3565910306  6.873114e-01 -6.310531e-01  0.3780156674
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## [1325,] -0.3139109699  3.986482e-01 -7.300118e-01 -0.0079481112
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## [1326,]  1.4514437051  3.319676e+00 -1.156760e+00  0.1272473833
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## [1327,] -0.3079879387  3.499383e-01 -6.663529e-01  0.2646426688
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## [1328,] -0.2425799123 -2.833987e-02 -5.517908e-01  0.9864970977 -
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## [1329,]  0.0191305899  1.364290e-01 -3.071441e-01  0.9203073903 -
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## [1330,] -1.2903227371 -9.434804e-01 -6.137537e-01 -0.4811265496
1.340868e-01
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## [1333,]  1.8102777174 -2.153449e-01 -1.071339e+00  0.0987428204
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## [1334,] -0.2384134002  5.846746e-01 -3.390048e-01 -0.4178405799
6.484598e-01
## [1335,] -0.1709199043  1.993431e-01 -4.206845e-01  0.5538249697 -
3.404614e-01
## [1336,]  1.5588591865 -6.920675e-02 -1.210250e+00 -0.0429780632
3.525549e-01
## [1337,] -0.1228389856 -1.132952e-01 -4.568229e-01  0.2707256255
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## [1338,] -0.9950799667 -5.521269e-01 -4.682074e-01 -0.2590006036
2.965057e-01
## [1339,]  0.2446856748  1.413901e-01 -1.590788e-01 -1.1523606034 -
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## [1340,] -0.0680064617  3.632875e-01 -6.329869e-01  0.9859201027
1.217874e-02
## [1341,] -0.2601881694  3.042353e-01 -6.340642e-01  0.2837323754
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## [1342,]  0.0131690713 -2.234865e+00 -1.628260e+00 -1.2120333175
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## [1343,] -0.3655137087 -1.644380e-01 -5.788273e-01  1.0328383591 -
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## [1344,] -0.1050820072  5.020727e-01 -2.110065e-01 -0.4358356423
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## [1345,]  0.1798155265 -5.644340e-02  2.941096e-01 -0.2443464531 -
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6.330888e-01
## [1347,]  0.3912802181  8.677461e-01 -4.365410e-01  0.2740942873 -
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## [1348,] -0.5158683025  3.283587e-01 -7.752777e-01  0.8500458123
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## [1349,] -0.3395007465  2.399594e-01 -2.984216e-01  0.6355610144 -
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## [1350,] -0.1777527898 -4.827140e-01  1.055352e+00  0.9813968434 -
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## [1351,] -0.6696581257 -1.709408e-01  3.510828e-01  0.5000145706
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## [1352,] -0.2523648791  6.068169e-02 -4.993160e-01  0.2796220189
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## [1353,] -0.6097924954  2.294220e-01 -8.561809e-01  0.1878271983
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## [1354,]  0.3190444961 -2.587743e-01  3.056731e-01 -0.5968529466
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## [1355,] -0.0638756798 -7.473382e-02 -3.376048e-01 -0.1254246124
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## [1356,]  0.1596874019  9.599027e-01 -2.132076e-01 -1.0749100563 -
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## [1357,]  0.8085969504  2.467772e+00 -6.650553e-01 -0.5264345093 -
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## [1358,]  0.3179321555 -1.099708e+00 -1.184870e+00 -0.8971304221 -
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## [1359,]  0.0275754532  2.125841e-02 -3.830300e-01  1.0627484749 -
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## [1360,] -0.7690515615  7.104265e-01 -8.267857e-01  0.4299890190
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## [1361,] -0.4324277218  2.990847e-01 -7.722295e-01  0.8984850290
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## [1362,] -0.4363282007 -1.956241e-01 -5.750690e-01  0.4057317393 -
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## [1363,]  0.0242155863  1.505038e-01  5.941820e-01 -1.2862745130
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## [1364,] -0.5581547096 -2.198623e-01  1.509594e+00  1.0784445141
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## [1365,]  0.1430283980 -1.573813e-01  1.760847e-01 -0.4276448577
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## [1366,] -0.0348374740 -2.787010e-01 -4.140108e-01  0.1254539603
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## [1367,]  0.0566084989 -4.806145e-01 -1.020800e+00 -0.5650771109 -
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## [1368,] -0.2159883026  4.970732e-02 -4.783892e-01  0.3164804187
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## [1369,] -0.0625664024  3.195581e-02 -3.439708e-01  0.2165025289 -
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## [1370,] -0.5812612832  4.304478e-01 -3.921592e-01 -0.3464399495
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## [1371,] -0.4930211063  5.565283e-01 -3.347827e-01 -0.5573769361
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## [1372,]  0.4900712025  4.539605e-01  2.623495e-02 -0.9259253546
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## [1373,] -0.3553883509  2.173836e-01 -6.547805e-01  0.8580357638
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## [1374,] -0.6052693378  4.040716e-01 -3.971579e-01 -0.5804143127
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## [1375,]  0.3282036424 -4.956218e-01 -8.933187e-02 -0.8422432393
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## [1376,]  0.2564274105 -3.175501e-01 -4.146961e-01  0.5665569630
1.367342e-01
## [1377,] -0.1514277536 -1.529960e-01 -1.028315e+00 -0.1762734684
5.391310e-01
## [1378,] -0.1051233454  1.481814e-01 -1.592951e-01 -0.0652798807 -
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## [1379,]  0.2271702842  3.563125e-01  1.547031e+00 -0.5188375746
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## [1380,] -0.9200307051 -4.830782e-01  3.874700e-01  0.4034186141
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## [1381,] -0.3739635883  7.213360e-02  9.670070e-01 -1.3784487565
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## [1382,]  0.3880584928 -1.159857e-01 -2.930440e-01  1.3170383396 -
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## [1383,]  0.1899262083  4.335458e-02  8.996281e-01  0.7830739234
1.377096e-01
## [1384,] -0.4034479737 -1.309780e-01 -5.962269e-01  1.0630856554 -
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## [1385,] -0.6132060699 -2.690901e-01 -1.389997e+00 -0.0057598378 -
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## [1386,] -0.3276613858  1.196182e-01 -6.795415e-01  1.7675937950 -
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## [1387,]  0.1006557658  1.116379e+00 -4.913406e-01 -0.3825352758
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## [1388,] -0.1344767899 -2.335882e-01 -5.797022e-01 -0.4311544284
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## [1389,] -1.2418719136  1.239299e-01  1.206229e+00  0.4569383858
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## [1390,] -0.7198146619 -4.142311e-02 -3.239484e-01 -0.0770216486 -
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## [1391,] -1.2388071691 -5.684460e-01 -7.155294e-01 -0.2376216309
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## [1392,] -0.8552545675  1.104618e+00  3.593420e-01  0.0745916325
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## [1393,] -0.0988656880  1.672667e-01 -5.756787e-01  1.3118334480 -
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## [1394,] -0.5618730899  6.461702e-01 -2.230444e-01 -0.7159396678
4.281061e-01
## [1395,]  1.5629830969 -7.382247e-02 -1.179151e+00 -0.0616672689
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1.091014e+00
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## [1401,] -0.4439914479  5.105507e-01 -3.411403e-01 -0.4970557137
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## [1402,]  1.6732180909 -1.114175e-01 -1.187987e+00  0.0161453134
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## [1403,] -0.4593151115 -1.219245e-01 -4.708736e-01  0.5664623437 -
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## [1404,] -0.2202315708 -1.778811e-01 -9.454102e-02 -0.3694511571
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## [1405,] -0.0376746967 -9.004365e-01  4.211007e-01 -1.3874447931
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## [1406,] -1.2013561494  4.086778e-01 -3.450666e-01  0.9980106265
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## [1407,]  0.0593579903  1.006860e+00  3.826832e-01  0.4621463916
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## [1408,] -0.3210864774 -4.738273e-01  6.737673e-01  0.8214497148
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## [1409,]  0.0549140813  5.627970e-02 -4.020028e-01  0.6169614707 -
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## [1410,] -0.5963911674  3.429934e-01 -3.888250e-01 -0.6063975530
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## [1411,] -0.9072086178  3.407715e-01 -4.256420e-01 -0.2813310255
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## [1412,] -0.0205706409  3.205378e-01 -5.207172e-01  0.8694240677 -
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## [1413,] -0.4954417830  4.269519e-01 -1.725420e-01 -0.7090899803
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## [1414,]  0.0324622311  1.957811e-01  6.838933e-01 -1.5677827109
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## [1415,] -0.1188499839 -2.443597e-01 -4.451460e-01  0.0924150518
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## [1417,] -2.5270178582 -1.966497e-01  1.360893e+00  0.1963080921
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## [1418,] -0.4076277375  6.361895e-02 -4.000107e-01  0.3268267159 -
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## [1419,] -0.4922008091 -1.319754e+00 -7.939702e-01  0.3177467019
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## [1420,] -0.2102840300  1.493877e-01 -1.704980e-01 -0.6820190426
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## [1424,] -0.7271850448  2.159381e-02 -4.362791e-01  0.3112910843 -
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## [1425,] -0.1055275410 -3.750216e-01 -2.003709e-01  0.4049556279
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## [1426,] -1.1803645334  1.019727e-01  1.161823e+00  0.6117347385
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## [1427,]  0.1184928995 -3.441778e-01 -1.321214e+00  0.5719497432 -
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## [1428,]  0.4045755719 -5.516650e-01  8.702288e-03 -0.8611880905
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## [1438,] -0.0965014042  1.356524e-01 -5.154996e-01  0.7805193589 -
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## [1439,] -0.1857710827 -7.348065e-01 -8.114912e-01  0.3013090870 -
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## [1440,]  0.6143094557 -1.025849e-01  6.026622e-01 -0.7228207860
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## [1441,] -0.8288406827  2.875509e-01 -3.067081e-01 -0.8693662926
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## [1442,] -0.3098080635  2.972084e-01 -5.197565e-01  0.5336507805 -
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## [1450,] -0.6787327802  4.104545e-03 -3.734726e-01  0.2681244088 -
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## [1468,]  0.9828817080  5.132922e-03  1.395820e+00 -0.4535285707 -
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## [1477,] -1.0713940213 -8.792540e-02 -6.638240e-01 -0.2389144355
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## [1478,]  0.0269519185 -1.459014e-01 -3.890810e-01  0.0640352595
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## [1479,]  0.2099198034  6.791806e-03 -3.653024e-01  0.7604463297 -
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## [1480,]  0.1862284263 -1.728668e-01  1.207734e-01 -0.0470942374
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## [1481,] -0.1494392594 -7.697788e-01 -6.425456e-01 -0.6738040188 -
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## [1482,] -0.0426985551  9.490544e-02 -3.024089e-01  0.3505533270 -
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## [1483,] -0.9072746172  3.314312e-01 -4.687659e-01 -0.6624357462
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## [1484,]  0.8836532090 -1.665251e-01 -7.469511e-01 -0.3718493550 -
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## [1487,] -0.1558207392  7.392691e-01 -8.780761e-01 -0.6401016700 -
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## [1489,] -2.5695595595 -1.533181e-01  1.509103e+00 -0.0493579301
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## [1491,] -0.5628873842 -2.008614e-01 -5.720525e-01 -1.0027733169
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2.799279e-01
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## [1498,] -0.3109451595 -2.256688e-01 -5.122638e-01  0.7664392706 -
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## [1499,] -1.0584198629  2.947237e-01 -5.403453e-01 -0.8124706908
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## [1501,] -0.1999016544 -6.060425e-01 -8.405452e-03 -1.2584050525
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## [1502,] -0.0605621971 -4.804653e-01 -1.273236e-02 -1.1233857392
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## [1503,] -0.2304240702 -1.129364e-02 -4.763220e-01  0.4470642225 -
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## [1504,]  0.0052794811  2.806334e-01 -4.320975e-01  0.8604466401 -
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## [1505,]  0.7809295307  4.780183e-01 -1.606209e+00  0.3863649802
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## [1506,] -0.5729122811  2.677386e-01 -2.929042e-01 -0.6527435357
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## [1507,] -0.3058237424  6.804969e-01 -6.770806e-01  0.4716525676
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## [1508,] -1.0538621129  2.105521e-02 -1.476701e+00  0.6881544931 -
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## [1509,] -0.0550721182  1.285077e-01 -1.612917e-01 -0.0645550492 -
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## [1510,] -0.1475467701  1.998336e-01 -1.905446e-01 -0.1002971604 -
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## [1511,]  0.3411511859  9.707069e-02 -8.541966e-02  0.1451520022
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## [1512,] -0.1684399057  2.012084e-01 -1.417144e-01 -0.7065885437
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## [1513,] -0.0717344330  1.710219e-01 -4.848030e-01  1.7612758978 -
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## [1514,]  0.4205119639 -4.222124e-01 -4.168759e-02 -1.0935889755
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## [1515,]  0.1934712874 -5.670321e-01 -4.593184e-01  0.0934482465 -
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## [1516,]  0.1207026144  1.805501e-02 -2.901835e-01  0.0153754784
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## [1517,] -1.1204727516 -6.831636e-01 -5.219150e-01 -0.3356263659
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## [1518,] -0.5839231021  3.127608e-01 -3.697183e-01 -0.6022097109
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## [1519,] -1.0391600929  2.023104e-01 -5.589959e-01 -0.7012713155
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## [1524,]  0.4292259629  1.349686e-01  3.425432e-01 -0.6149621587
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## [1525,] -0.1210640095  3.581186e-01  8.661838e-01  1.0395292564
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## [1526,]  0.0054940914  1.029733e-01 -9.033619e-02 -0.0592757086 -
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## [1527,]  0.5580106204  1.762376e+00 -8.982596e-01 -0.7448673140 -
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## [1529,] -0.4448751111  4.641046e-01 -3.655917e-01 -0.4432569242
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## [1530,] -0.1837028608  2.365152e-01 -6.305442e-01  1.8655897976 -
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## [1531,] -0.6904655604 -3.823563e-01 -9.445497e-01 -0.0504840620 -
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## [1533,]  0.0146442619 -1.316521e-01  1.056201e-01 -1.5098555791
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## [1534,]  0.1897260054 -2.143315e-01 -3.126015e-01  0.2339193874
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## [1535,] -0.2781754419 -3.487363e-02  1.595188e-01 -2.0176207696
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## [1541,] -0.5898533733  4.134452e-01 -2.909504e-01 -0.3362469181
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## [1543,] -0.3394442567  1.381470e-03  2.331504e-01 -2.1292400074
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1.835064e+00
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## [1552,] -0.1462746016  1.250995e-01 -5.129954e-01 -0.3036862193
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## [1563,] -0.8128844713 -1.530478e-01 -3.723981e-01  0.0775405915 -
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## [1564,] -0.3195257187  4.818404e-01  5.327989e-01 -1.8384629505
5.929627e-01
## [1565,] -0.5785840430  5.307778e-01 -7.635596e-01  0.7027156388 -
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## [1566,] -0.0132274628  1.270928e-01 -2.023096e-01  0.0112473600
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## [1567,]  0.0700559520 -3.456545e-02 -7.255155e-02  0.1894625726 -
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## [1568,] -2.6014445361 -1.471133e-01  1.434260e+00  0.1021547410
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## [1569,] -2.3371772142  5.424008e-01 -6.031029e-01 -0.1162289544 -
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## [1570,]  0.3373857982  7.900823e-01 -7.060767e-01 -0.9227153506
3.882977e-01
## [1571,] -0.3865175413  2.723944e-01 -6.282765e-01  0.7460251953
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1.611042e+00
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## [1573,] -0.4265797817  2.767109e-01 -7.899077e-01  0.9994689254
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## [1574,] -0.2102044363 -1.767171e-01  4.337409e-02 -0.6048195609
2.337753e-01
## [1575,]  0.2805324950 -2.367401e-01  2.640567e-01 -0.5998551858
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## [1576,]  0.5038942493 -1.068402e+00 -2.873045e-01 -1.1041626850
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## [1577,] -0.3907067177  5.069282e-01 -3.347400e-01 -0.2079637732
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## [1578,] -0.2598322859  1.495953e+00 -4.558323e-01 -0.9092598412
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## [1579,] -0.4262881660  5.402235e-01 -4.070416e-01 -0.1493018677
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## [1580,] -0.0816059495  3.002107e-01 -4.791997e-01 -0.3006334584
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## [1581,]  0.5919929341 -6.721334e-01  1.129617e-02 -0.2496317784 -
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## [1582,] -0.0782871685  1.589466e-01 -1.439443e-01 -0.1049829464 -
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## [1583,] -0.4347776598  4.009247e-01 -1.598490e-01 -0.7076677357
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## [1584,] -0.5615160902 -9.555394e-02 -1.318574e-01  0.2309492985 -
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## [1585,]  0.2029388527 -6.798592e-02  3.362831e-01 -0.2692043975 -
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## [1586,] -0.4283678958 -3.031489e-01 -5.290016e-01 -0.9273878700
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## [1587,] -0.0436178734  5.483170e-01  9.274754e-01  0.0101079851
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## [1588,] -0.2123627220  6.384109e-01  5.787436e-01  0.3094524837
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## [1589,]  0.8115964722  1.098024e-01  1.235813e+00 -0.4644608443 -
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## [1590,]  2.1273080629  3.433081e+00 -2.439911e-04 -0.3449954912 -
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## [1591,] -0.0235290133 -1.654251e-01 -2.008792e-02  0.6439313493 -
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## [1592,] -0.6299920856 -1.718821e-01  1.329096e+00  1.2959438858
1.012877e+00
## [1593,] -0.1412517199  2.304812e-01 -5.995890e-01  0.2584711920
1.658580e-01
## [1594,] -0.8446487309  7.975896e-02 -9.612049e-01 -0.6757914234
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## [1595,] -0.9697011576  2.417158e-01 -5.673611e-01 -0.6870401333
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## [1597,]  0.7467659081 -7.472284e-01 -4.243702e-01  0.3436985350
1.525602e-01
## [1598,]  2.4441315033  3.249732e+00 -1.220334e+00 -3.0069796449 -
1.499200e+00
## [1599,] -0.0360017287 -1.876618e+00 -1.038272e+00 -0.6208644840 -
2.135292e-01
## [1600,] -0.9432424833  1.218335e-01 -4.448383e-01 -0.7469659838
4.102194e-01
## [1601,]  1.6846617600  4.232538e+00 -2.073921e+00 -0.6627831282 -
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## [1602,] -1.2531205809  6.114425e-01 -1.629797e-01 -1.1203452319 -
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## [1603,]  0.4010226516 -4.199064e-01 -3.907338e-02 -1.1030366545
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## [1604,] -0.4120882348  3.992152e-01 -5.409941e-01  0.1774283750 -
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## [1605,]  0.6714072613 -2.629403e-01 -1.502054e-01  0.6671053540
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## [1606,]  1.1307494498  3.223336e-01 -4.559300e-01  1.6940650197
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## [1608,] -0.1120892914 -4.294929e-01  1.019517e+00 -0.1406693920
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## [1610,] -1.2777014230 -9.485624e-02 -2.564209e-01 -0.0895218773
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## [1611,] -0.2834501041  6.566346e-01 -6.760006e-01  0.5072100420
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## [1612,] -0.3752787632  6.973370e-01 -6.138054e-01  0.3700948176
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## [1613,] -0.2515474177 -3.235254e-02 -1.728387e-01  0.6305848147 -
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## [1614,]  0.1179759099  1.873359e-01  9.205780e-02  0.1799695981 -
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## [1615,] -0.3869136019  5.005902e-01  4.657497e-01 -1.7553992612
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## [1616,]  0.0292209003  1.109529e-01 -2.700311e-01  0.8532875204 -
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## [1617,] -1.3116694291  1.966058e-01 -1.508596e+00  0.3921485225
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## [1618,] -0.6156075212  5.698117e-01 -7.648392e-01  0.6680560769 -
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## [1619,]  0.0110349910  2.520932e-01 -4.399787e-01 -0.1403489799 -
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## [1620,] -0.5037044622 -8.145307e-02 -3.903281e-01  0.2581134565 -
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## [1623,]  0.3633858761 -7.606871e-01 -1.412272e+00 -0.3539079329 -
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## [1625,]  0.6637552490  5.602104e-01  1.474737e-01 -0.8435671682
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## [1626,] -0.4591663897  4.662432e-01 -1.067496e-01  0.2296878693 -
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## [1627,]  0.8133943120  1.472483e-01 -1.613217e+00  1.0329143369
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## [1628,]  0.1068984289 -3.551774e-01 -1.281656e+00  0.5491214897 -
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## [1629,]  2.4317140142  3.245542e+00 -1.225180e+00 -2.9524090070 -
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## [1630,] -0.6567372075 -4.088862e-02 -3.477447e-01  0.4832167797 -
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## [1633,] -0.5896174851  5.624211e-01  5.476400e-01  0.6777052541
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## [1636,]  0.1246026567  4.684292e-02 -3.608589e-01  0.6190062072 -
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## [1637,]  0.0510598433  2.283226e-01 -1.345384e-02  0.2025198682 -
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## [1638,]  0.2898560079 -7.617031e-01 -1.982425e-01 -1.6385367042
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## [1639,] -0.3819909754  5.073239e-01 -3.439315e-01 -0.1977081511
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## [1640,] -0.2924607737 -2.475894e-01 -4.687167e-01  0.3853984686 -
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## [1641,]  0.0396707290 -2.722351e-01  7.589358e-02 -0.4278068384
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## [1643,] -0.7466256790 -4.648947e-01 -1.240004e+00 -0.9095843671
2.316293e-01
## [1644,] -0.9078845174  3.127575e-01 -3.861946e-01 -0.8033341977
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## [1645,] -0.6872714031 -1.232154e-01  1.415659e+00  1.1028445277
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1.005645e+00
## [1647,] -0.2557635948  2.817162e-01 -2.203828e-01 -0.3146728328
2.184911e-01
## [1648,]  0.2107823750 -8.446062e-02  2.545447e-01 -0.1140174690 -
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## [1649,]  0.0165185033  4.635144e-02 -3.922014e-01  1.0837969477 -
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## [1650,]  0.5260413592 -3.428730e+00 -2.653451e+00 -0.4924712482 -
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## [1658,] -0.7652034806  4.854101e-01 -7.790643e-01  0.3521174222
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## [1659,]  0.7754547572  1.608356e-01 -1.556639e+00  0.9027365316
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## [1660,] -0.0463058414  4.068610e-01 -3.843136e-01  0.8310276152 -
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## [1661,] -2.2055928442 -4.262284e-02  2.520880e-01 -0.9229680303 -
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## [1662,] -1.3328461761  6.717556e-01 -9.696736e-01 -0.3837967468
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## [1663,] -1.1397409888  7.997892e-02  1.289178e+00  0.4827642143
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## [1664,] -0.6695469873 -4.999144e-01 -1.240248e+00 -0.8433811543
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## [1665,] -0.6619385575  1.109352e+00 -3.590579e-01  0.5909918598
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## [1666,]  0.1320371533  4.826519e-01  1.372189e+00  0.0400479316
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## [1668,] -0.5316452283  5.275764e-01 -7.542151e-01  0.6826281643 -
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## [1669,] -0.2903462467  3.111433e-01 -4.629838e-01  0.4969818485 -
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1.134768e-01
## [1672,] -0.3109036807  1.275577e-01 -5.326027e-01  0.2933077659
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## [1673,] -1.2603806064  1.713516e-01 -1.551864e+00  0.4414425098
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## [1674,] -1.8391915871 -5.523131e-01 -5.286777e-02  0.0027088253
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## [1675,]  0.2009916547  1.938851e-01 -2.488187e-01 -1.0524819818 -
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## [1676,] -0.1904449742  4.832166e-01 -4.065365e-01  0.6625408718 -
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## [1677,] -0.1133294800  5.035895e-01 -2.158730e-01 -0.4440194960
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## [1678,] -0.7252028400  4.812753e-01 -7.877581e-01  0.3221395789
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## [1679,] -0.0387254419  2.246293e-01  6.172592e-01  0.9557131319
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## [1680,] -0.0309869315  5.130035e-01  7.234615e-01  0.8973685784
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## [1681,] -0.2257147499  3.091651e-01 -5.161899e-01  0.8133076981 -
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## [1682,]  0.1548602707  2.676241e-02  7.308340e-01 -1.2640518397 -
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## [1683,] -0.0425042341 -6.141240e-01 -8.570699e-01  0.8883683758 -
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## [1684,] -0.2891072446  3.459524e-01 -2.159645e-01 -0.6707091185
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## [1685,] -0.8985011374  7.834799e-01 -6.892492e-01 -0.4780237699
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## [1686,] -0.9109734743 -1.066633e-01 -9.629036e-01 -0.7748936923
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## [1687,] -0.0655183064  2.797248e-01 -5.554308e-04 -0.1265675928
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## [1688,] -0.5109170545  1.928397e-01  3.000187e-02 -0.9593560355 -
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## [1689,] -0.2146402170 -8.419589e-02 -3.522053e-01  0.2862482723 -
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## [1690,] -0.4274505990  3.121337e-01 -7.923046e-01  0.9253177047
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## [1691,] -0.5661198910  6.112711e-01 -6.456662e-01  0.3032936417
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## [1692,] -0.2238858721 -2.468140e-02 -5.607161e-01  1.0157639252 -
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## [1693,]  0.0352271573  2.374980e-01  2.869567e-02  0.1439674930 -
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## [1694,] -0.4982425378  2.352276e-01 -4.869233e-01  0.0160906620
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## [1695,]  0.2995981613  1.276441e-01 -1.644399e-01 -1.0901466834 -
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## [1698,]  0.2561133059  7.913769e-01 -7.402178e-01  0.3306114498 -
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## [1699,]  0.1039627613  5.627365e-02 -4.512106e-01  0.6887561015 -
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## [1701,] -1.2021212914 -1.690196e-01 -1.851006e-01 -0.1474392106
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## [1702,]  1.5829562023  1.559261e+00  4.424899e-01 -0.8903416300 -
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## [1703,] -0.2287029866  3.119355e-01 -4.732645e-01  0.7221527581
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## [1704,] -0.1512226478  4.968721e-01 -1.522642e-01  0.0294741830
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## [1705,]  1.1535805214 -1.042951e+00 -1.805388e+00 -0.2129676807
1.917033e+00
## [1706,] -0.1012269458 -1.681242e-01 -1.054013e+00 -0.1254119881
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## [1707,] -0.0499600400  7.250712e-02 -3.510076e-01  0.4565861256 -
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## [1708,]  0.0666015607  9.908420e-02 -3.090830e-01  0.9839577572 -
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## [1709,] -0.8063649903  2.738731e-01 -5.157130e-01 -0.1193755215 -
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## [1711,]  0.5509914218  2.741469e-01 -1.052424e+00 -0.8719099593 -
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## [1712,]  0.9358630721 -2.720846e-02  4.316786e-01  0.0734484353 -
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## [1713,]  0.1833109239  3.038543e-01  1.030723e+00  0.3607186487
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## [1714,] -0.3228182780 -1.281673e-01  2.558251e-02  1.6130008101 -
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## [1715,] -2.5645382093 -6.444911e-01  6.233339e-01 -0.2409630165 -
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## [1716,]  0.4672015810  2.241867e-01  1.774496e+00 -0.0678876212
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## [1717,] -1.0167399143  1.095202e-01  2.198479e-02  0.6449406988
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## [1718,]  0.2553786783  3.098939e-01  1.332656e+00  0.0591649371
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## [1719,] -0.5448348536  1.830011e-01  3.046313e-01 -0.2692147632
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## [1720,] -0.4972750911  1.811765e-01  4.745060e-01  1.0640609030
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## [1723,] -1.1235596926  3.707146e-01  4.544597e-01 -0.2868944418
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## [1724,]  0.1213381421  3.033977e-01  1.517869e+00 -0.2898115534
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## [1725,] -0.7115202712  9.913057e-02  7.846298e-01 -1.5768433852 -
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## [1726,] -0.0188518801  2.210702e-01  9.118763e-01  0.5469524563
2.712739e-01
## [1727,] -0.2717427315  1.818897e-01  5.442595e-01  0.4659300553
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## [1728,] -0.2457631506  7.766604e-01  8.021014e-01  0.3888377065
3.728248e-01
## [1729,] -0.2435497754 -2.778460e-01  9.421521e-01 -0.1902564576
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## [1730,]  0.4722811576 -1.236789e+00  1.036301e-01  0.0694565246 -
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## [1731,]  0.2763855199  2.933884e-01  1.337916e+00  0.0765678471
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## [1732,] -0.1687479344  1.987492e-01  7.823201e-01  1.2725647177 -
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## [1733,]  0.9197336174  5.925396e-02 -4.672555e-01  1.6137055145
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## [1734,] -0.9765195155  3.195468e-01 -7.779848e-03  0.9753931484
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## [1735,] -0.0483159704 -1.156593e-01  1.299462e+00  0.1907850984
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## [1736,] -1.2748107465  2.519859e-01  9.136817e-01 -0.0216113805 -
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## [1737,]  0.7908313619 -1.826755e-01  2.193796e-01  0.5284178915 -
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## [1738,] -0.2570528585  7.349306e-01  9.658462e-01 -0.2224571209
6.661931e-01
## [1739,] -2.3879843026 -3.216517e+00 -1.777035e+00 -1.3186340119 -
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## [1740,]  0.7779685505  2.040435e+00  3.885530e-01  0.4462701319 -
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## [1741,]  0.2949484804  1.036496e-01  1.768218e+00 -0.7254939875
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## [1742,] -0.2734601815  6.161260e-01  3.457034e-01  1.2080159428
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## [1743,] -0.7728828174  1.777784e-01  1.665016e+00  0.6826736150
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## [1745,] -1.2902967653  4.157579e-01 -8.733170e-02  0.6696566868
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5.186992e-01
## [1747,]  0.3722285983 -6.186593e-01  5.098387e-01  0.6094847894 -
2.543329e-01
## [1748,]  0.1930800196 -5.882571e-01  4.871368e-01  0.6626827370
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## [1749,] -0.2787276339 -1.614486e+00 -1.158513e+00 -0.8041746956
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## [1750,]  0.2204334021  1.382731e+00  7.646884e-01 -0.6186610865
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## [1751,]  0.2409277169 -4.003669e-01  6.824272e-01  0.3855213444
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## [1752,] -0.4573824617 -7.699013e-02 -3.079018e-01  0.1586910852 -
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## [1753,] -0.0629496176  3.829837e-01 -8.946553e-01  0.0029696092 -
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## [1754,]  0.4672717672  4.220684e-02  4.873992e-01 -0.5676474866
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## [1755,] -0.5296331771  3.150408e-01 -3.598514e-01 -0.4124339776
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## [1756,] -1.0684868150  2.892474e-01 -5.396045e-01 -0.8011715435
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## [1757,] -0.4099014418  1.683687e-01 -2.452199e-01  0.4964158507 -
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## [1759,] -0.2034824662  1.147806e+00 -2.891984e-01 -0.1648601105 -
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## [1760,] -0.8285053458  9.429204e-01 -1.573038e+00  0.1193888667 -
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## [1761,] -0.8579914808  5.355321e-01  6.039362e-01 -1.5805304794 -
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## [1762,] -0.8394970222 -1.534748e-01 -9.642075e-01 -0.7227440572
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## [1763,] -0.3935480340  5.126858e-01 -2.996095e-01 -0.2116293432
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## [1764,]  0.4706468253 -1.024654e+00 -3.645592e-01 -1.0707765200
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## [1765,] -0.0071624714 -5.298451e-01  3.965000e-02 -1.1182495109
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## [1766,] -0.7354909900  2.408160e-01 -3.419407e-01 -0.2143809281
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## [1767,]  0.7214066860 -5.216797e-02  4.834363e-01 -0.4828249658
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## [1768,]  0.1425358521 -1.406915e+00 -1.043353e+00 -0.6186313919 -
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## [1769,]  0.4340675609 -5.140196e-02  5.571876e-01 -0.4644555111
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## [1770,] -1.1178004734  1.950331e-01  6.463094e-01 -0.1003138082
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## [1771,] -0.4608356552 -9.996379e-03 -6.441774e-01 -0.8741182350
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## [1772,]  0.3314864560 -5.321292e-02  2.123619e-01 -0.3442742244
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## [1773,] -0.4779068737  4.727908e-01 -5.466474e-02  0.1003757807 -
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## [1774,]  0.3448759219 -4.974359e-02  1.343239e-01 -0.2761756565
2.616010e-01
## [1775,] -1.1568804484  1.062667e-01  1.244291e+00  0.5223213221
1.052043e+00
## [1776,]  0.4081113461 -2.791457e-02  1.473725e+00  0.2052196974
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## [1777,]  0.2317202993  3.374723e-01  1.086614e+00  0.3661763552
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## [1781,]  0.2473863403 -6.232234e-01 -4.169067e-01 -1.2232213062 -
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## [1790,]  0.9803838983 -4.046233e-01  5.256555e-01 -1.0827699997 -
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## [1794,] -0.5870248902  3.354276e-01 -1.749583e-01  0.1679629816 -
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## [1797,] -0.0212344600 -4.422558e-01  1.241054e-01 -0.1827804083
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## [1799,] -0.2394874106 -2.385202e-01 -4.502181e-01  0.1500897187
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## [1800,] -0.2908576962 -2.184278e-02  6.361436e-01  1.1356949475
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## [1801,] -0.1296583219  6.017280e-01  7.294058e-01  0.9529324991
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## [1802,] -0.7125531830  2.186237e-01 -1.015552e+00 -0.6375118500
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## [1803,]  0.1032397566  1.771913e-01  2.715612e-01 -0.4501072572
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## [1804,] -0.0041761766 -5.032386e-01  1.480330e-01 -0.1666490461
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## [1806,] -0.4084079713  1.782302e-01 -4.689231e-01  0.0680828450
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## [1807,] -0.3374178897 -5.854884e-03 -3.899994e-01 -0.6023471658
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## [1808,] -0.0418832645  4.449507e-01 -1.623811e-01 -0.4149384203
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## [1809,] -0.2381333609  3.458643e-01 -2.829409e-01  0.0259073704 -
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## [1811,] -0.6251899631  7.376670e-02 -3.798498e-01  0.5225474935 -
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## [1812,]  0.5516620467  7.919210e-02 -6.248561e-01  0.2120149337 -
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## [1813,] -0.3411687826  3.324425e-01 -1.096322e-01 -0.6876496485
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## [1814,] -0.6383906931  6.180103e-01 -6.658254e-01  0.3625581432
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## [1815,] -0.7924382212  8.317487e-02 -1.127026e+00  0.7093649662
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## [1816,]  0.5882001669 -2.346295e-01  4.425278e-01 -0.2444365823 -
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## [1817,]  0.4310285725 -1.344165e-01 -2.003616e-01  1.2124291674 -
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## [1818,] -1.4099848295  3.718101e-01 -5.614112e-01 -1.0922080033
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## [1819,]  1.1361464653  1.995188e+00 -7.562194e-01 -0.7689013528 -
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2.542641e-01
## [1822,]  0.4258020489  4.349317e-02  5.710365e-03  0.1043819066
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## [1823,] -0.5644727971  3.041019e-01 -9.782932e-02  0.1086877460 -
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## [1824,] -2.4243421528 -2.344816e-01  1.489047e+00  0.1641958662
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## [1825,]  0.1114264998  1.406717e-01  1.085487e+00  0.3343727767
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## [1826,] -0.2797862064 -6.315076e-01  1.864745e+00  0.2466351748
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## [1827,] -0.5881695195 -5.381464e-01 -5.030584e-02 -0.3072819849
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## [1828,] -1.6722427450 -4.016637e-01 -1.338386e+00 -0.6884952543
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## [1829,]  0.2259046847  1.705205e-02  1.164136e-01  0.8644684994 -
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## [1830,]  0.3690339639 -2.929454e-01  3.226438e-01 -0.5551919681
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## [1831,] -0.0440077922  1.388947e-01 -4.665540e-01  1.8390558368 -
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## [1832,] -0.1050326063  1.864885e-01 -2.684860e-01 -0.4600963091
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## [1833,] -0.4645325403  2.078151e-01 -5.206337e-01  0.0944804332
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## [1834,] -1.6018153313  7.269460e-01 -3.528119e-01 -0.8476335351
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## [1835,] -0.3989298550  7.682931e-02 -3.122683e-01  0.2398198211 -
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## [1836,] -0.5791455805  5.532277e-01 -7.348814e-01  0.6748773622 -
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## [1837,]  0.2642361027 -8.379791e-02  3.420769e-01 -0.1816399505 -
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## [1838,] -1.1465051924 -6.743723e-01 -4.661024e-01 -0.4577834904
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## [1839,] -0.2658734234 -7.712935e-02 -5.985530e-01  0.7447517152
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## [1840,]  0.1831327775 -2.824642e-01  1.772859e-01 -0.2440702678 -
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## [1841,]  0.6801800440 -2.228678e-01 -8.829263e-01 -0.0618933627 -
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## [1842,]  0.4920370481 -7.970003e-02  1.209129e-01 -1.1486892088 -
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## [1843,]  2.8816978329  3.440019e+00 -1.362615e+00  0.0038841171
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## [1844,]  0.2681360017 -5.546211e-02 -3.144082e-01  1.2994721308 -
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## [1845,]  0.1573868295 -3.388369e-01 -2.922487e-01  0.2123016327 -
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4.712612e-01
## [1847,] -0.1648020517  5.846569e-01 -5.118808e-01  0.3508203078
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## [1848,] -0.1272435858 -1.286493e-01 -3.403460e-01  0.1699771574 -
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## [1849,]  0.1367160391 -1.992379e-01  2.385935e-01 -0.4416975621 -
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## [1850,] -0.0148117266 -5.931745e-01 -8.139960e-01  0.5361723859 -
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## [1851,]  0.2380289882 -3.175258e-03  7.924130e-01 -1.2814133452
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## [1852,] -0.8640916421  7.416486e-01 -7.581210e-01 -0.3589389610
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## [1853,]  0.4600456938 -9.677625e-02 -2.150318e-02  0.0737738796
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## [1854,]  0.2315787660 -4.359980e-01  2.429237e-01 -0.5731350411
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## [1856,]  0.2069545334 -6.128868e-01 -3.987722e-01 -1.2607450777 -
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## [1857,]  0.7650575013  4.807436e-01  4.119466e-01 -1.8042932335 -
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## [1859,] -0.0289483640 -2.770782e-02  1.115486e-01  0.6553592457 -
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## [1860,] -0.2436730446  2.897242e-01 -3.612669e-01  0.2393177041 -
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## [1861,] -1.1529803059 -2.993905e-03 -1.691009e-01 -0.0188217456
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## [1862,] -0.2376805374  1.322311e+00 -8.196775e-01 -0.5237514879 -
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## [1863,] -0.9929345916  2.480844e-01 -5.538287e-01 -0.7563987799
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## [1864,]  0.9136443731 -3.515191e-01  4.686666e-01 -1.0459734072 -
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## [1865,] -0.0958431189  5.023901e-01 -2.043112e-01 -0.4039004534
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## [1866,] -0.3296670907 -2.377934e-01 -4.188346e-01  0.6959309229 -
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## [1867,]  0.2795388087 -5.908833e-01 -4.276422e-01  0.5086126348 -
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## [1868,] -0.4199986720 -8.494034e-05 -9.836793e-01  0.4125464020 -
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## [1869,]  0.5645392983 -3.446755e+00 -2.550501e+00 -0.5787632307 -
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## [1870,] -1.6017215721  7.494259e-01 -3.729595e-01 -0.8302362103
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## [1872,] -0.2943749558  3.076017e-01 -3.263857e-01  0.0598453016 -
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## [1873,]  0.3049539091 -4.123214e-01  5.038425e-01 -1.8022801020
4.244983e-01
## [1874,] -0.2147277487 -1.944902e-03 -1.797434e-01 -0.1088402475
8.109110e-03
## [1875,]  0.2020549011  1.239468e-01  6.921776e-01 -1.3680692869
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## [1876,] -0.0414778572 -1.842842e-01 -3.327050e-01  0.2684515236 -
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## [1877,] -1.8679625785 -6.758546e-01 -1.035701e+00 -0.6177883826
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## [1878,] -2.5133439163 -1.693204e-01  1.498919e+00  0.0235088235
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## [1879,]  0.1039984929 -3.314308e-01  7.465236e-01  1.4268841689 -
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## [1880,]  0.3286693046  1.808794e-01  1.064923e+00  0.4534283119
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## [1881,]  0.3129987123 -4.717087e-01  8.003390e-01  0.1369010534
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## [1882,]  0.9180286925  3.026786e-01 -3.895878e-01  1.7095057735
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## [1883,]  1.0419765369  2.681110e+00  8.761836e-02  0.3183620762 -
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## [1884,]  0.3465466814 -1.971452e+00 -6.195610e-01 -0.8888275430
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## [1886,]  1.0679864003 -1.649856e+00 -1.331496e+00 -0.5849195685 -
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## [2051,]  0.3410823793 -1.751251e+00 -2.251253e+00 -0.4687237903 -
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## [2052,]  0.8919122159 -2.752475e-01  5.545828e-01 -1.2064921334 -
7.162969e-01
## [2053,] -0.0024113444 -6.957823e-01 -4.296323e-02  1.3652016328 -
3.528345e-01
## [2054,]  0.2631097266 -5.772804e-01  1.923543e-01  0.7367409577 -
1.472121e-01
## [2055,]  0.8670317367  4.017056e-01 -5.925745e-01  2.2351678565 -
1.416135e+00
## [2056,] -1.9818490777  2.396192e-01 -9.697271e-01  0.1401555531
1.622140e+00
## [2057,] -0.0880708327 -2.204237e-01 -3.805651e-01  0.0119803920
3.054465e-01
## [2058,]  0.1625114647  8.435535e-02  2.449632e-01  0.6371041394 -
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## [2059,]  0.8187219949 -1.506271e-01 -1.266168e+00 -1.0165583874 -
8.742587e-01
## [2060,] -0.1148126902 -3.415084e-01  1.004796e-01  0.3512700603 -
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## [2061,] -2.3708421737  5.523839e-01 -6.271433e-01 -0.0716525632 -
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## [2062,]  1.6349689133  2.647866e-01 -2.467548e-01  0.4889147122
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## [2063,]  0.7112654547  5.228231e-01  1.950754e-01 -0.8605295857
7.901657e-02
## [2064,] -0.0627250376  2.701398e-01 -4.371135e-01 -0.2358919480
5.717541e-01
## [2065,]  0.1934344052  1.508679e-01  1.290766e-01  0.1545242052 -
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## [2066,] -0.3952204122 -1.485123e-01 -4.973262e-01 -0.1473260202
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## [2067,]  1.6870589088 -1.489838e-01 -1.140935e+00  0.0192376582
3.372085e-01
## [2068,]  0.0667543801  2.194984e-01  1.684941e-01 -0.3499616539
1.112024e-01
## [2069,] -0.4004559138  3.918352e-01 -1.272547e-01 -0.6956674480
1.382407e-01
## [2070,]  0.1286695279 -1.645256e-01 -4.425008e-01  0.8238022868 -
5.512201e-02
## [2071,] -0.3752193311  4.581084e-01 -1.688670e+00 -0.2115456447 -
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3.152938e-01
## [2072,] -0.5794324852 -1.216218e-01 -2.010857e-01  0.3929574865 -
4.759910e-01
## [2073,] -1.8428147230  1.498317e-01  1.300220e+00 -0.0674278529 -
1.615780e+00
## [2074,]  0.3934852739 -1.013115e-01 -2.628282e-01  1.2821878117 -
4.352032e-01
## [2075,] -1.3227819453 -2.043099e-01  9.574730e-01 -1.2628725857 -
1.245045e+00
## [2076,]  0.9433374462  1.693189e+00  8.502038e-01 -0.6549376414
1.276364e-01
## [2077,] -0.9427824720 -1.447368e-03 -1.163440e+00  0.6053118257
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## [2078,] -0.0224283881 -4.515289e-01  1.374274e-01 -0.1838535161
1.396356e-01
## [2079,]  0.1923834709 -6.160831e-01 -3.685747e-01 -1.2873200980 -
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## [2080,] -0.0067043136  9.659246e-02  2.452375e-01 -0.6565119895 -
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## [2081,] -0.4222564166  2.054649e-01 -3.160036e-01 -0.4666705637
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## [2082,]  0.0735566505  2.327725e-01  5.760012e-02  0.1507727385 -
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## [2083,] -0.1960439961  2.801309e-01 -3.628634e-01  0.3685137582 -
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## [2084,] -0.1477046023  5.213988e-01 -1.630893e+00 -0.0510888417 -
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## [2085,]  0.1754281095  1.435568e+00  4.160526e-01  0.2054848330
2.705718e-01
## [2086,] -0.3647771668  4.281573e-01 -1.671821e+00 -0.2497754800 -
3.304933e-01
## [2087,]  0.7703811859  1.534864e-01 -1.596890e+00  0.9997657063
1.296802e+00
## [2088,] -0.2733036317  7.116008e-02 -5.677051e-01  1.6879573664 -
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## [2089,]  0.6326334198  1.708785e-01 -5.530145e-01 -1.4027543620 -
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## [2090,]  0.0919277817 -2.896270e-01  2.050052e-01 -0.1931256356
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## [2091,] -0.6858115739 -3.339754e-02 -2.513141e-01  0.3549676759 -
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## [2092,] -0.6388760984  1.499162e+00 -9.268090e-01 -0.5270476073
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## [2093,] -0.2787498437  2.850499e-01 -5.618968e-01  0.6870839166 -
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## [2094,]  0.8777177831 -8.291114e-01 -3.869772e-01  0.4619698559
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## [2095,] -0.6002171918 -2.313848e-01 -3.774115e-01  0.0040076315
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9.838896e-02
## [2097,]  0.0779243565 -1.381206e+00 -9.842323e-01 -0.7681632106 -
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## [2098,]  0.8407928676 -8.241770e-01 -2.713783e-01  0.2940238105
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## [2099,] -0.3577332896 -1.233423e-01 -5.711478e-01 -0.0430577540
2.755474e-01
## [2100,] -0.2255400204  3.043344e-02 -3.997149e-01 -0.1951878860
2.802447e-01
## [2101,]  0.0541584720 -5.186697e-01  2.621649e-01 -0.3147756031
1.570338e-01
## [2102,]  0.9623943519 -4.035651e-01  5.632228e-01 -1.1249930373 -
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## [2103,]  1.1464076034  1.802913e-01 -8.527960e-01  0.2479660203
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## [2104,] -0.5951787038  6.128962e-01 -6.830013e-01  0.4164680932
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## [2105,]  0.3113662611 -3.571074e-01  9.543402e-01  0.6947195267 -
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## [2106,]  0.1661575325 -1.410232e+00 -9.148893e-01 -0.7566130655 -
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## [2107,]  0.7617579470  1.612501e+00 -6.573300e-01  0.2664050669 -
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## [2108,]  1.4949337289  1.221874e-02 -1.385295e+00 -0.0547200114
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## [2109,]  0.1769186627  1.678509e-01  1.067668e-01  0.2249342860 -
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## [2110,] -0.2282307002  9.484604e-03 -4.547437e-01 -0.0944814005
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## [2111,] -0.1411571117 -6.810310e-01 -4.022650e-01 -1.5805160788
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## [2112,] -0.4797191006 -6.837650e-01  7.977611e-01 -0.3721983838
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## [2113,] -0.6081589204 -1.711632e-01  1.411523e+00  1.1574128397
1.028181e+00
## [2114,]  0.1578438590 -5.765305e-01 -4.141444e-01 -1.2751411373 -
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## [2115,] -0.0482141012  1.192522e-01 -1.410301e-01 -0.5110400271
2.112753e-01
## [2116,]  1.0318872269 -2.561420e-01  9.453565e-01 -0.6794449068
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## [2117,] -0.0648150376 -3.673952e-01  9.053891e-03  0.5840121129 -
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## [2118,] -0.4062677449 -1.288927e-01  7.852274e-01 -0.1440461356
7.839373e-01
## [2119,] -1.4554061389  8.637895e-01 -3.051077e-01 -0.7329839971
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## [2120,] -0.2393992601 -3.448874e-01  1.797584e-01 -0.7498668372
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3.253817e-01
## [2122,]  0.3182752826 -4.657994e-02 -3.370632e-01  0.8966329204 -
8.770363e-02
## [2123,] -0.0252736671  2.412828e-01  1.497701e-02 -0.0984592734
2.496456e-02
## [2124,] -0.0757712038 -2.283095e-01 -6.296798e-01  0.1754978918 -
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## [2125,] -2.4116263896  3.815785e-01 -5.994230e-01 -0.2454625837 -
9.729104e-01
## [2126,] -0.4507249646 -5.716424e-02 -5.631706e-01 -0.1343225259
2.385765e-01
## [2127,] -0.6321906978 -1.770252e-01  1.532389e+00  0.9968949031
9.760924e-01
## [2128,] -0.0387018720 -6.608929e-02  6.606411e-02 -0.4258368386
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## [2129,] -0.8101375223 -2.334432e-01 -5.162447e-01 -0.1693028767
1.354203e-01
## [2130,]  0.2757775904 -2.080378e-02  5.448870e-01 -1.0592326670
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## [2131,]  0.3887737758 -8.554343e-02  2.608708e-01 -0.3846479701
2.102443e-01
## [2132,] -0.1824590138  1.476370e-01 -2.998807e-01 -0.2556495571
3.380220e-01
## [2133,]  0.7869484678  1.450750e-01 -1.571226e+00  0.9407055210
1.334584e+00
## [2134,]  0.0407438161  2.762895e-01 -2.177413e-01  0.0054786105
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## [2135,]  0.4679994279 -1.235974e-01  2.064218e-01 -0.2167621669
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## [2136,] -0.5486113546  9.330961e-01 -8.291160e-01 -0.0372837667 -
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## [2137,] -1.3994588082  1.561259e-01 -5.883652e-01 -1.0841479061
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## [2138,]  0.1756185822  7.291087e-03  5.457064e-01 -1.1491813213
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## [2139,] -0.9595074591 -2.447330e-02 -1.050732e+00  0.4476956862
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## [2140,] -0.1747123075 -3.888160e-02 -3.423650e-01  0.3071436956 -
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## [2141,] -0.0500903822 -1.267254e+00 -1.184458e+00  0.6021938207 -
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## [2142,]  1.1256494348  5.995723e-01  5.326710e-01 -0.6559298460
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## [2143,] -0.2879115830 -3.650485e-02 -5.228799e-01  0.6702875248 -
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## [2144,] -0.5916696530  4.793115e-01  3.683202e-01  0.8601495497
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## [2145,]  0.3187259060 -1.075345e+00 -1.265560e+00 -0.7136894708 -
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4.455230e-03
## [2147,] -0.0513526359  9.425594e-02 -1.140662e-01 -0.0161890600 -
1.277272e-01
## [2148,] -0.9967413295 -9.029116e-02 -4.420120e-02 -0.0610907323
2.545816e-01
## [2149,] -0.3972086026  4.433779e-03 -4.227637e-01 -0.6315208353
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## [2150,]  1.2645157623  2.243440e+00 -1.030435e+00  0.0407995420 -
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## [2151,]  1.4915754391 -9.901469e-02 -5.067127e-01 -1.3896003660
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## [2152,] -0.3250606625 -3.694178e-01 -1.098184e-01 -0.8199002658
4.163953e-01
## [2153,] -0.5592266724  6.221086e-01 -1.475768e-01 -0.7562473271
3.117089e-01
## [2154,] -0.6435118773 -1.580380e-01  1.419515e+00  1.1614824542
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## [2155,] -0.0756264515 -3.720596e-01  5.546450e-02  0.4498226955 -
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## [2156,] -0.2075429243  2.023703e-01 -1.679339e-01 -0.0866170635 -
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## [2157,] -3.0435855688 -3.506604e-02  3.936099e-01 -0.2549344810 -
4.377796e-01
## [2158,] -0.2754993570 -2.964291e-01 -7.642916e-01  0.1391963967 -
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## [2159,] -1.0920791189  7.344324e-01 -9.154566e-01 -0.1447295775
2.035557e-01
## [2160,] -0.2920734528  3.900452e-01 -1.683619e+00 -0.1265583624 -
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## [2161,] -0.0633979741  2.813946e-01  2.954376e-01 -1.0216491270
3.164445e-01
## [2162,] -0.4781031605  4.882490e-01  6.693796e-02 -1.1048333341
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## [2163,]  0.1775739608  1.437492e-01  1.773394e-01  0.1239551230 -
1.205390e-01
## [2164,] -0.5300893660  1.991461e-02 -2.567642e-02 -0.6537558824 -
1.313973e-02
## [2165,]  1.2184419376  1.507834e-01 -8.226868e-01  0.2659606640
1.824505e+00
## [2166,]  1.6246303435 -1.105452e-01 -1.130631e+00 -0.0581067824
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## [2167,]  0.4877507794 -8.465110e-02  6.284478e-01 -0.4701939196 -
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## [2168,]  1.7162691344 -1.514833e-01 -1.138225e+00  0.0210246860
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## [2169,] -0.8859348825  1.186438e-01 -4.109572e-01 -0.7901557551
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## [2170,]  0.0889038910 -4.957500e-01 -6.208330e-01  0.7062524493 -
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## [2171,] -0.1257270699 -6.687668e-02 -3.091524e-01  0.2772175141 -
```

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5.512985e-02
## [2172,]  0.3009930902  1.372212e+00  5.553800e-01  0.6946426652 -
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## [2173,] -0.2557424382  8.378761e-01  5.387124e-01  2.0686444691 -
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## [2174,] -0.0283567345 -4.298660e-01  1.249616e+00  0.8524977539
4.434701e-02
## [2175,] -0.0370354976  7.959239e-02  1.080740e+00 -0.0024497774
5.108106e-01
## [2176,] -1.3550435261 -8.067734e-01 -5.288609e-01  1.4007906375
1.019302e+00
## [2177,]  0.3800955985 -2.083614e+00 -3.850534e-01 -0.0415028424
1.222655e-02
## [2178,]  0.2932200006 -8.086002e-01  7.935846e-01  1.8445121479 -
7.347790e-01
## [2179,]  2.5650512946  2.055900e+00 -9.677894e-01 -1.6323665528 -
1.268605e+00
## [2180,] -0.5508178532  3.304381e-01 -4.647608e-01 -0.1965916257
2.003554e-01
## [2181,]  0.1347776823  1.054589e-01  2.125369e-01  0.7035487947 -
6.529342e-01
## [2182,]  0.4141160395 -1.277979e-01 -1.176136e-01  1.1444603381 -
5.053352e-01
## [2183,] -0.9729541263  1.626524e-01 -4.574121e-01 -0.7857174652
4.256999e-01
## [2184,] -0.2640487562 -4.699612e-01  2.050185e-01  0.1684610226 -
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## [2185,] -0.8483642980  1.010785e+00 -3.587972e-01  0.4224135527
3.331621e-01
## [2186,] -0.1718521544 -7.748925e-02  2.776538e-01 -2.0291524378
4.670088e-01
## [2187,] -0.5568735008  5.685674e-01 -5.651574e-01  0.3016091601
1.777096e-01
## [2188,] -0.8490292461  7.982378e-02 -3.859711e-01 -0.7846694667
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## [2189,] -0.1489163506 -3.603371e-01  8.144691e-02 -0.1822255351
8.572506e-02
## [2190,] -0.2804247443  3.149242e-01 -5.404576e-01  0.6298962729 -
3.042497e-01
## [2191,] -0.0501521678  4.245172e-02 -4.660198e-01 -0.2830447765
7.487154e-01
## [2192,] -2.8661427116  4.195311e-02  5.277921e-01 -0.2357526891 -
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## [2193,]  0.2198327255 -6.211246e-01 -3.633248e-01 -1.2840441866 -
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## [2194,]  0.0029409688 -7.472558e-01 -8.794548e-01 -0.1004962504 -
2.960690e-01
## [2195,] -0.0948867451  2.934466e-01  3.867344e-01 -1.2265265204
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## [2196,] -0.6612836602 -6.879917e-02 -8.536447e-01 -0.8041649743
```

```
5.825874e-01
## [2197,] -0.3400679123  4.201442e-01 -1.620134e+00 -0.2945341681 -
3.256905e-01
## [2198,] -0.4470958603  2.283005e-01 -2.666297e-02  0.1242044101 -
5.431373e-01
## [2199,]  0.4526897860 -6.435870e-01 -8.062511e-04 -1.6602919122
6.904377e-01
## [2200,] -0.0860928364 -2.622854e-01 -7.892634e-01  0.3512034790 -
3.016048e-01
## [2201,]  0.1364695293  1.672690e-01  1.127941e+00 -0.0370737242
5.116990e-01
## [2202,]  0.1293644729  4.639203e-01  1.140170e+00  0.4127947061
2.069793e-01
## [2203,]  3.5966536240  6.125573e+00  1.431763e-01 -2.1310349621 -
1.604602e+00
## [2204,]  0.5169563145  7.353782e-01  8.773524e-02 -1.4772195459 -
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## [2205,] -0.9162158819  1.151019e-01 -4.372097e-01 -0.7057027352
3.673877e-01
## [2206,]  0.0262209625 -4.951765e-02 -3.802089e-01 -0.2727386268
1.249490e-01
## [2207,] -0.0776752788  8.160569e-02  4.661319e-02 -0.1402457308 -
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## [2208,]  1.6424633715  1.321045e+00  5.251652e-01 -0.9140470500
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## [2209,] -1.3811380296  3.426021e-01 -6.063459e-01 -0.9983460759
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## [2210,] -0.2457785216 -5.866009e-02 -5.507936e-01  0.7371199363
3.064817e-02
## [2211,] -0.2667939687 -1.919899e-01 -1.941644e-01 -0.2111947133 -
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## [2212,] -0.6885123695 -2.540376e-01 -1.543868e-01  0.1331785520 -
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## [2213,]  1.0196150798 -2.774265e-01  8.932952e-01 -0.5786470636
4.215816e-01
## [2214,]  0.0969512795 -1.294285e-01  1.679676e-01  0.6726265752 -
6.056314e-01
## [2215,]  0.2422871656 -3.121176e-01  1.062643e+00  0.3807775981 -
6.525663e-02
## [2216,]  0.0884108729 -7.769284e-01 -8.998621e-01 -0.0297927441 -
2.182253e-01
## [2217,] -0.2379372574 -1.489558e-02 -1.554825e-01 -0.1016617159 -
1.196239e-01
## [2218,]  1.7384566750 -1.601228e-01 -1.126484e+00  0.0260587204
3.638919e-01
## [2219,]  0.5360656284  1.446686e-01 -1.502472e+00  0.9208470646
1.284156e+00
## [2220,]  0.2700484369 -1.455853e+00 -9.456200e-01 -0.1658453736 -
7.054492e-01
## [2221,] -0.4639965225 -5.382784e-02 -1.813232e-01  0.4355294002 -
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6.024577e-01
## [2222,]  0.0615409232 -3.857023e-02 -2.614458e-01  0.3375078985 -
2.403823e-01
## [2223,] -0.5269040934  5.252808e-01 -1.259407e-01 -0.8472588445
2.220558e-01
## [2224,]  0.1162270617  4.509235e-01  8.709840e-01  1.3255159893 -
2.006781e-01
## [2225,] -0.2659165734  1.124272e-01 -4.492381e-01  0.6563683546
3.630767e-02
## [2226,]  0.0597411998 -3.482521e-01 -3.222404e-01  0.1260695243
2.320021e-01
## [2227,] -0.9869990753  6.496936e-01 -8.448066e-01 -0.1833482223
2.377000e-01
## [2228,] -0.2428368048  2.975814e-01 -5.654448e-01  0.6987205283 -
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## [2229,]  0.5969557964 -4.239236e-01  8.236520e-01  0.8384174733 -
1.797312e-01
## [2230,]  0.7829614280 -3.259037e-01 -1.323040e+00 -1.0517374329 -
7.141574e-01
## [2231,] -0.9952615016  3.791211e-02 -1.202281e+00  0.5606032908
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## [2232,]  0.5900510960 -1.537569e-01  1.204283e-01 -0.0551091247
2.926697e-01
## [2233,] -0.1631669937  2.720085e-01 -2.844946e-01  0.3428806816 -
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## [2234,] -0.4535059183 -4.618987e-02 -5.941956e-01 -0.0860876693
2.429885e-01
## [2235,] -0.0543275721 -3.023867e-01 -4.048577e-01  0.1623779869
1.805741e-01
## [2236,] -0.5389291805  3.336094e-01 -4.643227e-01 -0.2599099342
2.981314e-01
## [2237,] -0.8703071946 -3.273413e-01 -2.513428e-01  0.0600772003 -
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## [2238,]  0.5697295041 -1.144821e+00 -3.863532e-01 -0.8511736550
1.242175e-01
## [2239,]  1.1886362875  1.583015e-01 -7.866135e-01  0.2554702532
1.751614e+00
## [2240,]  0.0696701342 -3.337584e-01 -5.467794e-01  0.2533854403 -
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## [2241,]  0.1397055873  1.109192e-02  3.540845e-01 -0.6836261780 -
3.433427e-02
## [2242,] -0.7093128742 -9.717954e-02 -1.449908e-01 -0.6880549319
6.344183e-02
## [2243,] -0.0463841006  2.836083e-01  5.599083e-03 -0.0601688043
3.678666e-02
## [2244,]  0.5807062762  6.214542e-02  1.324618e+00  0.6341814925 -
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## [2245,] -0.3202207550 -4.048330e-01 -1.248339e-01 -0.7228558315
3.088215e-01
## [2246,] -2.3781998630 -2.837526e-01  1.611954e+00  0.0848565679
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## [2247,] -0.5005453160  3.747455e-02 -1.116780e-01 -0.0941408173 -
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## [2248,]  0.0446827510 -9.016319e-01 -6.317716e-01 -0.4834860147 -
4.392279e-01
## [2249,]  0.3670356631  3.507533e-02 -4.871624e-02  0.1925769358
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## [2250,] -0.1853425642 -1.767406e-02 -4.533255e-01  0.0068235854
1.726744e-01
## [2251,] -0.2025393278  8.261958e-01  1.163159e+00 -0.1568881056
5.354267e-01
## [2252,]  0.3705966264 -7.883148e-02  1.163443e+00  0.6393735659
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## [2253,]  0.6163599831 -1.365438e-01 -1.575390e+00  0.9375879296
1.381766e+00
## [2254,]  0.1203879318 -1.905615e-01 -2.446751e-01  0.1209893629
1.036020e-01
## [2255,] -0.1783671679  5.113186e-01  1.069881e-02 -0.6315953360
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## [2256,] -0.1841378155  5.232831e-01 -1.777569e-01  0.0274966289
1.089605e-01
## [2257,] -1.2963797870 -2.325170e-01  9.696556e-01 -1.1797225992 -
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## [2258,]  0.6989835489 -2.617039e-01 -3.907321e-02  0.6195374924
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## [2259,]  0.0488804168 -4.174398e-02 -2.327100e-01  0.2259365412 -
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## [2260,] -1.7229145744 -7.577719e-01 -1.069079e+00 -0.4246534153
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## [2261,]  0.2184657991 -1.277796e+00 -2.413530e-01  0.3203778449
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## [2262,] -1.3559452801  8.216887e-01 -1.768079e-01 -0.8338322212
6.918454e-01
## [2263,] -0.2324953182  5.358260e-01 -2.533640e-02 -0.5458216657
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## [2264,]  0.3566893001 -7.644837e-02 -2.729044e-01  1.3222231013 -
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## [2265,]  0.4663912519 -6.191513e-01 -1.872433e+00 -0.2287363668
2.615809e-02
## [2266,] -2.3754491327 -2.699541e-01  1.585200e+00  0.1660170404
1.817653e-01
## [2267,]  0.7904067016  1.638411e-01  1.176513e+00 -0.3348925286 -
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## [2268,] -0.0430959679 -7.907673e-01 -1.103255e+00  0.6729570165 -
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## [2269,] -2.5699079725 -7.762681e-01 -4.254734e-01 -0.6927190133 -
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## [2270,]  0.7529012931 -9.387467e-02  4.593329e-01 -0.3737090820
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## [2271,] -0.3035941720  3.118623e-01 -5.040176e-01  0.5649890794 -
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3.607268e-01
## [2272,] -1.1161157648 -1.356753e-01 -1.038476e+00 -0.0089984865
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## [2273,]  0.7966659718  1.375860e-01 -1.501833e+00  0.9267022653
1.253144e+00
## [2274,]  1.1831742369  1.110478e+00 -9.409179e-01  0.8868946883 -
1.000612e+00
## [2275,]  1.0783922873  1.969212e-01 -9.088884e-01  0.2695849636
1.746988e+00
## [2276,] -0.6430584240 -4.969798e-02 -2.499244e-01  0.3932549927 -
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## [2277,]  0.3326222622  6.755066e-02 -1.304365e-01  0.2456173010
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## [2278,] -1.4354370659  1.656189e-01 -6.815688e-01 -0.9156837272
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## [2279,]  0.0203186197  2.461395e-02  1.188108e-01 -0.1509243223 -
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## [2280,]  0.0865178494  1.724549e-01  9.218258e-01  0.6962393409
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## [2281,]  0.1589267255 -7.800583e-02 -1.988375e-01  0.2624545430 -
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## [2282,] -1.4329100628 -3.746655e-01  8.364593e-01 -1.1889680245 -
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## [2283,]  0.0533332056 -7.566731e-01 -9.190310e-01 -0.0484568993 -
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## [2284,] -1.4595670488 -1.115861e+00 -3.151680e+00 -2.4611976605 -
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## [2285,] -0.6230980518  5.752447e-01 -1.855712e-01 -0.9333490689
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## [2286,]  0.0601072380 -3.087189e-01  2.851830e-01 -0.2353189676 -
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## [2287,] -0.4971027960  4.327098e-01 -4.648992e-01 -0.4364603896
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## [2288,]  1.0529822783  1.537181e+00 -7.768722e-01  0.3001680614 -
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## [2289,] -0.2231571302 -5.971314e-02  2.235483e-01 -1.9705887731
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## [2290,]  0.5497534141  2.269175e-01 -6.556998e-01 -2.4627278820 -
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## [2291,] -2.6797040669  4.877883e-01 -9.475987e-03 -1.2460949278 -
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## [2292,] -0.0025519626  2.775416e-02  7.212543e-02 -0.1099993281 -
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## [2293,] -0.0031141257  2.279774e-01  1.558215e-03  0.0137872780 -
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## [2294,]  1.0085099129  1.662669e+00 -4.737248e-01  0.2763892615 -
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## [2295,]  0.0161439998  2.154089e-01  2.112244e-01 -0.4674956373
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## [2297,]  0.9325257602 -2.043917e-01 -2.341195e-02 -0.5974480696 -
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## [2298,] -2.9267586580  6.189760e-02  4.845826e-01 -0.1443323438 -
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## [2299,]  0.5206574526 -1.176210e-01  5.966623e-01 -0.3792207305 -
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## [2300,]  0.3630796462 -1.185044e-01  3.633980e-01 -0.5017244139
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## [2301,] -0.2196656067  1.459941e+00 -4.207343e-01 -0.8401006741
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## [2302,]  0.3041998066 -4.660643e-01  3.002987e-01 -0.6315958764
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## [2303,] -0.9356801182  7.508648e-02  4.762464e-01  0.2891979679
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## [2304,] -0.9315792278 -4.837490e-02 -1.385922e+00  0.7135235988 -
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## [2305,] -0.1565410285  2.629041e-01 -3.215018e-01  0.4372391248 -
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## [2306,]  0.8446432718  1.155364e-01 -1.541303e+00  1.0179697589
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## [2307,] -1.7107064337  2.419330e-01  9.172576e-01  0.8460047025 -
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## [2308,]  0.2451840512 -3.744321e-02 -2.778321e-01  0.7370367377 -
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## [2309,]  1.7332586870  1.878512e-01 -1.445910e-01  0.5276848602
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## [2310,] -0.0116798953 -3.802077e-02 -1.923313e-02  0.8434971903 -
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## [2311,] -0.7671651565  5.933836e-01  1.727108e+00  0.0991557544
1.384209e+00
## [2312,]  0.0263608497  2.583576e-01  9.416781e-01  0.2661158467
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## [2313,]  0.2793867825 -8.550442e-01  4.057144e-01  2.2260866843 -
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## [2314,] -0.9033210316  1.021156e-01  1.892909e+00  0.9201248923
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## [2315,]  0.5033871768 -9.807165e-03  1.625923e+00  0.8912433324 -
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## [2316,] -0.2009506635  1.698744e+00  6.215135e-01 -0.0911447417
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## [2317,]  0.1589968885  3.906921e-01  1.127094e+00  0.4982570051
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## [2318,] -1.3412932639 -5.481776e-01 -8.678618e-01  0.3340113434
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## [2319,] -0.3953777316  9.349398e-02  5.643024e-02  0.9388250117
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## [2320,] -1.2349468928  1.094990e+00  4.617515e-01 -0.0077284206
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## [2321,] -1.2781820306  3.606999e-01  1.361705e-01  0.4558062186
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1.514209e+00
## [2322,]  1.8550081563  6.167466e-01 -1.655413e-01  0.6195376936 -
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## [2323,]  0.3860313831 -2.938993e-01  4.601571e-01 -0.7419420505
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## [2324,]  0.3807981699 -1.645157e-01  8.577461e-03  0.0457485606
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## [2325,] -0.1828115141  1.681961e-01  2.182177e-01 -1.0710077877
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## [2326,]  0.3669913039 -9.920485e-01 -6.706465e-01  1.7949775284 -
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## [2327,] -0.5067726992  7.723775e-03  2.979353e-02 -0.7414157957
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## [2328,] -0.2670193105 -3.142318e-01  1.593773e-01 -0.6709670093
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## [2329,] -1.9670933036 -3.281776e+00 -2.535891e+00 -1.2060671178 -
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## [2330,] -1.0307301312 -4.711989e-02 -1.022247e+00  0.1221878854
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## [2331,] -0.1655616532  5.029149e-01  3.515924e-02 -0.5884318704
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## [2332,]  0.4171684777 -2.637817e-01 -1.890969e-01  0.1164463344
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## [2333,] -0.5250926775 -4.175994e-01 -2.840172e-01 -0.7822231666
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## [2334,]  0.4354363875 -4.104198e-03  3.224104e-02  0.1810521108
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## [2335,]  0.0981387327  1.489227e-01  2.917302e-01 -0.5081477960
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## [2336,] -1.2273039035 -1.471831e+00  3.499758e-02 -0.1102673273
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## [2337,] -0.1332662017  4.364782e-01 -4.047979e-01  0.0848634676
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## [2338,] -0.3545458594  7.137153e-02 -2.109051e-01  0.1361021813 -
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## [2339,]  0.5478045098 -1.185969e+00 -6.864983e-01  0.4234516519 -
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## [2340,] -0.8799321306 -5.997247e-02 -1.077041e+00  0.5441200894
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## [2341,] -0.7779085601  6.429190e-01 -3.382941e-01 -0.5230831465
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## [2342,]  0.8563481556 -1.908510e-01  2.425986e-02 -0.7080990306 -
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## [2343,] -0.4732514541 -1.226103e-01  1.412202e-01 -0.5423985310 -
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## [2344,] -0.2765261633 -2.670484e-01 -5.070303e-01  0.6259534566
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## [2345,] -0.9739816779 -1.556307e-03 -1.178860e+00  0.5776210509
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## [2347,] -3.0708943566 -4.948483e-02  3.256706e-01 -0.1488131870 -
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## [2348,] -0.4850818386  4.872258e-01 -1.093427e-01 -0.8795442249
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## [2349,]  0.0257426404  3.319204e-01 -3.006963e-01  0.1021207807
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## [2350,]  0.1444361248 -3.602168e-01 -2.952256e-01  0.2516915838 -
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## [2352,] -1.8776773266 -6.688333e-01 -1.104144e+00 -0.5212624692
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## [2353,] -0.0794143184 -4.287791e-01  1.970636e-01 -0.3366416941
1.003751e-01
## [2354,] -0.2252121099  1.488178e-01 -1.851113e-02 -0.3350633974 -
2.530781e-01
## [2355,]  0.1780385114 -4.327323e-01 -1.167701e+00  0.5640648861 -
1.207678e+00
## [2356,] -1.0100742018 -7.471075e-03  9.305364e-01  0.1782501526
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## [2357,]  0.9286136134 -2.117876e-01 -7.303702e-03 -0.6021389091 -
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## [2358,] -0.0622664577 -3.647174e-01 -8.873561e-02  0.7187251599 -
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## [2359,] -0.0202840209 -1.074585e-01 -3.222855e-01  0.4507940299 -
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## [2360,]  0.1245832367 -1.514101e-01 -3.268418e-01  0.6569692410 -
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## [2361,]  1.1080960903 -6.791589e-01 -1.079647e-02 -0.1737386585 -
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## [2362,]  0.6200899467 -1.811349e-01  7.307709e-01 -0.5189748518
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## [2363,] -0.7815173208  9.528546e-02 -9.766061e-01  0.5121825264
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## [2364,] -0.1433426391  4.781009e-01 -6.909405e-02 -0.0767959500
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## [2365,]  0.0395713946 -4.892945e-01  3.254877e-01 -0.3988650827
1.234067e-01
## [2366,]  0.2273643361 -6.422851e-01 -3.257173e-01 -1.2869156174 -
1.891595e+00
## [2367,] -0.1254777650 -6.374500e-02 -2.401082e-01  0.2356273568 -
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## [2368,]  0.4719100617 -1.656561e-02  7.776103e-02  0.1489642859
2.682537e-01
## [2369,]  0.3209502933 -5.030312e-02  1.403634e-02 -0.3055353191
2.977688e-01
## [2370,] -0.9212182350  9.279356e-01  5.192362e-01  1.2868566562
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## [2372,]  0.4179672575 -1.411330e-01  1.991428e+00 -0.1980997135
1.206017e-01
## [2373,] -1.1074557710 -2.238992e-02 -7.068067e-02 -0.1366165471
2.386090e-01
## [2374,] -0.4801904359  4.869443e-01 -4.954020e-02 -0.9457975322
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## [2375,] -0.3249735515  1.243164e-01 -2.533772e-01  0.6235516385 -
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## [2376,] -1.3346757422 -2.189588e-01  9.879202e-01 -1.2678746038 -
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## [2377,] -3.0978453897 -2.535870e-02  2.914573e-01 -0.1666398487 -
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## [2378,] -0.7196937863 -7.408358e-02 -8.813431e-01 -0.7663174097
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## [2379,]  1.5047199218  4.686493e-03 -1.355710e+00 -0.0733231891
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## [2380,]  0.6044124965 -6.708344e-02  5.230825e-01 -0.5084624488
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## [2381,]  0.2796133102 -2.754207e-02  5.711516e-01 -1.1150869116
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## [2382,]  0.0253519001 -2.666194e-01  2.567871e-01 -0.2451204060 -
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## [2383,]  0.0264300969 -8.839420e-01 -7.552688e-01 -0.3484493293 -
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## [2384,] -0.4402497488  9.368507e-02  4.824217e-01  0.3298219583
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## [2385,]  0.4964132765 -2.072407e-01  4.699427e-01 -0.5727991359
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## [2386,] -0.1137256978 -2.250591e-01 -3.248368e-01 -0.8513789491
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## [2387,]  0.0531897825 -2.406595e-01  1.988900e-01  0.4296551528 -
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## [2388,]  0.2729167440 -6.522206e-01 -3.357148e-01 -1.2587715900 -
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## [2389,]  0.5545415622 -1.250393e-01 -2.600047e-02  0.1100248346
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## [2390,]  0.4036032608 -3.073588e-02 -1.882033e-01  0.1703346947
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## [2391,]  0.1973127709 -2.008134e-02  3.381905e-01 -0.6097010165 -
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## [2392,]  1.1793347403  1.569484e-01 -8.214297e-01  0.2983860101
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## [2393,] -0.3066493351 -1.921160e-01 -2.467892e-01  0.2196108081 -
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## [2394,] -0.9054998876 -5.037177e-02 -1.168058e+00  0.6584169488
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1.760875e-03
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## [2398,]  0.1912914341 -6.445319e-01 -4.469547e-01  2.0561880955 -
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## [2399,]  0.9300328975  1.710654e+00 -5.459355e-01  0.3004460159 -
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## [2400,]  0.8724311744  1.063150e-01 -1.456866e+00  0.9254871129
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## [2401,]  0.1136103254 -8.477772e-02  1.645474e-01  0.7348207734 -
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## [2402,] -0.2763165665  3.375560e-01 -3.450521e-01  0.3506230635 -
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## [2403,]  0.2850255756 -2.498481e-01 -3.799430e-01  0.9132419408 -
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## [2404,]  0.4054003435 -9.023657e-02  2.415892e-01 -0.3250677641
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## [2406,]  0.4428189748 -1.209255e-01  2.841578e-01 -0.3089435519
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## [2407,] -2.9841220118 -1.182216e-01  4.426285e-01 -0.1758591090 -
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## [2409,]  0.3837577368 -2.115744e-01 -2.003015e-01  0.0539301718
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## [2411,]  2.9668694780  6.087683e+00 -1.046978e+00 -3.0143454064 -
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## [2414,] -1.1918811434  7.700554e-02 -2.382775e-02  2.5964443681 -
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## [2415,] -0.1602064904 -1.228852e-01 -5.070118e-01  0.7736347177
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## [2416,] -0.3338671475 -4.563659e-03 -4.660284e-01 -0.4618138282
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## [2417,]  1.0458300716 -2.890142e-01  9.936741e-02 -0.6401383592 -
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## [2419,] -1.8211643842 -7.147176e-01 -9.658268e-01 -0.6214676385
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## [2424,]  0.1914364767  3.916088e-02  5.266279e-01 -1.1296631828
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## [2447,]  0.2164612031  8.964749e-02 -5.397848e-01  0.8622107655
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## [2457,]  0.3655956910 -7.237865e-02 -2.611350e-01  0.8203231419 -
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## [2459,]  0.3784908059 -3.391335e-01 -1.203537e-01  0.3476449583
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## [2461,]  0.4814396528 -3.496847e-01 -6.538490e-03 -0.2967672239
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## [2463,]  0.3674124039  1.774573e-01  8.994255e-01  1.3960578158 -
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## [2464,]  1.5364941182 -2.667466e-02 -1.340682e+00 -0.0376499928
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## [2465,]  0.8051090345  1.622195e-01 -4.959474e-01  0.3153672104 -
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## [2467,]  1.1460702951  1.493660e+00 -6.220825e-01  0.2226016457 -
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## [2468,] -1.2585599283  1.244452e+00 -4.333923e-01  1.0669189092 -
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## [2473,] -1.7543530280  9.066430e-02  1.384818e+00 -0.0784091187 -
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## [2474,]  0.6369096561  3.930487e-01  2.350781e-01 -0.4464573840 -
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## [2475,]  0.2228451868 -1.878186e+00 -1.886212e-01 -1.0334991668
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## [2476,] -1.6698119416  3.010863e-01  1.998024e+00  0.8079042809
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## [2477,]  0.5790590839 -1.566991e+00  8.094685e-02 -0.4246527976
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## [2478,]  0.3639080529  8.429975e-01  7.966420e-01 -0.0859467952
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## [2479,]  0.6778518268  2.490978e-01 -1.441601e+00  1.0800802373
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## [2480,]  0.3875285160  5.224047e-01 -3.013509e-01 -0.5671917197
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## [2481,]  0.6729172785 -1.047678e-01  4.829854e-01 -0.3170329039
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## [2482,]  0.2218498080 -2.056943e-01  5.472854e-01  0.1701217896 -
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## [2483,]  0.7445480369  3.444916e-02 -4.775542e-01 -0.7578611485
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## [2484,] -0.4088330993 -3.209253e-01 -1.198716e-01 -0.8209116553
3.206064e-01
## [2485,] -0.2858116654 -2.569032e-01 -3.198917e-01 -0.7061702761
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## [2486,] -1.1257672642  1.368398e+00 -2.801934e-01  1.0139440948 -
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## [2487,]  0.7816742472 -2.976198e-01 -5.401715e-02  0.6650182239
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## [2488,] -0.3055504537 -1.315163e-01 -4.898906e-01 -0.1273129014
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## [2489,]  0.3297165363 -2.443528e-01 -2.292945e-01  0.4254711907
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## [2490,] -0.1215692088 -7.505898e-02 -1.919136e-01  0.0400780679 -
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## [2491,] -0.0105145826 -4.271148e-01  1.504625e-01 -0.1786319405
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## [2492,]  2.3647121673  1.946966e+00 -5.680385e-01  0.5463656038 -
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## [2493,] -1.0202796127 -7.675381e-01 -1.090002e+00 -0.3229677189
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## [2494,]  0.2169237880 -5.175868e-01  4.143466e-01 -0.2422977394
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## [2495,]  0.2424523251 -1.857197e-01 -3.747402e-02 -0.3898907131
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## [2496,]  0.5966834860  1.129678e-01 -1.471652e+00  0.9878069603
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## [2497,] -0.1438613979  3.574308e-01  3.698513e-01 -1.2268004562
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## [2498,]  0.6821753767  2.545801e-02 -5.015446e-01  0.2108383275 -
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## [2499,] -1.4535217098 -3.545998e-01  9.288601e-01 -1.3280220290 -
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## [2501,] -0.3910500841  3.641231e-01 -3.591746e-01 -0.4736164196
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## [2502,]  1.2372926888  1.174167e-01 -8.520550e-01  0.3968155033
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## [2504,]  0.0593555775 -2.729026e-01 -2.156547e-02 -0.4551320888
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## [2506,] -0.8143747809 -1.197927e-01 -9.944334e-01  0.4822997087
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## [2507,] -1.0795605116 -2.152892e-01 -1.012167e+00  0.0878529706
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## [2508,]  0.5700597294 -2.595366e-01  2.920531e-01  0.3406548125 -
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## [2509,]  0.3668435605 -2.273743e-02  3.288124e-01  0.2468211334 -
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## [2510,] -0.2610228109 -6.582141e-01  1.910308e-01  0.1019397412 -
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## [2511,]  0.3489298809 -8.245406e-02  4.574282e-02 -0.3635704199
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## [2512,]  1.4268834368  1.147001e+00 -9.105322e-01  0.0822990472 -
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## [2513,]  0.3290789830 -2.677647e-01 -2.270576e-01  0.4273856379
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## [2514,]  1.2110036298  1.478424e+00 -6.351210e-01  0.2252410900 -
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## [2515,]  0.9903787373 -2.782414e-01  1.494841e-01 -0.7472716198 -
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## [2516,]  0.0454470635  2.192700e-01  2.047726e-01 -0.4275509803
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## [2517,]  0.2565225538 -2.305285e-01  4.400844e-01  0.3456479040 -
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## [2518,] -0.9684222900 -2.456907e-02  1.266879e+00 -0.0775236748 -
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## [2520,] -0.1322042325  4.713487e-01  1.205856e-01 -0.7067148042
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## [2522,]  0.2594623151  3.382125e-01  7.738009e-01  1.6314575683 -
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## [2525,]  1.3703356420  1.081493e+00 -5.741784e-01  1.3221512175
1.618673e+00
## [2526,]  0.2855670176  2.278780e+00 -2.379867e-01  0.1433466434
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## [2527,] -1.6978033657  3.438575e-01  1.348905e-01 -0.1206687955 -
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## [2538,]  0.5381462481 -1.872178e+00 -2.331183e-01 -0.8987359256
4.763335e-01
## [2539,]  0.3562666667  2.921499e-01  1.322027e+00  0.3162390092
1.778971e-01
## [2540,] -1.8110873950  1.329763e+00  3.214060e-01 -0.1290805157 -
7.231959e-01
## [2541,]  0.4639459169 -7.811412e-01  5.234204e-01 -0.0641725483
1.843124e-01
## [2542,] -0.2161775048  1.720357e-01  6.273030e-01  0.3318576306
5.670844e-01
## [2543,]  0.7673510257  2.123477e-01  1.126157e+00 -0.3170320648 -
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## [2544,] -0.2180123968 -2.239811e-01  9.555597e-01  0.4597405998
3.096775e-01
## [2545,]  0.5386788170 -1.169826e+00 -7.827283e-01  1.0994194083
2.036244e+00
## [2546,] -0.6570907498 -2.886904e-03 -6.976699e-01  1.4995753970
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2.657976e-01
## [2547,]  0.5571772740 -4.841710e-01  8.200396e-01 -0.0153067588
2.879746e-01
## [2548,]  0.3135618732 -2.003329e+00 -3.916667e-01 -0.9260830495
1.185453e-01
## [2549,] -0.0692301563  3.101711e-01  7.433425e-01  0.7039235583
2.714485e-01
## [2550,]  0.0582206532  1.799354e-01  9.404700e-01  0.2625606402
4.642163e-01
## [2551,]  0.0067173623  6.656427e-04 -4.075608e-02  0.7983955999 -
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## [2552,]  0.6823670160  2.030852e-01  2.356474e+00 -1.3216278640
5.997881e-01
## [2553,] -2.3540144930  1.016045e+00  9.288111e-01  0.1093773204 -
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## [2554,]  0.0732816727  9.929151e-03  9.462347e-01  0.6972744300
2.019234e-01
## [2555,]  0.5075884935  4.679924e-01  1.693313e+00  0.0798012204
2.418589e-01
## [2556,] -0.4461190632  7.566057e-01  6.632147e-01  0.6675254033
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## [2557,] -0.1264922305  8.564387e-01  7.953265e-01  0.8115989161
2.326662e-01
## [2558,] -1.7870979549 -2.075113e-01  1.006830e+00  0.3531714459 -
1.312887e+00
## [2559,]  0.2000963186 -2.369485e-01  1.686785e+00 -1.7526301091
9.377233e-01
## [2560,]  0.1454121798  1.369532e-02  1.616066e+00 -0.3123335003
4.134604e-01
## [2561,]  0.7925696050  6.620650e-01 -3.006467e-01  0.9481971835
2.101162e+00
## [2562,] -0.3440014644  8.254268e-01  8.636562e-01  0.0618747538
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## [2563,] -0.8754514669  2.333816e-01 -1.245626e-01  0.8831687942
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## [2564,]  0.2549978039  3.033486e-01  1.104000e+00  0.3117326244
3.019834e-01
## [2565,]  0.8946890475  2.498068e-01  3.029576e-01 -0.6674905133 -
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## [2566,] -0.2979466001  3.699568e-01  1.273251e+00 -0.4188198964
6.377975e-01
## [2567,] -0.0342623128  6.146434e-01  8.422896e-01  0.9210479120
4.067591e-02
## [2568,] -0.2080810521  3.891130e-01  6.786650e-01  0.5190338297
4.412241e-01
## [2569,]  0.3322528610 -8.596519e-01  6.407252e-01 -0.3272329177
3.823208e-01
## [2570,]  0.4756527930  2.243095e-01  1.522157e+00  1.3029450103 -
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## [2571,] -0.5687232942  4.693227e-01  4.881652e-01  0.0218641400
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8.186001e-01
## [2572,]  1.5615133316 -4.146390e-03  1.066625e-01  2.8547530638
7.824115e-01
## [2573,]  0.2492281118  5.745094e-02  1.232269e+00  0.2728291152
2.705840e-01
## [2574,]  0.4772713036  1.506308e-01  1.330548e+00  0.7458257780 -
7.848745e-02
## [2575,]  0.0974209700  2.641555e-01  1.254426e+00 -0.0820582337
5.133779e-01
## [2576,]  0.2501942587 -7.785793e-01  9.832082e-01 -0.7096135066
3.807829e-01
## [2577,] -1.0698909801  1.180033e-01  1.598288e+00 -0.0315698426
1.613756e+00
## [2578,] -0.3647170377  9.443788e-01  8.400981e-01  0.1865185911
4.520996e-01
## [2579,]  0.3039351631  2.036239e-01  1.005002e+00  1.1667437625 -
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## [2580,] -0.0345300300  6.130744e-01  1.040592e+00 -0.1433026587
6.809439e-01
## [2581,] -0.5252812389  8.126063e-01  8.762905e-01 -0.1181887198
6.489022e-01
## [2582,]  0.6746342874  6.275139e-02  1.834423e+00 -0.0219337914
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## [2583,]  1.2054152625 -1.489661e+00 -2.414806e-01 -0.6866880459 -
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## [2584,]  0.3194785982  7.609617e-03 -1.987558e-01  0.2494709229 -
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## [2585,] -0.0323284865  5.026746e-01  5.913032e-01  1.2962207500 -
1.419638e-02
## [2586,]  1.4068318394  1.529166e+00 -3.180622e-01 -0.1532286138 -
5.812872e-01
## [2587,] -0.6195157650  3.307553e-02  2.348905e-01  1.9137139503
6.123120e-01
## [2588,] -0.6749790847  1.417484e-01  7.415607e-01  0.7866108090
1.060712e+00
## [2589,]  2.5956109943  3.487434e+00 -1.421948e+00 -2.0899564220 -
5.092634e-01
## [2590,] -0.4054933858  2.224073e-01  3.537680e-01  0.4099485352
3.014828e-01
## [2591,]  0.9320797793  8.839859e-01  1.247441e+00 -0.2438275550
1.160125e-01
## [2592,]  0.4686474878 -2.115919e-01  9.533375e-01 -0.0583812329
2.982688e-01
## [2593,]  0.0654722306 -1.091915e+00 -4.323012e-01  0.4410338593
4.838843e-02
## [2594,] -3.5560276166 -2.789360e+00 -2.787574e-01 -0.1794303352 -
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## [2595,]  0.3630721641 -1.096956e+00  7.172892e-01 -0.1698918472
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1.275033e+00
## [2597,]  0.3454808126 -1.116341e+00 -2.231198e-01  0.4543872160 -
7.916063e-02
## [2598,]  0.1035113566 -1.463168e-01  1.127031e+00  0.2126114118
3.209599e-01
## [2599,]  0.8220040598 -3.934245e-01 -1.909771e-01  0.1949984282 -
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## [2600,]  2.2263400280  3.966930e+00 -2.281450e+00 -1.2508601051 -
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## [2601,]  2.7833945613  6.320610e+00 -1.136720e-01 -1.4757406057 -
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## [2602,]  0.8249099166  3.623340e+00 -4.533719e-01 -0.6207560254 -
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## [2603,]  0.3295088021 -4.380576e-01  9.296186e-01 -0.0434188592
2.742291e-01
## [2604,]  1.1825601767 -1.837751e+00 -6.398188e-01 -0.8121079451 -
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## [2605,] -1.1428735806 -3.149741e+00 -1.810998e+00 -0.9352488432
1.110419e+00
## [2606,]  0.8131183837 -5.561846e-01 -4.289917e-02 -0.6405247810
1.090379e-01
## [2607,]  0.6207194636 -2.099706e+00  4.178024e-02 -1.8344176948
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## [2608,]  0.1049264009 -9.368579e-02  1.913369e+00 -0.3964702731
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## [2609,]  0.8603912458  2.739932e+00  5.005132e-02 -1.1808576944
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## [2610,]  0.0781807722 -1.360338e-01  3.623608e-01  2.1196603064 -
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## [2611,] -1.4932630484  9.952168e-01  3.760641e-01  0.9957007047
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## [2612,] -0.9847722610 -2.623275e-02 -9.629297e-01  0.0822060661
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## [2613,] -0.1497284326 -2.966427e-01 -5.370567e-01 -0.2957740453
7.866304e-02
## [2614,]  0.3692011841  3.687502e-02  1.303875e+00 -2.1254168868
2.504800e-01
## [2615,]  0.1432363030 -6.150018e-01 -3.606330e-01  1.8614842098 -
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## [2616,] -0.2826923989 -1.590662e-01 -3.357375e-01 -0.2688521406
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## [2617,] -0.4296859693 -3.183542e-02 -5.696317e-01 -0.2107044888
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## [2618,]  0.2798859212 -6.464593e-01 -3.561656e-01 -1.2139251076 -
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## [2619,]  1.1356615402 -1.243539e-01 -9.814938e-01  1.9731565914
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## [2620,] -0.8081560932 -1.017777e-01 -1.078241e+00  0.5799088596
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4.294494e-01
## [2622,]  0.6389028717 -1.728143e-01  7.336702e-01 -0.4619728007
2.682681e-03
## [2623,] -0.3635673388  5.127048e-01 -2.794661e-01 -0.4192521908
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## [2624,] -0.0318839397  6.349380e-02  1.138273e-01 -0.1506290870 -
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## [2625,] -1.0993984084 -1.188619e+00 -6.907842e-01 -0.3931258351
4.628444e-01
## [2626,] -1.7879402531  5.558423e-02  9.132358e-01  0.1489993190
1.453469e+00
## [2627,] -0.3366609127 -1.336339e-01 -4.310524e-01 -0.2192164573
2.308875e-01
## [2628,] -0.2663781886 -1.698505e-01 -4.307358e-01 -0.1543208625
2.655599e-01
## [2629,]  0.2286491365 -4.148938e-02  3.875302e-01 -0.5855974629 -
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## [2630,]  0.4437766236 -3.366049e-01 -1.563867e-01  0.4859160524
1.939882e-01
## [2631,] -1.8626290729 -3.221933e-01  3.780304e-02 -0.3601847765 -
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## [2632,]  0.0108212254  6.236947e-02 -4.545306e-02 -0.0389585932 -
1.355125e-01
## [2633,]  0.4328072888  6.024675e-01  2.037238e-01  0.7682521822 -
2.603332e-01
## [2634,]  0.3309468814 -6.874231e-01 -3.091436e-01 -1.2251671936 -
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## [2635,]  0.0785124695 -3.464537e-01 -1.268003e-01 -0.3123243113
3.760989e-01
## [2636,] -1.6623621220  3.733574e-01  6.920032e-01 -1.3675336612 -
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## [2637,]  0.3579485703 -6.849379e-02 -1.030198e-01  0.0479593135
2.458459e-01
## [2638,] -0.1462769668 -2.258191e-01 -1.487603e-01 -0.0173558072 -
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## [2639,] -0.3988908900  1.467546e+00 -4.940079e-01 -0.6968837448 -
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## [2640,] -0.9446831632 -8.913369e-02 -8.664891e-01 -0.0142614485
3.585242e-01
## [2641,]  0.8486498712  1.049856e-01 -1.495009e+00  0.9727433979
1.257528e+00
## [2642,]  0.1631082210 -1.741024e-01 -2.292507e-01  0.1462479524
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## [2643,]  0.0875301758  1.147934e-01 -3.762310e-01  0.2512269417
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## [2644,]  0.3044979427 -2.514018e-02  8.657967e-02 -0.3991700372
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## [2645,]  0.5848912927  5.945691e-01 -2.732889e-01 -0.4212682852
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6.717509e-01
## [2647,] -0.3279721139  1.219081e-01 -1.836998e-01  0.5123868731 -
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## [2648,] -0.9065335384 -6.070398e-02 -1.214530e+00  0.3605655596
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## [2649,]  0.4767061162  5.150133e-01  8.584983e-01  0.5866320844 -
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## [2650,]  0.2839351562  9.484399e-02  1.159408e+00 -2.0455744672
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## [2651,]  0.5049070529  4.274851e-01 -2.767870e-01 -0.5282591856
2.098835e-01
## [2652,]  0.3074820476 -3.868067e-02 -5.458430e-02 -0.1034195970
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## [2653,] -0.8500543671 -4.390164e-02 -1.072970e+00  0.5734348217
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## [2654,]  0.0645477800  3.203272e-01 -3.260998e-01  0.2239724850
3.635498e-01
## [2655,] -0.2958502042  4.996492e-01 -2.603720e-01 -0.3693351149
4.817700e-01
## [2656,] -0.0482804290  9.006636e-02 -1.380228e-01  0.0838513736 -
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## [2657,] -0.1444614337  4.603119e-01  7.674369e-02 -0.6420964091
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## [2658,] -0.8326790779  6.592417e-01 -3.747584e-01 -0.4754197886
1.625382e-01
## [2659,] -0.3614331165 -5.099041e-02 -5.888600e-01 -0.0857514001
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## [2660,]  0.2305033479 -6.276790e-01 -3.450292e-01 -1.2588424864 -
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## [2661,] -1.0507691799  1.200301e-01 -2.791594e-01 -0.0923703921 -
9.393114e-01
## [2662,] -0.3902192754  4.384928e-01 -2.831479e-01  0.1957492107 -
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## [2663,]  0.6006331006 -1.855237e-01 -4.635009e-02  0.2142361496
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## [2664,] -0.3156530246  5.135421e-01 -2.903931e-01 -0.3379283686
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## [2665,] -0.1934050427  1.220793e-01  8.893834e-02  0.2477339483
1.155963e-02
## [2666,]  0.7011432782 -1.121884e-01  6.238774e-01 -0.5473199222
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## [2667,]  0.3440793883 -2.977086e-01  7.151829e-01  0.0069869397 -
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## [2668,]  0.8224182908 -3.265728e-02 -1.408612e+00  0.8840822623
1.358655e+00
## [2669,]  0.1537650922 -9.533663e-01 -5.107394e-01 -0.5645329223 -
4.152207e-01
## [2670,]  0.8932467043  1.106702e-01 -1.400592e+00  0.8622234567
1.295246e+00
## [2671,]  0.4814755494 -3.556194e-01  6.189821e-02 -0.4283812987
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2.426124e-02
## [2672,] -0.1229292485 -3.308800e-01  1.025039e+00  0.2223485307
4.632240e-01
## [2673,] -0.0206277620  8.887921e-02 -3.465238e-02 -0.0632640547 -
1.403332e-01
## [2674,] -0.8542023870  1.036147e-01 -1.165735e+00  0.3386678390
1.484082e-01
## [2675,]  0.2124130331  3.895245e-01  4.387171e-01  0.2859563294 -
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## [2676,]  0.1411593858 -3.604385e-01  3.626935e-01 -0.2599049592 -
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## [2677,]  0.4138197131 -2.896507e-03  1.168948e+00 -1.9504044496
3.087404e-01
## [2678,]  0.6085442775 -1.970328e-01  1.973305e-01  0.3274839355 -
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## [2679,]  0.0986838758 -1.059872e+00 -4.571719e-01 -1.0142679136
1.051660e-01
## [2680,]  0.9530054349 -2.334017e-01  7.930874e-02 -0.6837831694 -
9.827575e-01
## [2681,] -0.1614832064 -6.314626e-01 -1.108071e-01 -0.2813481426
3.121378e-01
## [2682,]  0.3250434392 -9.869390e-02  6.875767e-01 -0.7213763126 -
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## [2683,]  0.5442991973  1.464961e-01  4.889511e-01 -0.2400437066
1.544678e-01
## [2684,] -0.4120845724 -5.513118e-01 -1.404276e-01 -0.7638884852
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## [2685,]  1.0744339844 -3.463923e-01  1.030109e+00 -0.6713042358
3.169889e-01
## [2686,]  0.3693879499 -1.805275e-01  2.749034e-01 -0.0656662557 -
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## [2687,] -1.8668506182  4.939062e-01 -2.180313e-01  0.0062940295 -
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## [2688,]  1.1826137452 -1.386554e-02 -7.576377e-01 -0.9978952659 -
9.962076e-01
## [2689,] -0.0634650339 -2.428903e-02  5.538158e-01 -0.9470090375 -
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## [2690,]  1.4787733936  5.097317e-03 -1.327805e+00 -0.1073256322
5.093565e-01
## [2691,]  0.8767169474  9.248461e-02 -1.488484e+00  0.9982481213
1.234311e+00
## [2692,]  1.1441708010  1.497275e+00 -7.039158e-01  0.2919945354 -
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## [2693,]  0.1445469668  1.218151e-01  9.309358e-01  0.9096865631
5.198957e-02
## [2694,] -0.0487148277  3.444747e-03  9.102672e-01  0.4862694243
3.242072e-01
## [2695,] -0.1269628363 -1.111151e-01  7.806742e-01  0.4791571754
4.148198e-01
## [2696,] -0.3174682127 -5.207496e-01  2.863014e-01  1.0249034994 -
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## [2697,] -0.7780242037  1.301528e-01  8.691921e-01  0.3719971795
1.107778e+00
## [2698,] -0.2074765281 -6.934764e-02 -5.307787e-02 -0.2318966880 -
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## [2699,]  0.5999977427  4.174947e-01 -1.465147e+00  0.4221296484
1.788401e+00
## [2700,] -0.6295270070 -1.541074e-02 -9.502515e-01  0.6148230135
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## [2701,]  0.5171039985 -3.552778e-02  6.175663e-02  0.1601568731
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## [2702,]  0.0632323261 -3.427557e-02 -1.169609e-01  0.5382039730 -
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## [2703,] -0.1088426983 -2.191153e-01 -2.012650e-01  0.1350537161 -
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## [2704,]  0.1510315541 -1.233043e+00 -8.173134e-01 -0.7613191161 -
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## [2705,] -1.8850435034 -3.131740e-01 -1.351181e-02 -0.2410885252 -
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## [2706,]  0.6939707595  2.685912e-01 -1.334634e+00  0.8814120967
1.164709e+00
## [2707,] -0.0080943176 -1.449792e-01  8.251428e-02 -0.2427681627 -
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## [2708,]  0.3757122311 -1.084578e-01  6.305861e-01 -0.6573962224 -
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## [2709,]  0.7604957675  7.288559e-01 -5.653136e-01  0.5017793659 -
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## [2710,] -0.1314304970 -1.891035e-01  5.183958e-01 -1.0060301325
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## [2711,] -0.8031656618 -7.934272e-01 -6.288631e-01  0.1187247792 -
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## [2712,]  0.2458261501 -1.532966e-01  1.932956e-01  0.3304564312 -
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## [2713,]  0.0652913074 -1.262883e-01 -2.109067e-01 -0.0127036353
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## [2714,] -0.1901064052 -9.200982e-02 -4.828550e-01  0.6785283185
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## [2715,]  0.1437522574  2.409034e-01 -1.652675e-01  0.0443561215
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## [2716,]  0.4693086266 -1.906335e-01  4.394185e-01 -0.4871541646
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## [2717,]  1.0370590182 -2.622867e-01  9.444398e-01 -0.6252487946
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## [2718,] -0.6087194011  7.347151e-01 -1.555324e-01 -0.5532581738
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## [2719,] -0.1014652920 -9.920759e-01 -1.064934e+00  0.6952188648 -
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## [2720,]  0.6447873167 -2.323082e-01  1.643263e-01  0.4809504250 -
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## [2723,]  0.2345579901  6.134149e-02  2.159296e-01  0.3234588743 -
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## [2724,]  0.4276927175  2.321032e-02 -1.422493e-02  0.2063561870
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## [2725,] -1.4238019325 -3.656006e-01  9.835757e-01 -1.3252169321 -
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## [2726,]  0.5147021940 -2.276652e-01  4.641527e-01 -0.4830740211
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## [2727,] -0.5314013209  6.848254e-01  5.171284e-01  0.4009769122
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## [2728,]  0.2747613361 -2.331425e-01  9.679074e-02 -0.5215598710
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## [2729,] -2.0441805433 -4.132762e-01 -1.289675e-01 -0.2705683066 -
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## [2732,]  0.5477929451  7.037439e-01 -5.482055e-01  0.3512741005 -
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## [2733,] -1.1808443795 -1.512092e-01  4.050632e-01 -0.5348006388
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## [2735,]  0.2255587677  7.695679e-01 -2.413004e-01 -0.4326517673 -
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## [2736,]  0.1571531345  4.874757e-04  3.026524e-01 -0.5326590893 -
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## [2737,]  0.0543356654  1.653327e-01 -3.616007e-02 -0.1501931376
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## [2738,] -0.1769282332 -5.111818e-01  2.361750e-01  0.1837075870 -
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## [2739,] -1.5226181408  6.966847e-01 -3.805884e-01 -0.6477233174
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## [2740,] -0.2129207978 -4.359254e-01 -4.073908e-02 -0.6852442098
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## [2741,]  0.5023836986  4.733277e-01 -1.395110e+00  0.2431176906
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## [2742,]  0.5960319753 -8.389098e-02  5.724016e-01 -0.4944047579
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## [2743,] -0.0572736428 -4.899365e-01  6.874338e-01  0.5557810161 -
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## [2744,]  0.2931416953 -6.274555e-02  6.259209e-01 -0.6587034838 -
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## [2745,] -0.5255772738  4.971584e-01 -4.554513e-01 -0.3556360764
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## [2748,] -0.2267598610  3.370893e-01 -3.878186e-01  0.4210495220 -
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## [2749,] -1.8566793983 -8.913657e-01 -1.033375e+00 -0.5874618348
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## [2750,] -0.1049000071 -9.648708e-01 -1.653240e-01 -1.3772053717 -
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## [2765,] -1.5627147807 -1.340791e-01 -2.786858e-01  0.6217042567 -
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## [2767,]  0.4367279585 -5.446632e-01  5.899273e-02 -0.0494417383 -
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## [2768,]  0.1901229640  3.606692e-03  3.449148e-01 -0.5543403347 -
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## [2769,] -0.4387167962  1.269696e-01 -7.974899e-03 -0.7637252618
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## [2781,] -0.2167342488  1.566924e-01  3.270650e-01 -1.2080350056
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## [2782,]  0.3012278987 -1.187030e+00 -7.046159e-01  1.7444199657 -
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## [2783,]  0.1655316017 -1.123540e+00 -6.505498e-01 -0.7889570585 -
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## [2785,]  0.4692830045 -2.641347e+00 -1.507718e+00 -1.3448603324 -
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## [2786,] -1.8409568651 -6.930769e-01 -1.045116e+00 -0.5082706235
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## [2789,] -0.2837893265  4.682002e-01 -2.166306e-01 -0.3900953153
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## [2792,]  0.0397773139 -5.227162e-01  5.253308e-01 -2.2407966730
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## [2793,]  0.2495931917 -2.382643e-01  1.716152e-01 -0.4166995415
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3.832364e-01
## [2797,] -0.1838226418  2.775587e-01 -2.799944e-01  0.3633684414 -
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## [2798,] -2.9427743333 -1.335909e-01  4.328200e-01 -0.1044446911 -
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## [2799,] -1.8110111733 -9.099469e-01 -1.034317e+00 -0.6114124095
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## [2801,]  0.7354052535  7.442311e-01  8.767775e-01  0.7396501086 -
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## [2802,]  1.0395687208  3.266357e-01  6.554696e-01 -1.8789830019 -
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## [2803,]  0.5381190260 -1.274460e-01  9.171527e-02 -0.0093581148
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## [2804,]  0.1421929860  1.859661e-01 -4.836428e-02 -0.4872744205
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## [2805,] -0.8833868066 -3.485527e-02 -1.050483e+00  0.4875332007
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## [2806,] -2.1221169853 -3.710686e-01 -6.296822e-02 -0.4644179980 -
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## [2807,] -0.9635220957 -3.042253e-02  8.600933e-01  0.3345484334
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## [2808,]  0.0401178706  5.165923e-02 -1.413783e-01  0.3563840848 -
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## [2809,] -0.0750345860  4.883837e-01 -2.238005e-01 -0.1610050766
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## [2810,]  0.0719315525 -2.941839e-01  1.058564e-04 -0.3972695740
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## [2811,] -1.7079845875 -7.547624e-01 -8.699475e-01 -0.6523229489
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## [2812,] -0.5358476455  7.282757e-01 -6.915703e-01  0.4019366107
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## [2813,] -0.6741147577 -6.162739e-01 -4.866295e-01 -0.1899158827
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## [2814,]  1.5414809201 -2.220450e-02 -1.324017e+00 -0.0644036912
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## [2815,] -0.4788330455  4.846292e-01 -3.097885e-01 -0.5710828771
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## [2816,] -0.1529899738 -5.195454e-01  3.348653e-01  0.1083268196 -
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## [2817,]  0.3257971939  3.644080e-02  1.164086e+00 -1.9825292925
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## [2818,]  0.4583734756 -1.473237e-02  1.365819e-01  0.0817538280
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## [2819,]  1.3262910887 -2.987392e-02 -9.029389e-01  2.1358923932
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## [2820,] -2.9871291277 -1.101794e-01  4.291292e-01 -0.1862653582 -
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5.152930e-01
## [2822,] -1.3426559171 -4.090418e-01  9.573854e-01 -1.2179789533 -
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## [2823,]  0.4722095516 -2.123566e-02  1.070268e+00 -0.5225019147
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## [2824,] -0.8654213365 -2.750489e-01 -9.026800e-01 -0.1960882992 -
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## [2825,] -0.2891780646  1.862938e-01 -9.018607e-02 -0.2164494933 -
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## [2826,]  0.2391343828  3.576812e-01 -3.020803e-01  0.6247246378
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## [2831,]  0.3743044022 -7.255039e-01 -9.027002e-02  0.1162295738 -
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## [2834,] -1.7478678389  4.480388e-01 -2.064279e-01  0.0738967511 -
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## [2835,]  0.7164496593 -2.768654e-02 -4.500969e-01 -0.1243453049 -
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## [2836,] -0.9265725532 -6.344557e-02  9.481428e-01  0.3161111408
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## [2837,]  0.5767072225 -6.493815e-01 -8.501342e-02 -0.7216220156
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## [2838,] -1.6820198405  3.919277e-01 -9.993511e-02  0.0357693333 -
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## [2840,]  0.8036406692 -2.125315e-01 -1.481665e+00  0.9196935736
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## [2841,]  0.4959205234 -1.394015e-01  4.159121e-01 -0.4556385044
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## [2842,] -1.3788763698 -8.838761e-01 -2.062399e+00 -0.0429559056
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## [2843,]  1.0858047670  1.546031e+00 -7.806175e-01  0.4083452917 -
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## [2844,]  0.5072818614 -5.519075e-01  7.594942e-02  0.0309429442 -
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## [2845,] -0.3545294354  4.452293e-01 -2.246679e-01  0.1041848947 -
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## [2846,] -0.0766650341  2.039487e-01  2.359310e-01 -0.7344902085
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2.496476e-02
## [2847,] -0.1724960472 -6.201390e-01 -6.230614e-02 -0.3116008941
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## [2848,]  0.1743367032 -1.226901e+00 -7.300996e-01 -0.8684966120 -
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## [2850,]  0.3172229202 -1.095672e+00 -6.286814e-01 -0.8888953378 -
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## [2852,]  0.3276287123  6.812505e-01 -2.479003e-01 -0.2508363597 -
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## [2853,]  1.1032978304  1.315043e+00 -6.924954e-01  0.2478154302 -
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## [2854,]  0.1117937806 -4.953498e-02 -7.578923e-02  0.5305782135 -
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## [2855,]  0.4190388329 -1.503634e-01  3.286148e-01 -0.3795871463
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## [2856,] -0.3050949039  5.348049e-02  1.364397e-01 -0.9023083942
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## [2857,] -0.1620527824 -9.155348e-01 -1.520079e-01 -1.4933622326 -
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## [2860,]  0.2275966322 -3.983556e-01  3.338838e-01 -0.2015571133
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## [2862,]  0.2977442663 -1.038519e+00 -1.716825e-01  0.8991397960 -
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## [2863,] -0.3098457002 -2.042003e-01 -2.523195e-01 -0.1133890169 -
9.441691e-03
## [2864,] -0.7199368195  6.504827e-01 -5.644584e-01 -0.2365363457
1.237910e-01
## [2865,] -0.5454345410  1.825987e-01  9.766810e-02  0.3109638596
1.234152e+00
## [2866,]  0.6924823679 -6.764041e-01 -8.825630e-01 -0.3379549209 -
4.351765e-01
## [2867,]  1.1835683945  1.539581e-01 -7.650427e-01  0.1863347024
1.747460e+00
## [2868,] -1.0002969068  3.867899e-01  5.907742e-01 -0.5051836485
1.073575e+00
## [2869,] -0.1705672135  1.509446e-01  7.691988e-01  0.5904927799
3.392507e-01
## [2870,]  0.3686135524 -9.361064e-01 -5.914168e-01 -0.7031141421
1.594986e-01
## [2871,] -0.4017970832 -4.373219e-02 -1.944063e-01  0.4504873543 -
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5.085500e-01
## [2872,]  0.5983114478  1.361693e-01  5.531353e-01 -0.3357031581
2.172627e-01
## [2873,] -0.6598767356  3.569823e-01 -5.602848e-01 -0.5850778575
4.186105e-01
## [2874,]  1.0581973193 -3.170617e-01  8.972599e-01 -0.5132086416
3.571890e-01
## [2875,]  0.5425175860 -2.162385e-01  4.411215e-01  0.0397005308 -
2.692810e-01
## [2876,] -1.6355948045 -2.832780e-02  8.932062e-01  0.3667201033
1.468668e+00
## [2877,] -0.6704195209  5.417525e-01 -4.928300e-01  0.0537137474
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## [2878,]  0.4107207179 -1.193964e-01  6.967257e-01  0.1573604810 -
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## [2879,]  1.3259032889  2.229688e+00 -9.770323e-01  0.0459899871 -
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## [2880,]  0.7391780559  2.521473e-02  6.973812e-01 -0.3965057830
2.104737e-01
## [2881,]  0.0970131049 -3.937284e-02  8.756033e-02  0.0013117758 -
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## [2882,]  0.5502213141  4.489773e-01 -1.427460e+00  0.2700583040
1.817349e+00
## [2883,] -0.2561887371  5.514599e-02 -4.851684e-02  0.4516366955 -
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## [2884,]  0.2082325556  3.492980e-01  7.953207e-01  0.6435469729
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## [2885,] -0.0582964496  3.540717e-01  6.858982e-01  0.9297920465
1.488366e-01
## [2886,] -0.0750133706  5.102242e-01  7.002788e-01  0.4498285872
4.422804e-01
## [2887,]  0.4098322974 -9.529087e-03  1.297517e+00  0.9766247137 -
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## [2888,]  0.0870975208  4.358773e-01  7.925666e-01  0.5484831657
3.798438e-01
## [2889,]  0.4661361901  1.456399e-01  1.265972e+00  0.6066143046
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## [2890,]  0.0746042271  6.103414e-01  1.322403e+00  0.3120415154
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## [2891,]  0.6944507830  7.028374e-01  8.459457e-01  1.3418523172
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## [2892,]  0.4284998833  1.189658e-01  1.120628e+00  0.6364391449
1.111141e-01
## [2893,]  0.1719468173  5.041712e-01  1.905785e+00 -1.2618322320
8.800835e-01
## [2894,]  0.9750675309  4.930194e-01  1.087859e+00  0.1837347395 -
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## [2895,] -1.7890545623 -6.294881e-01  1.124145e+00 -0.3493869693
1.889792e+00
## [2896,] -0.0069181797 -1.979495e+00 -1.104474e-01  0.1824757348
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## [2897,]  0.5101044020  1.562773e-01  1.508248e+00  0.4456145182 -
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## [2898,] -0.6453282728 -5.972678e-01 -1.438162e-01 -0.4475176833
8.328200e-01
## [2899,]  1.2674071744  1.114872e-01 -7.863949e-01  0.3387873485
1.731157e+00
## [2900,] -2.8781045925  4.485489e-02  4.564598e-01 -0.0475478149 -
6.857336e-01
## [2901,] -0.0993501432  1.251546e-01  2.514107e-01 -0.7715573884
3.676302e-01
## [2902,] -1.0096503912  6.514194e-01 -5.794668e-01  0.6516380729 -
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## [2903,] -0.4919332130 -2.213471e-01 -6.348206e-01 -0.0865735729
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## [2904,]  0.4436842807 -1.070367e+00 -6.167603e-01  1.8444548987 -
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## [2905,] -0.5198022033 -1.952308e-01  2.061061e-02 -0.7737152137
1.161253e-01
## [2906,] -1.6749427324 -1.468058e-02  9.237500e-01  0.2635160060
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## [2907,]  0.7089107431  2.273621e-01 -1.390205e+00  1.0654039287
1.057878e+00
## [2908,]  0.7211911424 -2.903375e-01  2.081494e-01  0.4541516755 -
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## [2909,] -0.1859242657  3.968153e-01 -2.332133e-01 -0.2829218650
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## [2910,]  0.5157547596 -1.604606e-01  1.518310e-01 -0.2117866517
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## [2911,]  0.5820946621 -1.923726e-01 -1.060953e-01  0.5772614948
1.042628e-01
## [2912,]  1.0844295866  7.821719e-01 -7.252900e-01 -0.1806719662 -
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## [2913,] -0.4920127166 -2.345205e-04  4.637964e-02 -0.7058448454 -
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## [2914,]  1.1503572497  3.016435e-01 -6.480887e-01  0.3170171153 -
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## [2915,]  1.1424850685  1.508369e+00 -6.792945e-01  0.2500454241 -
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## [2916,] -0.1551617454  2.454833e-01 -3.902801e-01 -0.0699179990
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## [2917,] -1.9904790902 -8.239841e-01 -7.846463e-01 -0.3571109799 -
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## [2918,]  1.1944432206  1.474896e-01 -7.666795e-01  0.2070290041
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## [2920,] -0.1359625908  2.536864e-01 -3.230393e-01  0.4786373468 -
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## [2921,]  0.2019546380 -8.104642e-02 -8.544171e-02  0.5431043731 -
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3.681601e-01
## [2922,]  0.3458722129 -1.348906e-01  1.233364e-01  0.0551764222 -
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## [2923,]  0.3746544563 -3.000915e-01 -2.175520e-01  0.5321363771
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## [2924,]  0.0120752750 -7.212967e-02  5.847091e-01 -0.9179294376 -
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## [2925,]  0.1886996968  1.171218e-01  9.480862e-01  0.6691763913
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## [2926,]  0.0442526654  1.575778e-01 -4.044454e-01  0.0261122913
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## [2927,] -0.3280277573 -2.041419e-01 -2.500252e-01 -0.1573287560 -
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## [2929,]  0.0464808650  3.050413e-01  2.060114e-01 -0.2095311619 -
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## [2931,]  0.4535315107 -2.015959e-01  1.179008e-01  0.1431546328 -
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## [2932,] -2.9374659679 -1.489206e-01  4.833264e-01 -0.2092907774 -
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## [2933,]  0.6420227484  1.103431e-01  6.772890e-01 -0.4726713954
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## [2934,] -0.4866294698 -7.625346e-02 -3.376848e-01 -0.2030108531 -
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## [2935,]  1.0542788359  1.340503e+00 -8.163074e-01  0.3412714086 -
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## [2936,]  0.4224454495 -2.229447e-01  2.777925e-01 -0.0333770436 -
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## [2937,]  0.5873262674 -1.964353e-01  1.345614e-01  0.4683891920 -
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## [2938,]  0.4973933847 -1.923876e-01  2.509585e-01  0.0275462030 -
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## [2939,] -0.0373648489  9.386783e-01 -4.509015e-01 -0.3691850929 -
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## [2940,] -0.9934741300 -7.344456e-02  5.708818e-01 -0.5256218752
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## [2941,]  0.7519312885 -2.687200e-01  2.461419e-01  0.4479983461 -
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## [2942,]  0.2449557880 -1.993734e-01  5.273428e-02 -0.5024443524
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## [2943,] -0.5100479219  6.402358e-01 -4.520563e-01  0.1764220023 -
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## [2944,] -0.3238267118  3.974534e-01 -2.952937e-01 -0.3825728101
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## [2945,]  0.0837454052 -4.098830e-01 -1.369921e-01 -0.6738600477 -
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## [2947,] -0.4497045863 -2.245198e-01 -6.035874e-01 -0.2055602286
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## [2948,]  0.7343731973 -2.810589e-01  2.438502e-01  0.4417257881 -
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## [2949,] -1.4254819730 -3.171012e+00 -2.751778e+00 -1.7685589767
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## [2950,] -0.6556227861  2.733287e-01  1.946936e+00 -0.1910345711
1.453692e+00
## [2951,] -0.2568399047 -7.688558e-03  2.535336e-01 -0.9323129669
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## [2952,]  0.5094510904  3.691788e-01 -8.816796e-01 -2.0207422163 -
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## [2953,] -1.0083145990 -1.951560e-01  8.727775e-01  0.2940803321
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## [2954,]  0.1936017368 -8.249275e-02 -3.870266e-01  0.6072163977
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## [2955,]  0.1518128090 -3.315214e-01 -2.581299e-01  1.0703161934 -
1.808138e-01
## [2956,]  1.9710695868  2.947883e+00 -3.089055e+00 -1.5498387864 -
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## [2957,] -0.2357146627  5.487556e-01 -1.572760e-01 -0.3916665039
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## [2958,] -0.2776620253 -2.368798e-01 -1.817638e-01 -0.1624949504 -
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## [2959,]  0.1708765051 -2.290710e-01  8.711094e-02 -0.2039769591
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## [2960,] -0.0412007039  4.038383e-01  2.093862e-01 -0.6719046743
3.623330e-01
## [2961,] -0.4220821885 -2.328088e-01 -1.181696e-01 -0.2044251735 -
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## [2962,]  0.4003749921 -1.612020e-01  6.328325e-01  0.8381476047 -
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## [2963,]  0.9473243486 -1.559109e+00 -7.214203e-01 -0.9715213667 -
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## [2964,]  0.5518899885  1.495819e-01  4.942379e-01 -0.2192254481
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## [2965,]  0.5197724109 -3.830344e-01  1.601140e-02 -0.2938306969
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## [2966,] -0.3557076081  5.305939e-01 -4.354795e-01  1.3241792463 -
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## [2967,] -1.1446090441  1.182574e+00 -2.467605e-01  0.9011625238 -
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## [2968,]  0.4644747359 -1.579582e-01  2.766876e-01  0.4301513615 -
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## [2969,]  0.1355092279  3.945031e-02  4.071338e-01  0.5641768982 -
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## [2970,]  0.0522634676 -3.171385e-01 -1.043428e-01  0.8795928406
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## [2972,]  0.1756564779 -2.100817e-01  1.406759e+00  0.6388192027 -
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## [2973,]  0.5270505635  1.952013e-01  1.742077e+00 -0.5396318085
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## [2974,]  1.0819023334 -1.453953e-01 -8.492555e-01 -0.9112542441 -
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## [2975,]  1.3327461652  6.302199e-02 -7.963965e-01  0.4422585754
1.713570e+00
## [2976,] -0.4596577662 -5.716156e-02 -3.921922e-01 -0.4128279132
1.520066e-01
## [2977,] -0.2125855411  1.517153e-01  2.375226e-01 -1.0668006961
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## [2978,]  1.3536643775 -4.636451e-02 -9.079968e-01  2.1157967444
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## [2979,] -0.1770326680  1.714394e-01  3.376210e-01 -1.0031648164
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## [2980,] -0.0122621479 -3.029047e-01 -3.077654e-01  0.0407380114
2.008397e-01
## [2981,] -0.0396495794 -4.881218e-01  3.119188e-02 -0.3277248507
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## [2982,]  0.2309302630 -3.594701e-01  4.322788e-01  0.0546108774 -
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## [2983,] -0.5635881587 -1.726154e-01 -1.661774e-02 -0.6908539586
3.373134e-02
## [2984,]  1.0866699757 -3.182284e-01  1.463181e-01 -0.6431241731 -
9.633771e-01
## [2985,]  0.4452391075  2.665898e-01  1.554054e+00  0.0219096087
2.139656e-01
## [2986,]  0.2578117373 -2.770351e-01  1.818196e-01  0.3965284770 -
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## [2987,] -0.7546925037  6.445049e-01 -5.131974e-01 -0.3241266105
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## [2988,]  1.5302602548 -2.074963e-02 -1.313424e+00 -0.0818966153
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## [2989,]  1.3025329112 -2.610300e-01 -9.703503e-01  0.1050765705 -
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## [2990,]  0.0957898480  4.557202e-01 -3.948766e-01  0.5646574777
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## [2991,] -0.4540353049 -2.564427e-01  5.951638e-02 -0.6878177107
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## [2992,]  1.2762901578  1.034992e-01 -7.598418e-01  0.3227886858
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## [2993,]  0.0272613349 -1.020297e+00  5.091342e-01  0.1339691516 -
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## [2994,]  0.5171841729 -2.100939e-01  3.324974e-01  0.2274552173 -
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## [2995,]  1.4485068096 -5.196874e-01 -6.543822e-01  2.5853073539
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5.204780e-01
## [2997,]  0.5127286925 -2.740281e-02  8.401593e-02  0.1487388350
2.917131e-01
## [2998,] -1.7145581818  1.191983e-03  9.016334e-01  0.3066446838
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## [2999,] -0.1726332850 -9.244596e-02 -6.134589e-02 -0.1896488989 -
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## [3000,]  0.0923517409 -5.097745e-01  2.486727e-01  0.1231817705 -
2.207222e-01
## [3001,] -0.5434213182  6.981468e-01 -5.845870e-01  0.2743111356
1.248482e-02
## [3002,]  0.4670477273 -3.725036e-01 -2.687524e-02  0.3374600735
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## [3003,] -1.0472926445  6.460347e-01 -5.081864e-01  0.5875505178 -
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## [3004,]  0.2407633817 -1.062560e-01 -6.922426e-02  0.6275902293 -
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## [3005,]  0.2983167871 -4.243655e-01 -3.350232e-01 -0.3901922524
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## [3006,]  1.5425453515 -3.885958e-02 -1.299948e+00 -0.0641439190
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## [3007,] -0.0060601870  1.187798e-01 -3.544656e-01 -0.0173164259
2.352843e-01
## [3008,]  0.5931047262  1.152697e-01 -1.407194e+00  0.8683278234
1.230842e+00
## [3009,] -0.2828022864 -1.848992e-01 -1.777707e-01 -0.2436516129 -
1.003936e-01
## [3010,]  0.0421509547 -5.665524e-01 -1.662085e-01 -0.7306084681
1.102190e-01
## [3011,]  0.0869625285  2.710310e-01  2.399395e-01 -0.2278770285
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## [3012,] -0.5894741381 -4.352492e-01 -3.734035e-01 -0.1607562483 -
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## [3013,] -0.4577101320 -2.907723e-01 -2.838634e-01 -0.3173740990
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## [3014,] -1.8447149646  4.940966e-01 -2.840290e-01  0.1898604690 -
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## [3015,] -0.9186961249  2.544837e-01  7.422354e-01  0.2000523478
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## [3016,] -0.8403241478  2.985857e-01  7.629612e-01 -0.5950455032
1.078439e+00
## [3017,] -1.0297876808  5.936753e-02  7.905333e-01  0.3822311534
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## [3018,]  1.5630263312  2.290785e+00 -8.335482e-01  0.1092605857 -
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## [3019,] -0.1625871011  5.467786e-01  8.614400e-01  1.2261960912
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## [3020,] -0.5159570661 -3.124195e-02 -6.552937e-01 -0.2716873457 -
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## [3021,] -0.4072041561  1.180033e-01 -2.139402e-01 -0.2810957532
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## [3022,]  0.7188898761 -3.500883e-01 -2.517536e-02  0.3140568139
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## [3023,] -0.5631350523 -1.457268e-01 -1.057856e+00  0.3320296281 -
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## [3025,]  0.1390733094  3.612191e-01  7.940433e-01  0.7694735325
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## [3026,]  0.0688351583 -1.080460e-01  1.781526e+00 -0.8029247892
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## [3027,] -0.3703276326  6.002251e-01  7.405570e-01  0.9240425718
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## [3028,] -0.7615949728  6.262289e-02  5.382040e-01  0.7057340989
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## [3029,] -0.6510847183 -1.463407e+00 -1.130815e+00  1.1888012107
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## [3030,] -1.0057779393  7.559338e-02  9.635845e-01  0.1495691948
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## [3033,] -0.2396639593 -6.691843e-01  2.363206e-01  0.1481986400 -
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## [3035,] -0.5684321862 -3.745520e-01 -1.595471e-01 -0.3177752228 -
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## [3145,] -0.2351233630  5.766257e-01 -3.224265e-01 -0.1486449371
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## [3166,] -0.1121671796 -2.371884e+00 -5.602246e-01 -0.9570822035
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## [3168,] -0.6012941566  5.178196e-01  1.040029e+00  0.0093528320
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## [3169,] -0.1566847551 -1.199130e-01  6.162323e-01  0.5366576644
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5.112510e-02
## [3188,]  0.5305960766 -2.623702e-01 -2.876276e-02  0.2710826856
5.012442e-02
## [3189,]  0.3346502973 -1.886557e-01 -1.988681e-02  0.4280305855 -
4.247184e-01
## [3190,]  0.0949961240 -3.006214e-01  8.316321e-02 -0.5241733250
3.795114e-01
## [3191,]  0.3858326536 -1.238505e+00 -6.988663e-01  1.8842626622 -
9.715217e-01
## [3192,] -1.0331268966 -1.716746e-01  8.494402e-01  0.2717744794
5.162116e-01
## [3193,]  0.2076587646  3.441228e-02  6.154004e-01 -1.2784126295
1.618408e-01
## [3194,]  0.2345205411  2.370797e-01  7.270966e-02 -0.0984580095
2.687612e-01
## [3195,] -1.5229353007 -1.770283e-01 -1.486791e-01  0.4780503513 -
1.714256e+00
## [3196,]  1.2840881330 -2.695840e-02 -8.596581e-01  2.0364358971
```

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1.965251e-01
## [3197,]  0.4166628147  5.147914e-01 -2.425570e-01  0.5750188873
2.561006e+00
## [3198,] -0.6645975827  6.039268e-01 -5.107099e-01 -0.2502999532
1.041410e-01
## [3199,] -0.0984647450  4.586997e-01 -4.508180e-02 -0.4735906184
5.401329e-01
## [3200,] -0.6994605678  6.112999e-01 -2.080802e-01 -0.5360239439
1.731899e-01
## [3201,] -0.2864122355  1.351864e+00 -7.045065e-01 -0.0225650546 -
2.553553e-01
## [3202,]  1.2101324185 -2.366241e-01 -7.562771e-01 -0.9209557053 -
9.510342e-01
## [3203,] -0.8742570969 -5.101694e-02  9.200441e-01  0.3876988374
4.215500e-01
## [3204,]  0.5501862058 -3.967801e-01  2.073766e-01 -0.4690476848 -
7.231544e-02
## [3205,]  0.5090046532 -5.627967e-02  1.334525e+00 -1.9925740481
2.275369e-01
## [3206,] -0.1858275285 -1.103444e-01 -1.554022e-01 -0.0412123482 -
2.451428e-01
## [3207,] -0.5147783261  3.008244e-01 -5.835560e-01 -0.3747783190
4.388651e-01
## [3208,]  0.4649752906 -1.081365e+00 -5.826682e-01  1.7834328616 -
1.015005e+00
## [3209,] -0.1275557509  3.137212e-01 -9.172103e-01  0.8372417943
2.716741e-01
## [3210,]  0.4072330126 -7.161387e-02  1.750076e-01 -0.4128984494
2.762012e-01
## [3211,]  0.3837627286 -2.176127e-01  9.641693e-02  0.1377103498
3.924194e-02
## [3212,]  0.7953089501  5.628466e-01  3.436785e-01 -1.4546416844 -
5.139044e-01
## [3213,]  0.4134690030 -3.265062e-01  1.251104e-02 -0.1214089033
2.893997e-01
## [3214,] -1.6924827150 -5.309348e-01 -1.188200e+00  0.8664262353
5.693689e-01
## [3215,] -1.5165668855  6.464461e-01 -6.905112e-01  0.5178867024
1.047071e+00
## [3216,]  0.0871282545 -4.919020e-01  2.587808e-01  0.1093853018 -
2.113143e-01
## [3217,] -0.3469400088  1.704510e-01 -4.773933e-01  0.3239327007 -
2.126636e-01
## [3218,] -0.0725579748 -1.211596e-01 -1.671148e-01  0.2898082527 -
3.372994e-01
## [3219,]  0.3351307569 -1.198622e-01  8.847548e-02  0.1011407608 -
2.048092e-01
## [3220,]  0.6564312448 -2.917775e-01  4.629099e-01  0.2030689680 -
3.355221e-01
## [3221,]  0.2889221395 -1.753690e+00 -9.939042e-01 -1.1721739325 -
```

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2.906367e-02
## [3222,] -0.6550706818  1.855087e-01 -5.746594e-01 -0.5515033960
5.410184e-01
## [3223,] -0.1165047838  1.492837e-01  2.438261e-01 -0.8192558134
3.943981e-01
## [3224,] -0.8215449782  6.925266e-01 -3.227440e-01 -0.5278596527
1.720393e-01
## [3225,]  0.3549493793 -4.933141e-02  4.049129e-02 -0.2399747251
2.878241e-01
## [3226,]  0.4794542580 -1.686718e-01  7.889124e-01 -0.7471117387 -
2.472326e-01
## [3227,]  0.1691654148  3.057652e-01  1.464203e-01 -0.2753345170
2.903468e-01
## [3228,]  1.1879817109 -1.621225e-01 -9.425752e-01  2.0466348531
2.932633e-01
## [3229,]  0.2182744591 -4.270122e-01 -4.677606e-02 -0.2903981068
3.762800e-01
## [3230,] -0.4561066536  2.095702e-03 -3.996234e-01 -0.0981950942
1.101197e-01
## [3231,]  0.4270663540 -1.263128e+00 -5.755889e-01  1.7437870391 -
9.298554e-01
## [3232,] -0.2867164227  1.509308e-01 -3.626780e-01  0.1513636182 -
1.350073e-01
## [3233,] -0.7881457456 -6.804573e-02 -4.432682e-01  0.0611107527
6.305821e-02
## [3234,]  0.4109651198  5.042280e-01 -1.763900e-01  0.4653850529 -
2.111200e-01
## [3235,] -0.0591760755  1.508847e-01 -3.297560e-01 -0.0370565916
9.842087e-02
## [3236,]  0.0239726880 -2.929476e-03  9.919741e-01 -2.1653267904
6.614220e-01
## [3237,]  0.4597082569 -1.566376e-01  7.559518e-01 -0.6604912065 -
2.725553e-01
## [3238,] -0.6523387971  1.503239e-01 -6.001796e-01 -0.4895344240
4.791111e-01
## [3239,]  0.5247396178 -5.574913e-02  1.426992e-01  0.0984898506
2.420131e-01
## [3240,]  0.5009553947 -1.449587e-01 -5.600357e-02  0.4713940011
1.884983e-02
## [3241,] -0.0718085823  1.540873e-01 -4.416455e-01 -0.0063942385
2.690193e-01
## [3242,]  0.5783227915 -3.384335e+00 -1.625011e+00 -1.1595051451 -
1.008120e+00
## [3243,]  0.0713715431  2.149042e-03 -9.839011e-02  0.3083868525 -
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## [3244,]  1.1770311450 -4.198138e-01 -1.246337e+00 -0.8533227281 -
8.153555e-01
## [3245,] -0.0208354368 -3.030833e-01  2.787337e-01 -1.1285290791 -
8.666064e-02
## [3246,]  0.4828132851 -1.459884e-01  7.130874e-01  0.2190038243 -
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8.080648e-01
## [3247,]  0.6365036107 -2.739713e-01  4.965633e-01  0.1248322250 -
3.106715e-01
## [3248,]  0.3762420206 -1.448587e-01  9.020882e-02  0.1352074397 -
1.634079e-01
## [3249,]  0.4250626228 -1.008702e-01  1.769025e-01 -0.4447790894
3.053080e-01
## [3250,] -1.6426801017 -3.459872e-02  9.627045e-01  0.3022262850
1.395183e+00
## [3251,]  0.1775738899 -2.386510e-01  1.588641e-01 -0.2677056663 -
7.116754e-03
## [3252,]  0.4843423916 -1.417306e-01  1.388228e-02 -0.0280854305
2.627754e-01
## [3253,]  0.4922688912 -1.401041e-01  6.338258e-02 -0.0841688351
2.601966e-01
## [3254,] -0.6814980912  1.578479e-01  9.051004e-01 -0.7723763454
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## [3255,]  0.4811344943  7.443365e-01 -6.034789e-01  0.4130382837 -
1.929046e-01
## [3256,]  0.4267509143 -1.472480e-01  7.400979e-01 -0.6646605250 -
2.853430e-01
## [3257,]  0.4898868758 -3.806394e-01  1.808967e-01 -0.4055706901
3.767793e-01
## [3258,] -0.1840364081  3.468807e-01 -9.529095e-01  0.8071045117
2.767121e-01
## [3259,] -0.6651225818  5.803360e-01 -1.818840e-01 -0.5722081567
1.486831e-01
## [3260,]  0.2803434902 -6.989217e-01 -2.799156e-01  1.9249656025 -
8.977779e-01
## [3261,] -0.3384236480 -4.807489e-01  4.950382e-01  0.4371866233
6.427467e-01
## [3262,]  0.6009996516 -2.361456e-01  2.497020e-01 -0.3286041050
2.528116e-01
## [3263,]  0.0017453113  1.380690e-01  2.927960e-01 -0.7098704244 -
2.882367e-02
## [3264,]  2.1701836645  4.514080e+00 -1.031134e+00 -0.3253252826 -
2.212638e+00
## [3265,] -0.7227959358  4.458237e-01 -5.828253e-01 -0.2515783127
2.290222e-01
## [3266,] -0.7841589068  6.374561e-01 -2.831051e-01 -0.5376197846
1.228615e-01
## [3267,]  1.3381210805 -4.031516e-02 -8.663581e-01  2.1153430859
2.006566e-01
## [3268,]  0.1549760119  9.218176e-02 -2.513179e-01  0.1135860879
2.992713e-01
## [3269,] -0.0365167151  3.422365e-01 -2.761916e-01  0.5715206682
9.775089e-02
## [3270,] -0.0635864175  1.102305e+00 -3.955258e-01 -0.3421784376 -
3.192984e-01
## [3271,]  0.2674970881 -1.196951e-01  4.800987e-02  0.5164069258 -
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4.642354e-01
## [3272,]  0.0001524421 -5.454457e-01 -1.047405e-01 -0.8033968198
5.720222e-02
## [3273,]  0.3349438398 -8.991742e-01 -6.676459e-01 -0.6716579846
2.104236e-01
## [3274,]  0.2997742035 -1.404966e+00 -3.033045e-01 -0.7814112872 -
1.268943e-01
## [3275,] -0.6810164702  1.579755e-01 -6.075011e-01 -0.5423399095
4.930280e-01
## [3276,] -0.0711636009  1.574192e-04  2.157409e-01 -0.7974397949
1.910784e-01
## [3277,] -0.1083115977  7.440084e-03 -1.650767e-01  1.0019272126 -
6.026347e-01
## [3278,]  0.1810854423 -7.115020e-02 -1.721538e-02  0.5375076859 -
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## [3279,]  0.6010466704  4.034092e-01 -1.394171e+00  0.3167489719
1.759806e+00
## [3280,]  3.2726932162  7.280271e+00 -1.576528e+00 -2.0130849610 -
1.505304e+00
## [3281,]  0.3760064173 -1.486467e-01  1.787190e-01  0.0574964122 -
2.295915e-01
## [3282,] -0.0164704538 -5.171765e-01  4.242229e-02 -0.2972146485
1.796635e-01
## [3283,]  0.5364093568  1.421216e-01 -1.178419e+00 -1.3715655044 -
6.481761e-01
## [3284,]  0.4206227429 -6.131831e-01 -2.511756e-01  2.0854388510 -
1.063473e+00
## [3285,] -1.0651442858 -2.190863e-01  5.201046e-01 -0.4940915011
1.373519e+00
## [3286,]  0.2371136548  7.113940e-01  7.636761e-01  0.2200725451
1.654323e-01
## [3287,]  0.6222921753  7.907964e-01 -8.532349e-01  0.0273473089 -
3.560412e-01
## [3288,] -0.3785881486  4.196648e-01 -1.625843e-01 -0.0314964892
5.174512e-01
## [3289,] -0.4296242652 -2.932605e-01 -2.337912e-01 -0.3279709317 -
1.004476e-02
## [3290,] -0.3264109742  3.635208e-01 -2.379991e-01 -0.3740839964
5.064703e-01
## [3291,] -0.0316584975 -1.186740e-01 -1.609385e-01  0.3099147319 -
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## [3292,]  0.3977794008 -3.133793e-01 -5.662455e-03 -0.0564342337
3.014289e-01
## [3293,]  0.0291613035 -1.970559e-01  1.173107e+00  0.4005318091
2.622702e-01
## [3294,] -0.6583377832  2.029451e-01 -5.520661e-01 -0.6167262607
5.748530e-01
## [3295,]  0.2858395427 -3.425761e-02  4.891710e-01  0.6505226276 -
9.461065e-01
## [3296,] -0.9035794662 -1.257344e-01  5.686635e-01 -0.4246427860
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1.311035e+00
## [3297,]  0.4909852561 -5.683645e-02  8.914321e-02  0.2765468351 -
8.451293e-02
## [3298,]  0.2331607141 -2.173979e-01  4.452847e-01  0.3794697617 -
7.757566e-01
## [3299,]  0.1750504679  1.176010e+00 -3.729501e-01 -0.0818672333 -
3.991480e-01
## [3300,] -0.6728927208 -1.834824e-03 -1.123757e+00  0.4823949244
1.519733e-01
## [3301,]  0.2204318390 -1.249655e+00 -7.465443e-01 -0.7818590154 -
2.321574e-02
## [3302,]  0.2062921311 -3.727166e-01 -4.480966e-01 -0.2835244349
1.556693e-01
## [3303,]  0.2514650992 -2.785269e-01  1.786318e-01 -0.2128303965
5.903179e-05
## [3304,]  0.2464145795 -6.564952e-02  1.965701e-01 -0.2088148958 -
1.450352e-01
## [3305,]  0.1040296160 -1.997767e-01  1.420905e-01 -0.2885143278 -
4.284847e-02
## [3306,] -0.0850354581  3.610205e-01 -1.218925e+00 -0.4380967172 -
8.117290e-01
## [3307,]  0.5400738979 -2.323827e-01  2.445160e-01  0.0631819275 -
1.382235e-01
## [3308,] -1.6964493512 -1.155170e-02  1.017525e+00  0.2000177057
1.342251e+00
## [3309,]  0.0937959917 -2.741112e-02 -5.809823e-01  0.7715840132
1.317871e-01
## [3310,]  0.6706811248 -6.846964e-01 -8.515206e-01 -0.3522890389 -
5.452002e-01
## [3311,] -0.3308065630 -2.726443e-01  7.342082e-01 -1.6859540683
1.716331e-01
## [3312,]  0.6520164616 -2.949276e-01  4.669052e-01  0.1937048880 -
3.214196e-01
## [3313,]  0.0670913537 -5.591679e-01 -2.442376e-02 -0.1453377296
2.291576e-01
## [3314,]  0.3347679928 -6.185621e-02  5.388283e-01  0.6072858963 -
9.145331e-01
## [3315,] -0.5767403787  4.545134e-01 -3.274917e-01 -0.0524958153 -
8.380870e-02
## [3316,]  0.5462014491 -1.857943e-01 -7.839837e-02  0.5292207340
4.116637e-02
## [3317,] -0.3637215602  1.675599e-01 -4.600023e-01  0.2595106569 -
2.004302e-01
## [3318,] -0.3364446376 -1.825126e-01 -1.481339e-01 -0.2844352040 -
1.937166e-01
## [3319,] -1.4489674785 -2.104836e-01 -5.907741e-02  0.4046516559 -
1.687051e+00
## [3320,] -0.5388850572  3.152791e-01 -3.709263e-01 -0.7608486496
4.601046e-01
## [3321,]  0.3941995647 -2.093660e-01 -1.046365e-04  0.4391490143 -
```

```
3.770922e-01
## [3322,]  0.5809915885 -3.997045e-01  9.046959e-02 -0.3523340542
3.330526e-02
## [3323,]  0.5058793480 -2.010297e-01  7.299473e-01 -0.6212120628 -
2.748562e-01
## [3324,]  0.6203143506 -2.118560e-01 -5.982790e-02  0.5189806421
1.028604e-01
## [3325,] -0.5593934318  5.174404e-01 -4.127758e-01 -0.2588469166
4.132155e-02
## [3326,] -0.1867554391  5.228659e-01 -1.464930e-01 -0.4120684446
5.294415e-01
## [3327,]  0.1591637905 -1.193930e+00 -7.255323e-01 -0.8657144356 -
4.662249e-02
## [3328,]  0.2512594079 -3.822773e-01 -2.994156e-01 -0.4631054521
1.725402e-01
## [3329,]  0.3968004289 -2.976797e-01  6.856931e-01  0.1137536516 -
6.821047e-01
## [3330,] -2.0043821206 -4.169713e-01 -5.643455e-02 -0.3567818056 -
1.655040e+00
## [3331,]  0.0857072630  8.671974e-02 -3.738899e-01  0.0404849046
3.466694e-01
## [3332,]  0.0947591635  4.059342e-02 -2.680313e-01  0.2289985128 -
6.049970e-02
## [3333,] -1.0114510291 -2.639786e-01  5.623257e-01 -0.4890495740
1.348200e+00
## [3334,] -0.5290146427  5.447206e-02 -4.030155e-01 -0.1459248357
5.181783e-02
## [3335,] -0.7129918099 -6.364976e-01 -6.019323e-01 -0.3695038823
2.543861e-01
## [3336,]  0.2800547180 -6.149399e-01  3.793111e-01  0.1775362548 -
2.232070e-01
## [3337,] -1.9824231234 -4.616219e-01  6.379073e-03 -0.4096202237 -
1.712901e+00
## [3338,]  0.4210677276 -2.368783e-01  1.049903e-02  0.5293271677 -
4.569199e-01
## [3339,]  0.5805086183 -2.629581e-01 -5.277220e-02  0.3782599674
6.432789e-02
## [3340,]  0.1209146610  1.345927e-03 -1.016247e-01  0.4034530669 -
3.817913e-01
## [3341,] -0.2411621710 -2.968652e-01  6.648791e-01 -1.5288742038
2.486410e-01
## [3342,]  0.2066047157  2.387236e-01  2.575719e-01 -0.1447261910
4.809732e-02
## [3343,]  0.3633115043 -2.826138e-01  4.674520e-02 -0.2071191094
2.749647e-01
## [3344,]  0.2559619778 -9.727502e-02  8.104033e-02  0.2769932642 -
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## [3345,] -0.8733149485 -1.048638e-01 -1.189989e+00  0.3727638365
1.814154e-01
## [3346,] -0.2773142076 -2.297687e-01 -1.298805e-01 -0.2486560555 -
```

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4.102984e-02
## [3347,]  0.6022568802 -2.596718e-01  4.877487e-01  0.0666008054 -
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## [3348,] -0.4650476035  6.833823e-01 -6.484861e-01  0.4332204021
8.237128e-02
## [3349,]  0.3952416183 -8.306446e-02  3.281305e-02 -0.0735729764
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## [3350,]  1.1003707569  8.060540e-02 -9.733199e-01 -0.5774025463 -
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## [3351,]  0.5434973348  4.366690e-01 -2.570067e-01  0.7834403143
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## [3352,]  0.1390042973  3.253193e-01  1.211824e-01 -0.2880828458
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## [3353,] -0.2408068614  4.625891e-01 -2.665190e-01 -0.2601722761
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## [3354,] -0.3571555379  2.430959e-01 -9.827226e-01  0.7423063577
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## [3355,] -0.3171459204  2.233116e-01 -1.018755e+00  0.8183609486
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## [3356,]  0.5531867628  6.896389e-02  4.188514e-01 -0.0601998969
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## [3361,]  0.1903446077 -5.455605e-01  3.515913e-01  0.1210219637 -
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## [3362,]  0.7406965577 -2.208468e-01 -6.105582e-01 -1.1239701284 -
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## [3364,]  0.4975137530 -1.281880e-01 -1.310177e-01  0.5175178032
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## [3366,]  0.1081096846 -3.482515e-01 -9.419188e-02  0.9696157726
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## [3368,]  0.5941508266 -2.883480e-01  5.522261e-02  0.3255572417 -
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## [3369,]  0.5831669526  3.977888e-01 -3.624265e-01 -0.3015077490
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1.220954e+00
## [3372,] -1.0176328813 -1.080236e-02  5.535797e-01 -0.4732820500
1.301076e+00
## [3373,]  0.0122310851 -5.938424e-01 -1.636821e-01 -0.7236385729
1.336245e-02
## [3374,] -0.0191556710  1.187575e-01 -2.110905e-01  0.8258240122 -
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## [3375,] -0.2332404204  1.362743e+00 -3.745945e-01 -0.6744805225 -
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## [3376,]  0.1171921725 -6.241293e-01  7.813558e-02  0.2937022577 -
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## [3377,]  0.5746513457 -2.559985e-01 -2.517211e-02  0.3414902563
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## [3378,] -1.7772864152 -7.452632e-01 -5.755067e-01 -0.3931098619 -
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## [3380,]  0.2603408944 -6.900698e-01 -3.591557e-01  2.0712562421 -
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## [3381,] -0.1769073746 -1.226106e-01  7.156870e-01 -1.4965255482
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## [3384,] -0.3808013379  5.673045e-01 -2.801746e-01  0.1322761198 -
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## [3385,] -1.5631068098 -6.868922e-02  9.529647e-01  0.3740933624
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## [3387,]  0.3808450294 -2.652460e-01 -7.304719e-02  0.2799310595
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## [3388,] -0.2238819166  5.625792e-01 -9.679254e-02 -0.4943131936
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## [3389,]  0.0927827864  3.218985e-01  1.052207e+00  0.6735339656
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## [3390,]  0.2277534956 -4.311947e-01 -8.028778e-02 -0.2231315631
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## [3391,] -0.4049799644 -4.654850e-03  8.729514e-01  0.0836032522
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## [3394,] -0.2996294175  3.507488e-01  6.566640e-01  0.8041932890
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## [3395,] -0.2569628268  8.024486e-01  7.081611e-01  0.4094365359
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## [3396,]  0.3509215504 -3.358680e-01  1.497840e+00 -0.7720804478
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## [3397,] -0.9057538273  6.669403e-01  5.470045e-01 -0.0736814834
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## [3399,]  0.4139877393  1.746845e-01  1.179312e+00  0.5606181221
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## [3400,] -0.2405663782  5.968281e-01  6.002446e-01  0.1967650778
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## [3401,]  1.8930624105  2.360963e+00  8.082705e-01  1.0508957881 -
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## [3422,]  0.1717231504  3.320494e-02  8.815344e-06  1.2694622918 -
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## [3423,]  1.8605213358  3.497131e+00 -2.809467e+00 -1.2847436419 -
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## [3424,]  0.2513379525  3.549585e-01 -2.271341e-01  0.4927957626
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## [3425,] -0.4083394708 -2.560581e-01 -5.695847e-01 -0.1410986097
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## [3426,] -0.1418478387 -1.927448e-01  7.881814e-01 -1.5461189907
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## [3427,] -0.5474035347  3.007276e-01 -4.680254e-01 -0.5790011718
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## [3428,] -0.7115791992  4.482808e-02 -2.479751e-01 -0.6375120298
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## [3429,] -0.1685214977  7.162917e-02  6.568870e-01 -1.2652873289 -
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## [3433,]  0.1837335616 -8.430482e-02 -3.838024e-01  0.5902864918
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## [3436,]  0.7815453047  1.110133e-03  7.574938e-01 -0.4147305647
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## [3437,]  0.6701962877  1.477833e+00  2.267734e-01  1.0134551504 -
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## [3438,]  0.1427715892 -4.163242e-01 -5.563341e-01 -0.2874655878
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## [3439,] -0.3186121127  2.138092e-01 -1.030938e+00  0.8010986918
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## [3442,] -0.1687329000  6.611621e-02 -2.816586e-01  0.2266823474 -
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## [3443,]  0.2959716168  3.348479e-01 -2.907745e-01  0.6451827589
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1.513617e+00
## [3447,] -0.7486490655 -1.080331e+00  4.986691e-02 -0.2009205771
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## [3448,] -0.8398140748  4.927913e-01 -4.744537e-01 -0.5588661290
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## [3449,]  0.2738308026 -8.370135e-01 -8.287616e-01 -0.4560969212
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## [3450,]  0.7589941267 -2.887880e-01  2.509082e-01  0.4392438604 -
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## [3451,]  1.1058885727 -2.307750e-01 -1.252925e+00  1.1744582708
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## [3452,]  0.2622508245  3.428130e-01 -2.971312e-01  0.6324947892
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## [3453,]  0.1308710095  2.152692e-01 -4.790691e-02 -0.4709708398
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## [3456,] -1.2194931787 -6.979693e-01 -1.155361e+00 -0.9038777660 -
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## [3457,] -0.0123473391 -2.579177e-01  6.062260e-01 -0.9350750930 -
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## [3458,]  0.5577042072 -2.249722e-01  3.560589e-01  0.4892738401 -
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## [3459,] -0.0477336528  4.751677e-01 -8.885724e-02 -0.2842360144
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## [3460,] -0.1982508085  3.479638e-01 -1.146198e-01 -0.0143373599 -
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## [3462,]  0.0571132526 -5.817004e-03 -5.478146e-02  0.3224314761 -
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## [3463,] -0.1145821842 -1.121406e-01 -4.058117e-02 -0.1920495374 -
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## [3464,]  1.1824568586 -2.017152e-01 -7.497819e-01 -0.9960974576 -
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## [3465,]  0.2118140341  1.487429e-01 -7.489531e-04 -0.5127932477
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## [3466,] -0.0829697861  7.670648e-02 -3.242366e-02 -0.0214056583 -
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## [3467,] -0.3114078001 -2.671285e-01  8.005778e-01 -1.7683251338
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## [3468,]  0.0521892513  1.231361e-01 -2.667123e-01 -0.1036653072
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## [3469,] -0.7170779508 -3.592683e-02 -5.507327e-01 -0.2074921504
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## [3470,] -0.1544459157  2.573714e-01 -2.969119e-01  0.3108564372 -
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## [3472,]  1.6019201683  1.727945e+00  1.921003e-02  2.2764355187 -
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## [3473,]  0.6399560224 -3.077960e-01  2.535797e-02  0.3384729686
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## [3474,] -0.0396504977  1.633630e-01 -2.382701e-01 -0.1226502606
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## [3475,]  0.5532963385 -2.464732e-01 -5.255947e-04  0.2986896040
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## [3476,]  0.1725066906  4.517455e-03 -2.621168e-01  0.2465860072 -
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## [3477,]  0.5465703306 -4.062190e-01  1.610291e-01 -0.4066835983 -
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## [3478,] -1.0524885585  2.096708e-01  1.006009e+00  0.7679858333
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## [3479,]  0.7361027214 -2.746158e-01  1.544882e-01  0.5901925542 -
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## [3480,]  0.1168941346  3.777766e-02 -2.973580e-01  0.2588785202 -
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## [3481,]  0.1932989862 -3.169271e-01 -2.580094e-01  0.3038352903
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## [3482,]  0.7354964701 -7.230845e-01 -7.054248e-01 -0.4321559253 -
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## [3483,] -0.4079495931 -2.119107e-01  8.217686e-01 -1.2123881225 -
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## [3484,] -0.8105089103  4.665736e-01 -4.008787e-01 -0.6665428561
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## [3485,] -0.4649270764  6.133548e-01 -2.839639e-01  0.0460273606 -
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## [3486,]  0.3674606741 -1.734808e-01 -3.891178e-02  0.5274624399 -
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## [3487,] -0.9513111760  5.846889e-01 -4.934450e-01 -0.6881910639
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## [3488,]  0.0580670619  8.635254e-02 -1.630295e-01  0.1923234576 -
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## [3489,] -0.2372106018 -1.945382e-01 -1.281915e-01 -0.1047204406 -
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## [3490,]  0.0416603391  1.053136e-01 -3.791116e-01  0.0100874495
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## [3491,] -1.0465581332  1.894290e-01  9.895878e-01  0.7834992137
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## [3492,] -0.5125279645 -1.573897e-01 -2.955680e-01 -0.4098813370
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## [3493,]  1.3009473511  2.652338e-02 -6.988538e-01  0.5187530886
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## [3494,] -0.1319863308  5.212802e-01 -2.479775e-01 -0.1246196670
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## [3495,]  0.6910997995  5.464635e-01 -1.612127e-01 -0.3850161516
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## [3497,]  0.1314851428 -1.327298e-01  7.117369e-01 -0.9934505127 -
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1.575603e+00
## [3499,]  0.3352489602 -3.033175e-01  2.186656e-01  0.4498290072 -
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## [3500,]  0.4430247029 -1.168438e-01  1.270174e-01 -0.1474105968
1.415326e-01
## [3501,] -0.2253469247  3.821471e-01 -2.023480e-01  0.2264041491 -
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## [3502,] -0.2605943789  7.793057e-01 -1.284586e+00  0.3982387782 -
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## [3512,]  0.5312281997  1.976496e-01  1.795345e+00 -0.3736085933
3.205600e-01
## [3513,]  1.7717622472  1.273900e+00 -5.858944e-01 -0.1449479095
1.718140e+00
## [3514,] -0.5990971721 -6.986611e-01  3.447520e-01  0.8749527364
4.957585e-01
## [3515,]  0.1607522671 -1.710982e-01 -4.556453e-02  1.2790608929 -
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## [3516,] -0.8580232253  2.955878e-01 -4.340167e-01 -0.7346065916
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## [3517,]  0.0024636679  4.252830e-01 -1.801827e-01 -0.0438301809
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## [3518,] -1.1177038819  2.055346e-01  1.004714e+00  0.7922453971
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## [3519,]  0.6020773856 -1.971731e-01 -5.122913e-01 -0.0716101150 -
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## [3520,]  0.5291122290 -2.157075e+00 -1.181850e+00 -1.3332584233
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## [3521,] -0.5975451687 -1.316742e-01 -3.700469e-01 -0.3262399714
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1.320888e-01
## [3522,] -0.4971446153 -2.774756e-01 -3.272665e-01 -0.2158314990 -
1.044240e-01
## [3523,] -0.1020170778  1.625941e-01 -3.070767e-01 -0.0668174703 -
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## [3524,] -0.1400929423 -1.604446e-01  8.517346e-01 -1.5970548666
4.400783e-02
## [3525,]  0.0748161842  5.182598e-03  3.889553e-02 -0.1258839013 -
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## [3526,] -0.4329028227  8.237340e-02 -5.104158e-01  0.2671321521
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## [3527,]  1.4432182771 -1.037645e-01 -8.531458e-01  2.2185215702
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## [3528,]  1.2735229191  6.434631e-02 -5.924000e-01  0.3341113287
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## [3529,]  0.1209943505 -8.935075e-01 -5.215406e-02 -1.3032461342 -
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## [3530,]  0.0118172542  1.103412e-01 -2.774065e-01 -0.0240058215
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## [3531,]  0.4232610306 -1.491332e-01  7.746802e-01 -0.6918833296 -
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## [3532,]  0.0213808100  3.984381e-01 -8.506696e-02 -0.2114353038
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## [3535,]  0.5222489823  1.026021e+00 -2.129177e-01 -0.6926405029
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## [3536,]  0.4620043908 -1.978166e-01  2.763606e-01 -0.0383537521 -
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## [3537,]  0.2050403316  8.245065e-01 -4.451059e-02 -0.2687965560 -
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## [3539,] -0.5062517484  4.841422e-02  1.895455e+00  0.7080651225
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## [3540,]  0.6690188173  3.703623e-01 -1.333324e+00  0.3984285493
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## [3541,]  0.4197263238 -1.016513e-01  7.559127e-01 -1.0498416578
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## [3542,] -0.8061510832 -1.452909e-01 -1.185378e+00  0.4856543239
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## [3543,] -1.5465888750 -1.469423e-01  1.107563e+00  1.0812734411 -
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## [3544,] -0.0604607733 -2.461828e-01  6.025447e-01 -1.0444149109
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## [3545,] -0.3384069599  2.517705e-01 -1.103395e+00  0.9246070548
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## [3547,]  0.0380233060 -3.607143e-01  3.413055e-01 -1.1702913826 -
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## [3548,]  0.0050512683  4.311744e-01 -1.975400e-01 -0.0790688475
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## [3549,] -0.5360120344  7.186266e-01 -6.858751e-01  0.4500918969
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## [3550,]  0.8194116404 -7.847494e-01 -7.914711e-01 -0.2686233880 -
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## [3551,]  0.7724401082 -2.119528e+00 -1.211618e+00 -0.9224741627
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## [3552,] -0.2425199155 -3.177547e-02  4.214110e-03 -0.7346135373
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## [3553,]  0.4645469906 -4.726195e-02  1.299070e+00 -2.0171052927
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## [3554,]  0.3233104079 -3.261117e-01  1.387802e-01  0.0095363556 -
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## [3555,] -0.2438463957  4.563859e-01 -2.053805e-01 -0.3157923532
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## [3556,]  0.4801384250  4.574589e-01 -2.306790e-01  0.6766241175
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## [3562,] -1.6988446692 -6.499206e-01 -1.820560e+00  0.1776405261 -
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## [3563,]  0.3345835492 -9.241953e-01 -6.908805e-01 -0.5553065993
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## [3564,]  0.0896089140 -5.837620e-01  1.425664e-01 -0.2667069123
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## [3565,]  0.1394131570  6.616156e-01 -1.373252e-01 -0.2463990807 -
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## [3566,] -0.3775248397 -3.322538e-01 -2.359442e-01 -0.2515315510 -
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## [3567,]  0.4575766069 -2.631942e-01  9.618137e-03  0.5284992233 -
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## [3572,]  0.0624965900  7.647863e-02 -2.891956e-01  0.1677727665 -
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## [3574,] -0.7614226365  4.934048e-01 -4.432784e-01 -0.7496470790
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## [3576,] -0.8861382794 -4.976743e-01 -1.026766e+00 -0.4406605243
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## [3577,] -0.0692235145  1.778725e-02  1.690627e-01 -0.6610170322
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## [3578,] -0.0395368681 -4.691137e-03  6.738224e-01 -1.1844843095
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## [3579,]  0.5542605322 -8.496713e-02  1.308389e+00 -1.9099469434
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## [3580,]  0.7273443197 -2.396235e-01 -4.485068e-01 -0.1049823866 -
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## [3581,]  0.9831603980  1.038131e+00  1.518829e-01  0.8648117741 -
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## [3586,] -0.4797613443  6.044674e-01 -4.366548e-01 -0.2375331265
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## [3587,] -1.7858824580 -3.713986e-01  4.536457e-02 -0.1665768145 -
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## [3589,] -0.0396085484 -1.381684e-01 -1.546569e-01  0.2993860385 -
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## [3590,] -0.1274261959  2.112688e-01 -3.269389e-01  0.3483474915 -
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## [3591,] -0.1869845074  5.313764e-01 -1.560740e-01 -0.3807072440
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## [3597,]  0.1414536253  4.664290e-01  8.784406e-01  1.2105216709 -
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## [3598,]  0.6995591618  3.558148e-01 -1.330860e+00  0.3405140551
1.741234e+00
## [3599,]  0.2120894237  2.671480e-01  7.117967e-02 -0.1309491481
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## [3600,]  0.1427247982  1.988312e-01 -3.368988e-02 -0.4597218529
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## [3601,] -0.2549828613 -2.292056e-01 -1.028186e+00  0.0572309041 -
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## [3602,] -0.0771524921  1.136214e-02  2.518860e-01 -0.8257646688
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## [3603,] -0.0560572556  2.403134e-01 -8.206138e-03  0.1835323324 -
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## [3604,]  1.3365655170  1.140250e+00 -1.753949e+00 -0.9060492030
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## [3605,]  1.3639939894  1.475198e+00 -1.024351e+00  1.5690206807 -
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## [3606,]  0.0025409199  1.662708e-01  8.281175e-01 -1.3737037202 -
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## [3607,]  0.1616235387  2.958812e-01  1.073428e-01 -0.2186448526
2.346134e-01
## [3608,] -0.0072517385  5.577596e-02  3.469572e-01 -0.7896876886
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## [3609,] -0.2783850180 -2.815778e-01  7.098272e-01 -1.6090417935
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## [3610,] -0.9316579967 -2.239517e-01 -4.884449e-01 -0.0112081875
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## [3611,]  0.3137439407  3.133043e-01 -1.645908e-01  0.5517838351
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## [3612,]  0.4718059044 -2.739093e-01 -1.550572e-02  0.6176889465 -
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## [3613,]  1.0687804462 -2.417826e-01 -1.344318e+00  1.2521954638
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## [3614,] -0.0202622015  2.219266e-02  1.018659e+00 -2.2046418690
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## [3615,]  0.0007672507  2.998002e-01 -2.366336e-01  0.6416038321
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## [3617,]  0.0828274802  2.443939e-01 -2.645797e-01  0.7488597026
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## [3618,]  0.7155712920  3.423340e-02  6.229822e-01 -0.2170284067
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## [3619,]  0.0863581519  6.243629e-02 -2.527750e-01  0.1987605183 -
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## [3620,] -0.0273866714  1.387459e-01 -3.835919e-01 -0.0056962929
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1.722542e+00
## [3622,]  0.0084838512  2.933460e-01  8.115065e-01  0.3909438378
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## [3623,]  2.0561374241  5.069979e-03  1.367591e-01  0.5816171694
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## [3624,]  0.0197797850  2.869616e-01  2.354229e+00  1.0276987448
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## [3627,]  0.3616642515 -1.299636e+00  2.574657e-01 -1.2543803445
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## [3629,]  0.7517608374  3.173036e+00 -5.084628e-02  0.1595431309 -
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## [3630,]  0.2628877819  2.010852e-01  8.833561e-01  0.4322912106
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## [3633,] -0.4886225044  7.011109e-01  4.771260e-01  0.8670870540
3.513322e-01
## [3634,] -0.7122710495 -3.355633e-01  2.720050e-02  0.7950042660
2.845790e-02
## [3635,] -1.0279359665 -9.031317e-02 -4.728006e-01  0.3438822971 -
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## [3636,]  0.8326906045 -2.064674e-01  6.145721e-01  0.5473005663 -
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## [3637,] -0.7252712712 -1.929297e-01 -2.186037e-01 -0.6651185627
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## [3638,] -0.3867600955 -3.411845e-01 -2.305020e-01 -0.2806497619 -
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## [3639,] -0.3876065761 -3.414171e-01 -2.331291e-01 -0.2476206989 -
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## [3640,] -0.2678264697  1.053358e-01 -3.762617e-01  0.2590666501 -
2.663202e-01
## [3641,] -0.7235820096 -1.935434e-01 -2.432823e-01 -0.5899183000
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## [3642,]  0.1692224315  2.274876e-01  3.230427e-01 -0.1934727818 -
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## [3643,] -0.4024110810  5.296331e-01 -3.415366e-01 -0.2763591419
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## [3644,]  0.3030352907  2.303674e-01  1.900039e-01 -0.2220300297
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## [3650,] -0.1928665713 -7.274609e-01  3.749805e-01  0.0562135009
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## [3651,] -0.1225868203 -6.589190e-01  6.081116e-02 -0.4329206866
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## [3660,] -0.0675715280  2.416242e-01  8.616438e-01 -1.9253616553
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## [3661,] -0.1523797753  1.325884e-01 -2.012063e-01  0.2037685335 -
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## [3662,] -1.5889014092 -1.347465e+00 -8.489352e-04 -0.3984952423
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## [3664,] -0.7217402168 -1.429486e-01 -3.591191e-01  0.0784936639 -
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## [3665,]  0.5530603402  1.197242e+00 -8.116144e-01  0.3358903836 -
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## [3666,] -0.6310299451  1.270844e-01  1.029041e+00 -0.8400579261
1.043617e+00
## [3667,] -1.0861333937  5.161977e-01  9.844373e-02  0.3029567084
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## [3668,]  1.0581617825  5.844945e-01 -6.291872e-01 -0.3445828337 -
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## [3669,] -0.1604247741  1.156222e-01 -1.149477e-01  0.1050321836 -
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## [3674,]  0.4859633506 -1.101091e-01  2.440543e-01 -0.2196500584
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## [3675,]  0.4352609379 -4.866342e-02  2.021034e-01 -0.2105494036
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## [3676,]  0.1383454639 -3.961696e-01  5.443326e-01 -1.5262327225 -
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## [3677,] -1.2258432828  4.015257e-01 -1.660310e-03  0.2852270727
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## [3678,]  0.4296064527 -2.469438e-01 -8.227365e-02  0.2712226958
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## [3679,]  0.8351822535 -1.849533e-01 -3.654860e-01  0.6353097256
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## [3680,] -0.0041108685  9.411077e-01  4.105781e+00 -7.2671302207
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## [3681,] -0.0495858283  7.104435e-02 -3.358186e-02 -0.4779069291
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## [3682,]  0.4000695334 -4.335114e-02  1.145581e-01 -0.1290941828
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## [3683,]  1.7495672159 -1.822649e-01 -9.787229e-01 -0.1004122328
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## [3684,] -0.8141645245 -1.557138e-01  8.063912e-01 -0.0554513869
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## [3685,] -0.1111696567  1.491738e-01 -2.870386e-01  0.5298973509
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## [3686,]  0.3862463847 -9.012281e-02  7.157049e-01 -1.0354514408
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## [3687,]  0.4323415972 -6.548509e-02  1.097744e-01 -0.0383951127
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## [3689,] -0.6388551516 -7.190038e-02 -1.530106e-01 -0.6204340340
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## [3690,] -0.7758209680 -1.739576e-01 -2.204454e-01 -0.7033904585
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## [3691,]  1.0658382445 -4.235735e-02 -3.231583e-01 -2.4211364838 -
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## [3693,]  0.7195900388  1.305027e+00 -8.065541e-01  0.5495249899 -
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## [3694,]  1.0742272611  2.714987e-01 -1.572387e+00 -0.6013260558
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## [3698,]  0.1085410238  6.041376e-02 -1.253135e-01 -0.1260577294
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## [3699,]  0.1647214172 -3.986679e-01  5.881141e-01 -1.5718561928 -
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## [3702,]  0.2141729089 -4.743072e-01  4.298879e-01  0.0846086185
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## [3704,] -0.4737544953 -1.594841e-01  8.833384e-01  0.2207341886
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## [3705,] -0.2882869614  2.009859e-01 -9.436879e-01  0.7391927347
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## [3709,]  0.1792800157 -1.860202e-01  9.348835e-02  1.1193326591 -
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## [3712,]  0.0225464534  1.064043e-01  1.163155e+00  0.2367084933
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## [3713,] -0.0952515675 -2.516273e-02 -2.877697e-01 -0.3474849273
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## [3714,] -2.1182008444  7.540078e-01 -9.733089e-01 -1.3577124715 -
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## [3717,] -0.1171719535  2.813196e-02 -2.202601e-01  0.1534073613 -
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## [3718,] -0.6673753558  1.453467e-01  9.320462e-01 -0.6852272760
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## [3719,]  0.8858303745 -2.214966e-01 -3.006539e-01  0.6436382729
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## [3720,] -0.7504819838 -9.871605e-02 -4.701254e-01  0.2163728471 -
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## [3723,]  0.2935118127  2.308029e-01  1.132905e-01 -0.1046584089
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## [3724,]  0.0963018731  6.849478e-01 -7.720110e-02 -0.3929106631 -
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## [3725,]  0.1861912803 -5.471557e-01 -3.288187e-01  0.3900391931
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## [3726,]  0.4879932574  3.366472e-01  1.795306e+00 -0.1067745338
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## [3727,]  0.1622013940  3.495230e-01  1.009500e+00 -1.9162260457
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## [3728,]  0.4531977008 -2.541302e-01  1.085568e-01  0.3998499492 -
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## [3729,]  1.1482678891 -2.889768e-01 -1.314830e+00  1.3515616842
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## [3730,] -0.1620129225 -6.271257e-01 -6.180866e-01 -0.8084257423 -
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## [3736,]  0.5725447996 -2.709862e-01  3.478107e-01 -0.0227889774 -
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## [3737,]  1.8391670405 -2.263619e-01 -9.787826e-01 -0.0259580584
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## [3739,] -0.1686358093 -1.713561e-01 -2.307370e-01  1.0225338821 -
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## [3740,] -0.7983782465 -1.807095e-01  8.461654e-01 -0.0412956885
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## [3741,]  0.6193005736 -2.945303e-01  1.819424e-02  0.3261569108 -
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## [3742,]  0.2906203216 -8.986250e-02 -2.493825e-01  0.4163223319 -
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## [3743,]  0.1032678698  7.421086e-02 -1.647901e-01 -0.0266095468
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## [3749,] -0.4324275042  5.586961e-01 -4.570611e-01 -0.0944876612
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## [3757,]  0.0673394736  1.439527e-01 -1.778040e-01  0.5814792522 -
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## [3759,]  0.1724251692  1.508955e-01  7.527906e-01 -0.9571443564 -
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## [3762,]  1.7580999499  2.009115e-01 -1.493545e-01  0.4692579042
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## [3764,] -0.6201599742  5.913086e-01 -5.079684e-01  0.2039813591 -
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## [3772,] -0.0493596741  2.053439e-01  1.446084e+00 -0.5024360740
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## [3773,] -0.0472753253  3.595451e-01  8.443835e-01  0.6727817199
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## [3776,] -1.6193786656  8.424809e-02  1.271787e+00  0.4043472893 -
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## [3777,]  0.2156976667  2.210367e-01  2.333463e+00  0.5183504580
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## [3780,]  0.7952350432  9.532201e-01  1.055937e+00  0.4207939209 -
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## [3781,] -1.2016511467  1.442131e-01  2.383302e+00 -0.3678136606 -
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## [3782,]  0.1997484873  3.866622e-01  9.076411e-01  1.4613692392 -
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## [3783,]  0.2644539814 -3.844004e-01  3.434520e-01  0.6041991337 -
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## [3784,]  0.6112187663 -1.742997e-01  1.436242e+00  0.5141021123
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## [3785,] -0.5116385710 -9.464670e-01 -4.524354e-01 -1.1852776596
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## [3786,] -1.8640199082 -4.845985e-02  1.051550e+00  0.0313738940 -
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## [3787,]  0.2395786498  1.849822e-01  1.493171e+00 -0.3069109914
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## [3788,]  0.0336721405  7.338857e-01  2.596366e+00 -1.6410035132
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## [3789,] -0.4472054648  8.033635e-01  9.524324e-01  0.8952811577
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## [3794,]  0.4840375198 -4.687763e-02  1.389874e+00  0.5533519930
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## [3795,] -0.0806793391  7.057874e-01  1.450530e+00 -0.6589150267
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1.247620e+00
## [3797,]  1.4787012033  2.400277e-01  3.953251e-01  0.8025261983
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## [3799,] -0.3574760765  1.085747e-01  5.072780e-01  0.4626287142
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## [3809,]  0.2574996125 -7.763202e-01  6.291175e-01 -0.6058223737
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## [3812,]  0.7682934364  2.073929e-01 -6.514164e-01 -1.1110522964
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## [3813,]  1.1556968621  1.263261e+00  1.502666e+00 -0.1133596904
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## [3815,] -0.5980724237  5.406276e-01  3.738527e-01  0.7664979250
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## [3816,]  0.2513214119 -6.069573e-02  1.082183e+00 -0.2740195532
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## [3817,]  1.1079469393 -1.012276e+00 -5.395395e-01 -1.0299969708
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## [3818,]  0.4373574204 -3.193629e-01  8.662044e-01  0.2158989784
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## [3819,]  0.9119080291 -3.834473e-01 -4.618167e-02 -2.3782561055
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## [3820,]  0.4512008889 -1.128466e+00  8.018805e-01  0.0298756674
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## [3826,]  0.4658801195 -3.949522e-02  6.707450e-02  0.3296976507 -
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## [3827,] -0.1865272936  1.374023e-01 -8.055294e-01  0.6321844583
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## [3837,] -1.0819084275 -6.884852e-01  3.363819e-02  0.9027789983 -
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## [3838,]  1.3878760232  1.608494e+00 -1.339291e+00 -0.6411682782
1.347662e+00
## [3839,]  0.0004476215  5.024934e-01 -8.770805e-02 -0.3005068266 -
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## [3840,]  2.0296926030  2.547283e-02  1.080083e-01  0.5620152488
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## [3841,] -0.0522542978  3.115059e-01 -1.676739e-01  0.2559033076 -
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## [3842,]  0.0648246999 -1.049405e+00  1.389533e+00  0.4175322356
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## [3843,]  0.3431527465 -5.779224e-02  1.670369e-01  1.1548514958 -
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## [3844,]  1.8148257183 -2.131990e-01 -9.636461e-01 -0.0630083846
2.122734e-01
## [3845,]  0.3233620839  4.831979e-01 -5.582912e-01  0.6584769432 -
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## [3846,] -0.6168376754  1.057313e-01  9.440773e-01 -0.7090364783
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1.031731e+00
## [3847,] -0.2044784229  1.028388e-01 -2.986696e-01  0.1385160888 -
6.113323e-03
## [3848,] -0.1099531667 -1.356940e-01  1.033549e-01 -0.7259442978
3.607062e-01
## [3849,] -0.0471235068  3.195050e-01 -3.471280e-01  0.7677166636 -
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## [3850,] -0.0101043852  3.729977e-01 -1.414998e-01 -0.8369279020
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## [3851,] -0.9532482937 -1.967189e-01 -4.909720e-01  0.0034059392
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## [3852,] -0.5632160392 -7.161073e-02 -1.134795e-01 -0.5834585040
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## [3853,]  0.9888098183 -4.082798e-01 -1.401261e+00  1.2430643541
1.085450e+00
## [3854,] -0.6488193937 -9.308809e-02 -5.845822e-01 -0.2568149143
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## [3855,]  0.6688965958 -1.642495e-01  2.468993e-01  0.3023402380 -
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## [3856,] -0.2206172137  5.630334e-01  1.662300e+00  0.4861234422
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## [3857,]  0.4686753340 -2.724126e-01  1.181316e+00 -2.0958086157
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## [3858,] -1.5398465532 -5.015837e-01 -1.156751e-01 -0.1245056313 -
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## [3859,] -1.2165545259 -1.660750e-01  1.435551e+00  1.1647269136
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## [3860,] -0.0254952214 -9.911957e-01  1.362519e+00  0.4222133057
1.189106e+00
## [3861,]  0.3348574991  1.917070e-01  1.974510e-01 -0.1496647748
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## [3862,]  0.5888982863  9.143856e-02 -1.052437e+00 -1.4035695150 -
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## [3863,]  0.0653227876 -1.101838e+00 -6.843688e-01 -0.2748618459 -
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## [3864,]  0.3264166625 -1.784467e-01  1.456324e+00 -0.5467757227
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## [3865,]  0.4403866697 -1.655417e-01  3.666617e-01 -0.0686559517 -
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## [3866,]  0.4856973643 -1.420608e-01  6.757517e-01 -0.8208916287
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## [3867,] -1.2701508235 -4.655926e-01  4.674047e-02 -0.1107955943 -
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## [3868,]  1.0052312829 -4.727493e-01  3.416448e-01  0.3666296430 -
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## [3869,]  0.3027722340  2.914458e-01  1.388773e+00 -1.7738830627
6.398762e-01
## [3870,]  0.2763449107 -4.452496e-01  2.195891e-01  0.2364763619 -
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## [3871,] -2.0067392317  8.962779e-01 -1.805655e+00  0.9278975919 -
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## [3872,]  0.5008036504 -5.559982e-02 -2.713573e-01  1.2909798699 -
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## [3873,]  0.7487036132 -1.495957e+00 -7.458755e-01  0.0846326648 -
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## [3874,] -0.9876689304  1.639887e-01  1.001865e+00  0.9019045587
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## [3875,]  0.4221093319 -3.470072e-02  4.616400e-01 -0.6969666279
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## [3876,]  1.1294126238  7.147527e-02 -7.265918e-01  0.0854337929
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## [3877,] -0.1369262515  1.771544e-01  3.044792e-01 -0.9333270962
2.984761e-01
## [3878,]  1.1539064750  6.254796e-02 -7.606090e-01  0.0958091959
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## [3879,]  0.5105850127 -4.215858e-02 -1.176309e+00 -1.3663155293 -
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## [3880,] -0.1825279952  4.172947e-02 -3.030875e-01  1.1921903455 -
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## [3881,] -0.6024842483 -2.019535e+00 -1.252615e+00 -1.5855026465 -
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## [3882,]  1.1335266090  7.290869e-02 -7.292132e-01  0.0402055177
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## [3885,]  1.3449750732  1.505454e+00 -1.018163e+00  1.5326747972 -
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## [3886,] -1.0773026533  1.928353e-01  1.093944e+00  0.6637664162
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## [3887,]  0.6272738699 -5.643974e-01  2.270414e-01 -0.3286055496
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## [3888,] -0.6481581181  6.000119e-01 -5.746388e-01  0.2914643751 -
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## [3889,]  0.0126827112  5.364460e-03  2.684463e-03  0.1100920544 -
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## [3890,] -0.2270860705 -9.848283e-05  2.697846e-01 -1.0152186365
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## [3891,] -0.7883088542  4.423299e-01 -4.235701e-01 -0.6022113316
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## [3892,] -1.8675974932 -1.527965e-01  2.575124e-01 -0.3629600040 -
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## [3895,]  1.1123190760  1.336158e+00  1.420872e-01 -0.8702477126 -
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5.456715e-02
## [3897,]  0.1032152250 -4.054340e-01 -3.668426e-01  0.0926630112 -
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## [3899,] -0.4292485803  5.397813e-01 -4.468798e-01 -0.1010782525
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## [3900,]  0.1910647399 -4.330064e-03 -3.172159e-01  0.3922664072 -
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## [3901,] -0.8290325897  1.163658e+00  1.150218e-01  0.4343278354 -
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## [3902,]  1.2339661529 -2.524671e+00 -7.827904e-01  0.4366252952 -
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## [3904,]  0.4464108815 -1.469455e-01  2.585753e-01  0.1294035865 -
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## [3908,]  1.1762888552 -1.452238e+00 -1.902085e+00 -0.9220119318
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## [3909,]  0.9879305274 -4.596680e-01  3.682618e-01  0.3091232993 -
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## [3910,] -0.6352770102 -8.343140e-02 -6.116103e-01 -0.2544328888
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## [3912,] -1.5623255427 -6.165078e-01  7.436896e-01 -0.8016423288 -
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## [3913,] -0.9049903212  5.532296e-01 -6.174643e-01  0.0867454566 -
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## [3914,]  0.3027938931 -4.840093e-01  2.465144e-01  0.2360736201 -
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## [3915,]  0.0278195887 -1.058999e+00 -7.657798e-01 -0.1912427358 -
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## [3916,] -0.1074112734  1.323785e-01 -2.800601e-01  0.5510922254
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## [3917,] -0.1421710129  2.840179e-01 -2.156465e-01 -0.1278732109 -
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## [3919,]  0.3478019191  1.823009e-01  2.251960e-01 -0.1668475456
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## [3922,]  1.1706801667 -1.114880e+00  8.277772e-02  0.5438293756 -
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## [3923,] -0.6444295679 -1.019541e-01 -5.786489e-01 -0.2466783858
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## [3924,] -0.8822235683 -8.758705e-01 -7.272757e-01  0.1014499799
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## [3925,]  0.0056706348  2.360319e-01  6.342401e-01 -1.5037806631
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## [3926,]  1.1634176874  4.708867e-02 -8.138305e-01  0.1801006545
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## [3927,] -0.1643728947 -5.124138e-02 -1.417114e+00  1.3410502221 -
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## [3928,]  2.7372005904  6.671005e+00 -2.265125e+00 -1.9436750972 -
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## [3929,]  0.4210628386  2.211564e-01  1.523580e+00 -1.9170370212
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## [3933,]  0.5704514865  6.914180e-01  1.148442e-01 -0.9510218392
1.412108e-01
## [3934,] -0.9747094273 -5.863624e-01  1.603431e-01  0.8875408847 -
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## [3935,]  0.3282728129 -2.601843e-01 -3.669334e-01  0.3188825922 -
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## [3936,]  0.0822550852 -3.910433e-01 -4.287822e-01  0.1583510676 -
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## [3937,] -0.2369028557  1.179437e-01  1.210263e+00  0.3620577599
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## [3938,]  0.4305096015 -6.638113e-02  3.442583e-02  0.0887001881 -
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## [3939,] -0.7614698297 -9.652725e-03 -6.063490e-01 -0.3228256668
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## [3940,] -0.5245108390  1.819419e-01  2.149255e-01 -1.0090421690 -
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## [3941,]  0.5174043419 -2.117130e-01  3.340818e-01  0.0492684858 -
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## [3942,]  0.8574074249  5.494251e-01  3.760285e-01 -1.3962389132 -
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## [3943,] -0.2985803828 -2.919472e-01  2.561281e+00 -0.4155329619
1.112696e+00
## [3944,]  0.7152700029 -1.327538e-01 -1.324375e+00  0.8611402365
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## [3945,] -1.3870031354 -2.360566e-01  4.667105e-01  0.4013342102
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## [3947,]  0.1515064569  3.316507e-01 -8.061179e-01  0.8443052260 -
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## [3948,] -0.3846565946  4.667287e-01  2.072333e-01 -0.8853302877
1.247789e-01
## [3949,] -0.6181432415 -2.828013e-01 -1.157599e-01 -0.6506335074
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## [3950,] -0.8728956413 -8.979762e-01 -7.939062e-01  0.2631119782
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## [3951,] -0.2714024667 -7.038663e-02 -3.188813e-01 -0.5581271955 -
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## [3952,]  0.2342838291 -1.533895e-01  3.695543e-01 -0.7935266057
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## [3953,]  1.4651800837  4.558474e-03 -1.253189e+00 -0.2090843980
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## [3954,] -0.3936675319  3.624863e-01  9.371027e-01  0.8124954164
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## [3955,]  1.8530483620 -2.361635e-01 -9.536109e-01 -0.0363922394
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## [3956,] -1.2218406898 -5.030555e-01  3.109243e-02  0.0197634141 -
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## [3958,] -0.1614259164 -6.221745e-01 -6.477182e-01 -0.7549498941 -
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## [3959,]  1.4454683001  1.752074e+00 -1.294618e+00 -0.6232085421
1.200500e+00
## [3960,] -0.4843769897  5.430625e-01  3.503505e-01 -1.4358212503
2.048291e-01
## [3961,]  0.2420525501 -1.749887e-01  4.421435e-01 -0.8204508539
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## [3962,]  0.5447075401 -1.317997e-01  2.415041e-01 -0.0886410379 -
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## [3963,]  0.8099035595  2.137417e+00 -3.037196e-01 -0.7014165585
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## [3964,]  0.5417547509  2.940406e+00 -1.084798e+00 -0.6078827962 -
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## [3965,] -1.0082507837  4.520984e-01  1.827088e-01  0.2825149206
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## [3966,]  0.3067166929  2.270906e-01  1.608245e-01 -0.1609000811
2.875395e-01
## [3967,] -0.7443667172 -1.011622e+00 -7.284117e-01  0.2575491955
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## [3968,]  0.1660828621 -3.925794e-01  1.790329e-01  0.2143054080 -
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## [3969,] -0.6069931095 -3.982822e-02 -1.609761e-01 -0.6027389488
1.607022e-01
## [3970,]  0.4558295593 -2.333580e-02 -1.165838e+00 -1.4138517322 -
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1.307961e+00
## [3972,]  1.2275060504  2.727465e-02 -7.128805e-01  0.1157477769
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## [3974,] -0.1233332053  7.641469e-02 -3.037079e-01  0.1410335672
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## [3975,] -0.0482646331 -2.244785e-02  7.985358e-01 -1.3186917957 -
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## [3976,] -1.1749419696 -6.337906e-01  1.101263e-02  0.9090903682 -
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## [3977,] -0.9765559093 -2.468408e-01  1.187798e+00 -0.5381043768 -
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## [3978,] -0.3171528382 -2.965688e-01  2.574284e+00 -0.4126657313
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## [3979,]  0.4982686527 -2.715178e-01 -1.562613e-03  0.6289877146 -
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## [3980,]  1.1175019567 -2.461019e+00 -7.980848e-01  0.3632250688 -
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## [3981,] -0.8365443969 -3.545869e-01  1.366429e+00 -0.7185031412 -
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## [3982,] -1.5250852246 -6.172785e-01  7.193020e-01 -0.7420124459 -
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## [3983,] -0.1921613734  1.437406e-01 -3.535925e-01  0.3221629606 -
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## [3984,]  0.2088317730  3.562623e-01 -6.599065e-01  0.6222236190 -
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## [3985,] -0.5019047537  5.824077e-01  3.229402e-01 -1.4071038555
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## [3986,]  1.1704778633  6.186779e-02 -6.908549e-01  0.0279180343
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## [3987,] -0.6576366996 -8.114827e-01 -6.509209e-01  0.2532429723
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## [3988,] -0.1571697899 -1.754928e-01 -3.916350e-01 -0.3060718071 -
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## [3989,]  0.6185385297 -5.374463e-01  2.349897e-01 -0.3131952797
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## [3990,] -1.3272085782 -4.329209e-01  7.320412e-02 -0.1973235829 -
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## [3991,] -0.3116673647  4.853035e-01 -4.362563e-01 -0.0077921592
1.911166e-01
## [3992,]  0.2954883943 -3.017307e-01  3.386117e-01 -0.1582502624 -
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## [3993,]  0.3189900436 -1.438789e-01  1.145653e+00  0.1734899106
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## [3994,]  0.2464118177 -9.190117e-02  1.734193e-01 -0.1403129957 -
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## [3995,]  0.5416643361 -1.599138e-01  8.324554e-01 -0.9880177785
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1.288186e+00
## [3999,]  0.4240330551 -2.354307e-01  8.096662e-02  0.4322831391 -
4.929429e-01
## [4000,]  0.2116096935  1.774816e-01 -1.475118e+00  0.0421028393 -
2.185825e-01
## [4001,] -0.2090788399 -1.526542e-01 -3.495807e-01 -0.3505272023
4.956877e-01
## [4002,]  1.3994643229  2.143339e+00 -6.466734e-01  1.8363545932 -
2.391695e+00
## [4003,] -0.8123355676 -2.561978e-02  1.742307e+00 -0.2512065525
1.416596e+00
## [4004,] -0.6953088283 -7.020892e-01 -1.279238e+00 -1.4922010725
6.043920e-01
## [4005,] -1.2782900912 -4.413784e-01  3.182458e-02 -0.0604123067 -
1.100752e+00
## [4006,] -0.3057191511 -4.626687e-01 -6.181659e-01  1.0071189615 -
2.920158e-01
## [4007,]  0.2651668590 -1.216201e-01  1.459799e-01 -0.0476401763 -
3.249025e-01
## [4008,]  0.0789259475  1.625053e-01 -1.329863e-01  0.1417464874 -
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## [4009,]  0.8591459724 -7.303188e-03 -1.276601e+00  0.9052655546
1.276444e+00
## [4010,]  0.7642728784  1.281358e+00 -7.387630e-01  0.4710459737 -
8.412595e-01
## [4011,]  1.2059424257  1.041346e-01 -1.174931e+00  0.7998560889
1.666129e+00
## [4012,]  1.1859758775  9.057614e-01 -1.098688e+00 -0.3669544934
1.485809e+00
## [4013,] -0.8364556034 -3.335384e-02  1.662592e+00 -0.1467159519
1.374984e+00
## [4014,] -0.9651750407  7.201531e-01 -6.760800e-01 -0.2075633509
1.762017e-01
## [4015,] -1.6207466608 -1.681684e+00 -1.057679e+00 -0.9214112036
1.270877e+00
## [4016,] -0.1363911447 -4.591089e-01 -4.098863e-01 -0.0243177419
2.423068e-01
## [4017,] -0.7156904793 -1.828164e-01  1.497626e+00 -0.0783001684 -
2.866049e+00
## [4018,] -0.0612302347  1.119421e-01  7.271979e-01  0.9433865050
1.697852e-01
## [4019,]  0.3627373489 -2.430263e-01  1.010312e+00  1.3629511338 -
2.336145e-01
## [4020,]  0.3730334862  2.832876e-01  1.072631e+00  1.2463599408 -
2.111076e-01
## [4021,]  0.2468428332 -1.479862e-01  9.011578e-01  0.9685176154
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5.803251e-02
## [4022,]  0.0023725710  1.490848e+00  2.501545e-01  0.8476053778
3.166777e-02
## [4023,]  2.6161407317  5.718179e+00 -1.592861e+00 -1.1482386213 -
1.512124e+00
## [4024,]  0.9762176963 -3.604090e+00 -1.076647e+00 -0.8281158905 -
1.678002e-01
## [4025,]  0.2552432339  2.562360e-01  1.540114e+00  0.3140733246
5.676012e-01
## [4026,]  0.2366220235 -1.411348e-01  9.024661e-01  0.9099485494
9.201349e-02
## [4027,]  0.2438439369 -1.352429e-01  4.240650e-01 -0.8510912655
3.201691e-01
## [4028,]  0.3793574634 -1.820759e-01  1.522275e-01  0.1168690141 -
2.294482e-01
## [4029,] -0.5294747239 -8.310184e-02 -1.033709e-01 -0.5434830489
1.372617e-01
## [4030,]  0.6290581326  6.484236e-01 -8.448856e-01 -0.4332336955 -
8.186255e-01
## [4031,]  1.3158221515  3.986513e-02 -1.215766e+00  0.9601588454
1.717900e+00
## [4032,] -1.8222394999 -1.704877e-01  1.992397e-01 -0.2784371414 -
1.818762e+00
## [4033,] -0.3776476551  5.112994e-01 -2.859279e-01 -0.3068238639
1.777648e-01
## [4034,]  0.1438710550 -4.283497e-02  7.827458e-02 -0.1354587016 -
2.813270e-01
## [4035,]  0.2995512566 -9.441511e-01 -7.938442e-01  0.1734831581 -
2.132695e-01
## [4036,]  1.8006904873 -2.087278e-01 -9.466554e-01 -0.0927160840
1.837986e-01
## [4037,]  0.3000026401  5.252071e-01 -5.912470e-01  0.6456351006 -
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## [4038,] -0.1162218459  1.390378e-01  4.001690e-01 -0.9863650420
1.787767e-01
## [4039,]  0.1580477496 -1.456687e+00  6.244273e-02  0.8282350163 -
3.522960e-02
## [4040,] -0.0452121633  3.317559e-01 -7.508337e-02  0.1036771769 -
9.463125e-02
## [4041,]  0.4655693262  4.168685e-01  1.461103e+00 -1.6849964671
5.860326e-01
## [4042,] -0.8983370570  3.415735e-01 -4.698630e-01 -0.6648570254
6.119182e-01
## [4043,] -0.4710820311  5.371575e-01  3.960052e-01 -1.5258804626
2.483375e-01
## [4044,] -0.6193187368  2.930894e-01 -4.658486e-02  0.7257473712 -
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## [4045,] -0.3450692529  5.106972e-01 -3.737363e-01 -0.1738394749
2.267379e-01
## [4046,] -0.5382079748 -6.508053e-01 -8.301074e-01 -0.5797670681
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1.491270e-01
## [4047,]  0.1982923534 -1.747136e-01 -5.416256e-01  0.4499994342 -
1.802320e-01
## [4048,] -0.1004784541  4.014807e-02 -1.904275e-01  0.0229608414
2.501948e-02
## [4049,] -0.5398621975 -8.919595e-02 -1.601646e-01 -0.4731311899
1.313711e-01
## [4050,]  0.3194883220 -1.938888e-01  3.427223e-01 -0.6438617529
3.084014e-01
## [4051,]  0.1330555571 -1.100450e+00 -7.114631e-01 -0.2278602814 -
4.719381e-01
## [4052,]  0.7188475764 -6.512330e-01 -6.611127e-01  0.8065680713
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## [4053,]  0.4007666029 -6.755727e-03  4.866002e-01 -0.7809445412
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## [4054,] -0.0368225166  2.352703e-01 -1.331008e-01 -0.1565302384
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## [4055,]  0.2872413710 -2.788173e-01  2.478992e-01  2.2446410935 -
6.740343e-01
## [4056,] -0.2346376336  8.866823e-03  3.990778e-01 -1.1727256466
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## [4057,]  0.0842634858 -3.927051e-01 -2.221419e-01  0.3879721045 -
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## [4058,] -0.2128254324  3.063843e-01 -2.161674e-01 -0.2134379920 -
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## [4059,] -0.0857876200  1.295873e-01 -1.424784e-01  0.1187824147 -
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## [4060,]  0.3905415025  2.555041e-01  1.414116e+00 -1.7441019190
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## [4061,]  0.3098525460 -1.527507e-01  5.424061e-02  0.1614970407 -
2.324363e-01
## [4062,] -0.2115706431 -1.322292e-01 -2.895623e-01 -0.5472319450 -
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## [4063,]  0.0470691692  3.339204e-01 -8.777250e-02 -0.7761783877
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## [4064,]  0.0135339913  2.843560e-01 -4.974392e-02  0.1789238409 -
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## [4065,]  0.3619555905 -3.485687e-01  2.509957e-01  0.0638301406 -
2.856471e-01
## [4066,] -0.0807868184  6.748730e-01  7.470998e-01  0.9049881950
1.595809e-01
## [4067,] -0.3958873557 -1.143682e+00 -1.447532e+00 -1.7044809482
4.921479e-01
## [4068,]  0.7237455568 -1.671065e+00 -6.976624e-01 -0.0538553001 -
3.362654e-01
## [4069,] -0.1611319771  3.642907e-01 -4.362601e-01  0.4840987037 -
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## [4070,] -1.4975373323 -3.691115e-01  4.216866e-01  0.3099587826
6.825333e-01
## [4071,] -0.4156075686  2.790309e-01  6.334438e-02 -0.8028999986
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2.927291e-01
## [4072,] -0.3383885800 -2.629702e-01  2.630382e+00 -0.5066213276
1.052808e+00
## [4073,]  1.5379136558 -2.041624e-02 -1.241985e+00 -0.1755665160
4.626588e-01
## [4074,] -0.8043085569 -5.363846e-02  1.764996e+00 -0.2640196226
1.387326e+00
## [4075,]  0.0716197980  1.685458e-01 -1.859612e-01  0.2680979883 -
5.076270e-02
## [4076,] -0.4035114396  2.338674e-01  1.547455e-01 -0.8828732342
2.001824e-01
## [4077,]  0.4028894424 -3.865906e-01  2.691758e-02  0.7483695746 -
4.771568e-01
## [4078,] -0.7234668536  4.279203e-01 -3.662706e-01 -0.5569383245
4.751471e-01
## [4079,]  0.0658610637 -1.805954e-02  1.454308e-01 -0.6278046900
3.259448e-01
## [4080,]  0.2266446501 -4.374780e-01  5.934607e-01 -1.5500724411 -
1.430152e-01
## [4081,]  0.2898588492 -5.343124e-01 -9.693027e-02  0.8338452779 -
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## [4082,]  0.8947789451 -4.168259e-01 -2.722745e-01  0.5826982034
8.662735e-01
## [4083,] -0.5070390212  5.584545e-01  3.110265e-01 -1.3908548613
2.012696e-01
## [4084,] -0.2542984402  5.364126e-01  1.771273e-01 -0.1186052998
2.835889e-01
## [4085,] -0.0251560011  1.577825e+00 -7.943184e-01 -0.7579130300 -
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## [4086,]  0.2456881718 -7.382022e-02  1.371075e+00  0.4585570229
1.045937e-01
## [4087,]  0.9611247181 -4.884206e-02 -1.191005e+00  0.8878897562
1.310105e+00
## [4088,] -0.4008008017  5.119374e-02 -4.348079e-01  0.2442598977 -
1.857405e-02
## [4089,]  0.9470255212  6.842482e-01 -3.949915e-01  1.1126180775 -
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## [4090,] -0.5905495082  7.176539e-01 -9.433071e-02  0.3232701100 -
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## [4091,]  0.6566891667 -2.279594e+00 -2.888791e+00 -2.6468365393 -
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## [4092,]  0.1206252576  1.686712e+00 -5.865754e-01 -0.8808427305 -
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## [4093,]  0.9782795456  7.962685e-01 -1.121380e+00 -0.5241118340
1.514916e+00
## [4094,]  1.1636595114 -2.475943e+00 -7.770253e-01  0.4198231181 -
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## [4095,] -0.1061601371 -6.701035e-01 -6.224655e-01 -0.7363012673 -
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## [4096,]  0.0761682033 -3.040615e-01  2.611418e-01 -0.2030108854 -
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1.013494e-01
## [4097,]  1.8941273522 -2.527151e-01 -9.210812e-01 -0.0373127353
2.100297e-01
## [4098,] -0.4215759403  2.297603e-01 -5.307984e-02  0.2180540079 -
2.931038e-01
## [4099,]  0.3419602027  2.767436e-01  1.442680e+00 -1.8603418337
6.961495e-01
## [4100,] -0.7127771270 -8.133154e-02 -6.614034e-01 -0.1621146209
1.553145e-01
## [4101,]  1.0501526815 -4.388236e-01 -1.326772e+00  1.2178763037
1.066229e+00
## [4102,]  0.4830111382 -1.043009e-01  1.437229e-01 -0.0075698305 -
1.967547e-02
## [4103,]  0.2819482532 -3.138204e-01 -3.616822e-02  0.7262752077 -
5.340960e-01
## [4104,] -0.4483128580  5.240818e-01  3.582758e-01 -1.4138414009
2.165408e-01
## [4105,]  0.6864421014 -1.616470e-01 -1.766795e-01  1.3459553591 -
1.270627e-01
## [4106,]  0.8072090702 -1.799820e+00 -1.526607e+00 -1.9817508230 -
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## [4107,] -0.1884915013  1.102364e-01 -3.283134e-01  0.1976879245 -
2.347950e-02
## [4108,] -0.6893281457  2.798129e-01 -2.511648e-01 -0.0924134575 -
3.974482e-01
## [4109,]  1.0176432497 -4.227817e-01 -1.360937e+00  1.2697644805
1.024649e+00
## [4110,] -0.1665207636  4.053641e-01 -3.567844e-01  0.3042162872
7.868525e-03
## [4111,] -0.7285106263 -2.053566e-01 -1.822448e-01 -0.6419074820
1.524735e-01
## [4112,] -0.5314245226  5.743470e-01  3.198720e-01 -1.4704149206
2.129671e-01
## [4113,] -0.2918559047 -2.943995e-01  2.596164e+00 -0.3624956371
1.012447e+00
## [4114,]  0.0827240059  3.244224e-01 -5.918160e-02 -0.7846634744
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## [4115,] -0.8729838745  6.076888e-01 -5.120674e-01 -0.2742864227
4.858903e-02
## [4116,] -0.4900639304  5.671964e-01 -5.250165e-01  0.3529403047 -
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## [4117,] -0.3485034855  5.102748e-01 -3.076611e-01 -0.1945094972
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## [4118,] -0.3749604770  7.103117e-01  7.022853e-01  0.8383573082
1.773339e-01
## [4119,] -0.3442255268  6.861826e-01  1.822384e+00  0.3364792487
9.359466e-01
## [4120,] -1.0015870605  4.229350e-01  2.208645e-01  0.2649681426
1.053194e+00
## [4121,] -0.1414887684  2.581084e-01 -1.688734e-01 -0.2139373755 -
```

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2.783151e-02
## [4122,] -0.2146063400 -3.106824e-01  2.618235e+00 -0.3679132160
1.125735e+00
## [4123,]  1.8629030959 -2.450788e-01 -9.238754e-01 -0.0515206797
1.890258e-01
## [4124,] -0.1782175370  1.436760e+00 -7.839490e-01  0.1971454964 -
4.275635e-01
## [4125,]  0.3364108428 -1.380927e-01  1.372046e-01  0.0872789929 -
2.251145e-01
## [4126,] -0.2981923207  7.418804e-01  1.073475e+00 -0.4213516220
7.385391e-01
## [4127,]  1.4390211518 -2.909635e-02 -5.628245e-01  0.5228466868
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## [4128,] -0.8494294851 -3.203072e-02  1.671451e+00 -0.1642482056
1.363583e+00
## [4129,] -0.0441230765  1.051319e-01 -1.529925e-01  0.2139146105 -
4.229378e-02
## [4130,]  0.4982467761 -1.327256e+00 -8.685829e-01 -2.7133463733
1.231437e-01
## [4131,] -0.2350781888 -3.257452e-01  2.641359e+00 -0.3960642701
1.056457e+00
## [4132,]  0.6611113614 -6.843682e-01  4.993837e-01 -1.2158521135
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## [4133,] -0.1886657104  4.056158e-01 -3.444836e-01  0.2942538953 -
4.361990e-02
## [4134,]  0.0975865675  4.164429e-01  6.024389e-01 -1.2803687380
4.542731e-01
## [4135,]  0.3325261659 -1.011933e+00 -5.755315e-01 -0.1440423957 -
6.336163e-01
## [4136,] -0.0268921248 -7.196381e-01 -6.004230e-01 -0.6611317959 -
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## [4137,]  0.7175819799 -1.012841e+00 -3.621662e-01  0.2381703979 -
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## [4138,] -1.3184155745 -4.360468e-01 -2.705305e-02  0.0307360887 -
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## [4139,] -0.1138811363  2.431770e-01 -1.650565e-01 -0.1454996295 -
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## [4140,] -0.4808245892  5.734758e-02 -1.267893e-01  0.2526392752 -
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## [4141,] -1.0383945488  5.196526e-01  1.361753e-01  0.3572543499
1.143641e+00
## [4142,]  1.4926415725 -7.319732e-03 -1.255635e+00 -0.1927802811
4.472876e-01
## [4143,] -0.0795278242  2.518556e-01 -1.271377e-01 -0.1989680857 -
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## [4144,]  0.3593610345  2.683382e-01  1.467932e+00 -1.8654473122
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## [4145,]  0.0322969368  1.662107e-01 -1.616795e-01  0.2034553750 -
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## [4146,] -0.2569133786 -3.761347e-01  3.548828e-01  0.6808776485 -
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1.155075e-01
## [4147,]  0.9934347193 -1.720752e-01 -3.204627e+00  1.0488262675
1.077106e+00
## [4148,]  0.0621456811 -5.986696e-01 -3.799461e-01  0.0445267821 -
4.994380e-01
## [4149,] -0.5952563093  6.539139e-01 -7.061159e-01  0.5024746121 -
2.293560e-01
## [4150,]  1.3283318718  4.237925e-02 -1.162160e+00  0.8497372913
1.757765e+00
## [4151,]  0.2482552545 -8.541028e-02  1.096915e-01 -0.0082006249 -
3.020757e-01
## [4152,]  0.1977127377  3.681473e-01 -6.624561e-01  0.6812669714 -
6.240774e-01
## [4153,]  0.0889460091  2.398751e-01  5.506348e-01 -1.3123281137
6.416707e-01
## [4154,]  0.5718860363 -1.389691e-01  1.192478e+00 -1.9432918733
4.813506e-01
## [4155,]  1.4599979532 -2.887540e-02 -5.103929e-01  0.4202154182
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## [4156,] -0.6998182849 -2.172835e-01  8.753690e-01  0.0287234198
4.189750e-01
## [4157,] -0.2516477480 -3.202187e-01  2.602421e+00 -0.4048165711
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## [4158,] -0.6052977281 -8.708068e-01 -6.197437e-01  0.3279938959 -
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## [4159,] -0.2042778987  3.036206e-01 -3.865702e-02  0.4465796895 -
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## [4160,] -0.1640245165 -3.583447e-01  2.657940e+00 -0.3938381000
1.106762e+00
## [4161,]  0.0191099159 -1.075422e-02  1.268226e-01 -0.0744583397 -
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## [4162,]  1.0974616312 -8.565966e-01 -1.288876e+00 -1.2945043735
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## [4163,] -0.7932712584 -4.124947e-01  2.296939e+00 -0.2416790947
1.371052e+00
## [4164,]  0.3787042287 -6.225603e-02  4.771691e-02  0.6769926964 -
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## [4165,] -0.5343440390  6.089600e-01 -6.736986e-01  0.5148985961 -
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## [4166,]  0.3000921037 -2.435150e-01  7.582925e-02  1.2340267005 -
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## [4167,]  0.3692190462 -3.201219e-01  3.033268e-01  0.3308708994 -
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## [4168,]  0.3907137732 -7.821640e-01 -8.284450e-01  0.3502184557 -
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## [4169,]  0.0394190730 -4.879063e-02 -3.039121e-01  0.4371635550 -
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## [4170,]  0.4488674402 -3.868719e-01  3.838153e-01 -0.0899301389 -
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## [4171,] -0.6181667843 -1.033548e-01 -6.137834e-01 -0.2171232715
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## [4172,]  0.6572442689 -1.808115e-01 -1.467247e-01  1.2400490610 -
1.785527e-01
## [4173,]  0.4261455588 -4.071445e-01  6.858173e-02  0.7078394770 -
4.971628e-01
## [4174,] -0.1806531834  3.197990e-01  3.028297e-01 -0.8741628588
1.753155e-01
## [4175,]  0.9440023065 -3.045849e+00 -2.000808e+00 -1.0042188885
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## [4176,] -0.2946551798  3.680007e-01  1.081887e-01 -0.6279322572
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## [4177,]  0.1077301428  4.042329e-01  1.330475e+00  0.2972008069
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## [4178,]  0.4400928494 -2.407683e-01  1.273455e+00  0.1520168911
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## [4179,]  0.9132582628 -4.068493e-01 -2.566277e-01  0.5447328048
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## [4180,]  0.2286354089 -1.905717e-01  3.130936e-01 -0.0920708419 -
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## [4181,] -0.7094217727 -1.004201e+00 -6.617081e-01  0.2414241135
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## [4182,] -1.2246139901 -5.815325e-01  8.868344e-03  0.8819944878 -
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## [4183,]  0.8614913706  6.443795e-03 -1.197378e+00  0.7899752548
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## [4184,]  1.6667693581  1.176634e+00 -1.495935e+00 -0.8425880628
1.155278e+00
## [4185,] -0.5529750861 -5.599223e-01 -7.718292e-01 -0.0373461978 -
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## [4186,]  0.4748309395 -1.338037e-01  7.882090e-01 -0.9549182152 -
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## [4187,]  0.2048351826  9.438714e-03  2.863599e-01 -0.5426603255
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## [4188,] -0.0823687311  3.447818e-01 -3.431562e-01  0.4118249155 -
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## [4189,]  0.0361144347 -2.941553e-01  2.356378e-01 -0.1545434727 -
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## [4190,]  0.5756179434 -1.255591e-01 -2.174356e-01  1.2766362856 -
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## [4191,] -0.3154207976  1.850956e-01 -4.037004e-02  0.2952991528 -
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## [4192,] -0.5715656254 -6.442453e-02 -4.682489e-01  0.2609501152 -
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## [4193,] -0.2945674539 -1.109209e+00 -8.293779e-01  0.4645227027 -
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## [4194,] -1.1261522725  3.360228e-01  3.606369e-02  0.3619802169
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## [4195,]  0.2821601300 -7.138603e-01 -1.827281e-01  0.8743633065 -
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1.607866e+00
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1.644034e+00
## [4199,]  1.3153023409  5.656940e-02 -1.143131e+00  0.8524867603
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## [4200,]  1.5515710777 -3.755753e-02 -1.236767e+00 -0.1571833003
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## [4201,]  0.3695376379 -8.962280e-02  1.846796e-01  1.2444878596 -
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## [4202,] -0.1825388379 -1.445712e+00 -1.718094e-01 -0.6942339002
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## [4203,]  0.6741595888 -1.639026e+00 -7.201371e-01 -0.0620707643 -
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## [4204,] -0.2520586292  6.622894e-02 -2.741110e-02 -0.5745103814
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## [4205,]  1.1115415244 -4.736351e-01 -1.333680e+00  1.3280316126
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## [4206,] -0.1248078183  5.066020e-01  1.131058e+00  0.1188134202
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## [4207,] -0.8065073971 -4.505127e-02  1.733261e+00 -0.1568287336
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## [4208,]  0.1594640726 -1.696359e-01  1.117002e-01  1.0977135121 -
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## [4209,] -0.1694474727  4.010811e-02  3.205035e-02 -0.6331703450
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## [4210,]  0.2336803695  3.412402e-01  7.508317e-01 -1.3665274556
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## [4211,] -0.7969899042 -3.821822e-02  1.743054e+00 -0.1814096634
1.346149e+00
## [4212,] -0.2573799925 -4.589741e-01 -6.766510e-01  1.1361091726 -
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## [4213,] -0.6470516746 -3.382403e-02 -4.406791e-01  0.1764387369 -
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## [4214,]  1.2609763257  8.004962e-02 -1.142749e+00  0.7619059470
1.713762e+00
## [4215,]  0.1173171848  1.045257e-01 -1.642794e-01  0.2459540118 -
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## [4216,] -1.5461726485 -3.598676e-01  2.695723e-01  0.5054748712
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## [4217,]  0.5534053081 -1.256689e-01  2.556076e-01 -0.1337141435
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## [4218,]  0.0534672704 -5.045944e-02  1.262211e-01 -0.2266312354 -
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1.511245e-01
## [4222,]  0.7858252531  1.195146e-02  1.696794e+00  0.6238948963 -
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## [4225,] -0.1869034829  5.367429e-01  9.446009e-01  0.0889165158
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## [4226,] -0.2430593854 -8.337403e-01  9.335106e-01  0.6722041607
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## [4227,]  0.6827815398  3.382385e-01  1.567550e+00  0.4247894242 -
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## [4228,] -0.3466030943 -6.200257e-01  1.419072e-01  0.4433925722
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## [4229,]  0.3709674237 -5.458655e+00 -1.896651e+00 -1.7286489923
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## [4230,]  0.7746888353 -3.179397e+00 -2.388872e-01  1.1015806249 -
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## [4231,] -0.0682371280  1.012554e-01  4.732585e-01 -1.0767309466
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## [4232,] -0.5522631964  4.088762e-01 -2.777671e-01 -0.5209752918
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## [4233,] -0.1374354673 -1.516004e-01 -4.972657e-01  0.5827612103 -
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## [4237,] -0.1447222329  2.031687e-01 -1.385695e-01  0.0801769455 -
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## [4238,]  0.6002536405 -2.785907e-01  4.276934e-01  0.0360580492 -
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## [4239,]  0.3965428729  2.400022e-01  1.562989e+00 -1.9562910556
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## [4243,] -0.7808469913  5.759283e-01 -5.017164e-01  0.1895222885 -
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## [4244,] -0.2627976566  5.575458e-01  1.806692e-01 -0.1630584800
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1.486765e-01
## [4247,]  0.2853480030 -4.446313e-01  1.234912e+00  0.0441401394
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## [4248,]  1.2208554495  2.471260e-01  7.837145e-01 -1.6419012681 -
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## [4249,] -0.5097865590  3.804547e-02 -5.238218e-01 -0.1967824087
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## [4250,]  0.6282670045 -1.655225e-01 -8.402426e-02  1.1367811603 -
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## [4251,] -1.3246684649 -4.070149e-01  1.929073e-02 -0.0875500197 -
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## [4254,]  0.0313846237  4.695782e-01 -4.525218e-03 -0.6743259672
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## [4257,] -0.5947569199 -6.667423e-02 -5.198108e-01  0.3252505297 -
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## [4258,] -0.2702723775  5.815725e-01  1.569606e+00  0.6255219158
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## [4259,] -0.9313009165  6.861361e-01 -6.023734e-01 -0.1906102373
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## [4260,] -0.0287114980  2.397037e-01 -1.769869e-01  0.1178736055 -
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## [4261,]  1.4703740083  1.070615e+00 -1.579270e+00 -0.9800935802
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## [4262,]  0.1225745641 -3.664373e-01  2.602099e-01 -0.1239729126 -
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## [4263,]  0.4226560494  2.432462e-01  1.487000e+00 -1.7944511884
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## [4264,]  1.2475068776  8.141655e-02 -1.153649e+00  0.7658277914
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## [4266,]  0.4329546000 -5.404223e-02  4.780699e-01 -0.7156467821
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## [4267,]  0.7262404429 -6.187939e-01  2.530791e-01 -0.2516108784
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## [4268,] -0.4138382636  4.911162e-01  4.607719e-01 -1.4922278489
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## [4269,] -0.4881023880  4.813613e-01  1.730052e-01 -0.3501698753
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## [4270,]  1.5575415023 -1.662960e+00 -9.558920e-01  0.2411590482 -
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1.379559e+00
## [4272,] -0.4405757015  4.469940e-01  7.403075e-02 -0.2278368942
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## [4273,] -0.4013409974  4.228038e-01  6.895765e-01 -0.2144366716
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## [4274,] -0.7848455449 -5.560535e-04  1.324762e+00 -0.1482668273 -
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## [4275,]  0.3646755718 -7.117926e-01  5.051615e-01  1.1861471625 -
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## [4276,]  0.6043924257 -9.788301e-02  1.708382e+00  0.3807132505 -
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## [4277,]  0.1303877068  2.099471e-01  6.419007e-01 -1.3969132805
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## [4279,] -0.3448175222  3.237500e-01  7.647452e-01 -0.1642586393
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## [4280,]  0.3671936117 -3.280573e-01  3.522352e-01 -0.0501226726 -
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## [4281,]  1.5567523429 -3.916567e-02 -1.214202e+00 -0.1749708196
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## [4282,] -0.4968680882  5.856024e-01 -5.142236e-01  0.3460200511 -
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## [4283,]  0.6379999125 -1.617331e+00 -6.481760e-01 -0.2233470071 -
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## [4284,] -0.6114740833  6.659713e-01 -6.594988e-01  0.3915570586 -
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## [4288,] -0.5331292649  3.728212e-01 -1.498657e-01 -0.7045627124
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## [4290,] -0.4328243497  5.122018e-01  4.340028e-01 -1.4649107029
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## [4291,]  1.2518711404  6.035612e-02 -1.188022e+00  0.8443197054
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## [4292,] -0.0618971849  2.537384e-01 -1.508083e-01 -0.1862690735
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## [4293,]  0.5448272172 -1.745223e-01  7.731934e-01 -0.8718116435
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## [4294,] -0.6689902867 -1.020734e+00 -5.956634e-01  0.1633020119
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2.471790e-01
## [4297,] -0.4959262764  6.132932e-01 -3.416676e-01  0.2519531380 -
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## [4299,]  0.9566500213 -4.480505e-02 -1.179942e+00  0.8660690167
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## [4300,] -0.0899045233 -1.924407e-01 -4.634791e-01  0.5852675223 -
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## [4301,] -0.0781727042  2.480765e-01 -1.908874e-01 -0.0939431050 -
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## [4302,] -0.1864802612 -2.578145e-01 -3.902690e-01 -0.0927540929
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## [4303,] -0.6890215961 -1.304093e-01  1.810515e+00 -0.1553558766
1.318158e+00
## [4304,] -1.1229606463 -5.655697e-01  1.255002e+00 -1.1115710813
1.023754e+00
## [4305,]  1.5969751353 -9.231353e-01  6.978281e-01 -0.7171366295 -
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## [4306,]  0.0634576975 -7.927809e-02 -2.203850e-01  0.4059139882 -
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## [4307,]  0.4032048970  1.457280e-01  2.250407e-01  0.0900245910
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## [4308,]  0.6811157806  6.806935e-01  8.658703e-03 -0.1916731063 -
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## [4309,] -0.9740089951 -2.186646e-01  1.548437e-01 -0.6823742513 -
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## [4310,] -0.1254381698  3.563749e-01 -3.100854e-01  0.3119714587 -
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## [4311,]  0.8607868763 -2.076364e-01 -1.270516e+00  0.9364030786
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## [4312,]  0.3563625092 -2.877429e-01 -4.630242e-01  0.5125323417 -
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## [4313,]  0.3068043384 -2.307323e-01 -1.928562e-01  0.9158259886 -
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## [4314,]  0.2223917323 -4.317979e-01  2.389168e-01  0.2620850533 -
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## [4315,]  0.9107635443 -3.854816e-02 -1.240131e+00  0.9633677431
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## [4316,]  1.1615117522  5.295447e-02 -6.810926e-01  0.0246383980
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## [4317,] -0.0282256620  1.030126e-01  4.555355e-01 -1.0291226530
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## [4318,]  1.4870137572  1.062334e+00 -1.588445e+00 -0.9089730834
1.212347e+00
## [4319,]  0.5200867428 -6.939167e-01  1.404909e-01 -0.3423707466
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## [4320,] -0.1728340559  3.517530e-01 -5.896626e-02 -0.8142494071
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## [4322,]  0.2399814188 -3.178086e-02  8.368058e-02  0.7228439726 -
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## [4323,] -0.7283959147 -6.915091e-02  1.856878e+00 -0.2870512332
1.365298e+00
## [4324,]  0.4177795762  1.018965e-01  1.599205e+00  0.1242918887
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## [4325,] -1.4870570253  5.288118e-03  1.270642e+00  2.0050751623
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## [4326,] -0.4485751510 -4.561396e-01  5.741032e-01  1.0136659800
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## [4327,]  0.3766980027 -3.134394e-01  2.804453e-01 -0.0055953903 -
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## [4328,]  0.8971316944 -3.904074e-01 -3.554300e-01  0.6596116524
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## [4329,]  1.0836094212  2.638293e-01 -1.447786e+00 -0.7312454478
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## [4331,]  0.2630510015  7.185655e-02  7.312452e-01 -0.7893685382 -
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## [4334,]  0.4043250421 -6.164521e-01  1.724352e-01 -0.4053804949 -
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## [4342,]  0.2713992183 -5.501902e-01 -3.896397e-02  0.7625292114 -
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## [4348,]  0.2745919617  3.453128e-01  1.459294e+00  0.1543749103
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## [4349,]  0.1574827480 -1.798763e-04  3.012348e-01 -0.6939776393
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## [4350,] -0.3739608085  5.978480e-01 -4.272883e-01 -0.9323342316
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## [4351,]  0.1774999804 -1.085029e+00  1.500206e+00  0.4414989985
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## [4352,] -1.4313478607 -3.374500e-01  1.159025e-01  1.5972145191
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## [4354,] -0.4841452783 -5.982597e-01 -7.542330e-01  0.0120109903 -
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## [4355,] -0.6348091785  1.207317e-01 -5.811928e-01  0.9016745023 -
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## [4390,]  0.4011731905 -6.021653e-03  5.660949e-01 -0.4689056248 -
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## [4399,]  0.3813298187 -2.770793e-01 -4.444227e-01  0.5008706923 -
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## [4409,]  0.1848771843  1.007138e-01  2.470884e-01 -0.2690953219
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## [4412,] -0.5340948949 -8.171805e-01 -1.141703e+00 -1.4546783307
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## [4417,] -0.4402690874 -6.151278e-01 -6.813104e-01  0.0041821581 -
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## [4418,]  0.4943899459  3.972882e-01  1.591623e+00 -1.8622924487
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## [4419,]  0.6849211373 -5.379090e-01 -1.070312e+00  0.6453344547 -
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## [4420,]  1.3719762409  2.115158e-02 -1.122014e+00  0.8935670815
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## [4424,] -2.6261554961 -2.666569e-01 -3.869679e-01 -2.1386431228 -
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## [4426,] -0.9955408401 -4.858910e-01  1.353179e+00 -1.0585489067
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## [4427,]  0.1486178459  4.182524e-01  6.954604e-01 -1.4005837512
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## [4428,] -0.3250889884  1.787815e-01 -8.191328e-02  0.3772065500 -
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## [4429,] -0.2079864548 -2.353217e-01  3.101651e-01 -0.5524815408 -
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## [4430,]  0.6544204961  2.665282e-01  1.033695e+00 -0.6673783263 -
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## [4431,]  0.3277712770  1.179695e+00  9.470131e-01 -0.1469486621
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## [4434,]  1.0652359330 -1.454534e+00 -5.356266e-01  0.2230111857 -
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## [4435,]  1.0927403439  1.488913e+00  8.488875e-02  0.9908374443 -
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## [4436,]  0.9585498316 -1.122422e-01  1.991001e+00  0.3954217441 -
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## [4437,]  0.5200857302 -4.163548e-01  3.564853e-01  0.3640495602 -
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## [4438,]  0.1053983211 -1.024355e+00  1.382344e+00  0.4835347653
1.264357e+00
## [4439,] -1.3736333717 -3.517078e-01  1.652946e-01  1.6108505001
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## [4440,]  0.4995191888 -8.204472e-02  4.907375e-01 -0.6103781014
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## [4441,] -0.5231695904  6.431370e-01 -2.743566e-01  0.1058819349 -
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## [4442,] -1.0271360557 -6.531197e-01  1.243953e+00 -0.9301332492
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## [4443,]  0.4440202901 -3.708292e-01  4.011079e-01 -0.1073907033 -
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## [4444,] -0.3746243225  4.724891e-01  5.247710e-01 -1.5819471006
1.918259e-01
## [4445,]  0.2921201343  3.050202e-01  8.115302e-01 -1.3781426371
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4.924625e-01
## [4447,] -0.6965958213  1.058403e+00  2.168699e-01  0.5252024803 -
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## [4448,] -0.5305286896 -1.176656e-01 -8.523944e-01 -1.0741275471
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## [4449,]  0.4573757017 -3.568195e-01  4.311168e-01  0.2122455561 -
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## [4450,]  0.1095489578  2.096938e-01  6.515929e-01 -1.4049991223
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## [4463,] -1.4591156167 -4.164049e-01  4.123486e-01  0.4108137529
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## [4465,] -0.4618939953  4.375234e-01 -4.700111e-01 -0.9558921140
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## [4466,]  0.2829084215 -1.344820e-01  5.446787e-01 -0.2276115384 -
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## [4468,] -0.4769924542  5.345931e-01  4.184376e-01 -1.5114759481
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## [4485,]  0.2292111034 -2.316682e-01  3.338952e-01 -0.0812921484 -
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## [4486,]  1.2159485524  1.329152e-02 -7.063256e-01  0.1742872634
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## [4487,]  0.3037940464 -2.295777e-01  4.063288e-01 -0.1247206729 -
2.277778e-01
## [4488,] -0.6493540809  5.063203e-01 -3.542694e-01  0.1233683228 -
2.521049e-01
## [4489,] -0.3690266235  1.855064e-01 -1.293452e-01  0.4250637335 -
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## [4490,]  0.1367688680 -1.341317e-01 -2.666676e-01  0.5140368406 -
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## [4491,] -1.6633819890 -4.574839e-02  2.452007e-01 -0.0714324270 -
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## [4492,] -0.5983710822  4.562953e-01 -2.919153e-01  0.0362776828 -
2.441712e-01
## [4493,]  0.8738145067  1.955089e-01 -6.425370e-01 -1.9242882231 -
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## [4494,]  0.3349312463 -2.744257e-01 -4.408888e-01  0.4932861588 -
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## [4495,]  0.4105553533 -3.280497e-01  3.139514e-01  0.3229319236 -
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## [4496,]  0.1831179225 -3.494028e-01  2.441343e-01 -0.3284780031
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7.854217e-02
## [4497,]  0.2207379558  1.113261e+00 -1.439126e-01 -0.7178261244 -
1.092348e-01
## [4498,]  0.3674992772 -4.146161e-01  5.387160e-01 -0.2037389828 -
1.658479e-01
## [4499,]  0.7747573607 -4.095480e-01  1.519881e+00 -0.2771410690
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## [4500,] -0.9522679910 -2.286191e-01  1.847930e-01 -0.6967903982 -
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## [4501,] -1.4353944959 -6.775429e-01  8.884309e-01 -0.8529270368 -
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## [4502,] -1.3191712773 -2.647175e-01  4.985057e-01  0.4849477711
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## [4503,] -1.1550191563 -5.824984e-01  1.211615e+00 -1.0376709684
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## [4504,] -2.0734640507  6.482496e-01  5.806265e-01  0.8085405641 -
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## [4505,] -0.1462470025  1.418726e+00 -7.866850e-01  0.2741138003 -
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## [4506,]  1.1631323737 -5.521870e-01  3.803727e-01  0.4950393930 -
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## [4507,]  0.4082007339 -6.145149e-01 -8.608614e-02  0.9733574886 -
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## [4508,]  0.8300098172 -1.530722e+00 -5.860729e-01 -0.0346628171 -
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## [4509,]  0.0665931942  3.479289e-01  1.011218e-02 -0.9211348972
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## [4510,]  0.7351234274  6.173700e-01  1.988761e-02 -0.1238638346 -
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## [4511,] -1.7112124546 -5.235512e-01 -8.831114e-01  0.2656033813 -
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## [4512,]  0.5023301741 -2.906178e-01  7.527195e-01 -0.3723174331 -
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## [4513,] -0.3093870347  3.933352e-01  1.682374e-01 -0.7120623099
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## [4514,]  0.0150715553 -4.223780e-01 -4.275339e-01  1.1001770775 -
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## [4515,] -0.6874024809 -4.154737e-02 -5.487623e-01 -0.2873364884
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## [4516,]  0.6046603210 -2.603693e-01  4.497795e-01  0.0096606941 -
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## [4517,] -0.4973444380 -5.939315e-01 -1.409078e+00  0.3911442588 -
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## [4518,]  0.0522093940  2.448818e-01  6.563815e-01 -1.3925877372
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## [4519,]  0.2272506715 -3.828868e-01 -2.069976e-01  0.7928888350 -
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## [4520,] -0.3419486307 -4.858333e-02 -3.520681e-01 -0.2254104888
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## [4524,]  0.2906800270  3.312074e-01  6.798794e-01 -1.2032581095
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## [4525,]  0.2677662343  1.126370e-01  7.681025e-01 -0.7893331501 -
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## [4526,]  0.8216777435 -1.552139e+00 -5.295081e-01 -0.1265168946 -
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## [4527,]  0.8092204908  6.009295e-01  4.670008e-02 -0.1728318805 -
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## [4528,]  0.3909849297  2.382681e-01  1.214419e+00  1.0679210816 -
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## [4529,]  0.8929539788 -2.106432e-01 -1.235615e+00  0.8975653458
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## [4531,]  0.7698931020 -2.089730e-01 -1.173062e-01  1.3695276809 -
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## [4532,]  1.1039862492  4.985684e-02 -1.135556e+00  1.0168927479
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## [4534,]  0.3777026918 -4.223496e-01  6.248922e-01 -0.3315037698 -
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## [4535,] -0.4756337274  3.004718e-01 -1.761745e-01 -0.5306770271
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## [4536,] -0.8778355351 -3.254360e-01  1.364562e+00 -0.7001825622 -
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## [4537,]  0.4935812675  4.225035e-01  1.653834e+00 -1.9446594319
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## [4538,]  0.1387525029 -4.498131e-01 -1.720542e-01  0.3699189757 -
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## [4539,] -0.9132672714 -3.102890e-01  1.378531e+00 -0.6976509565 -
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## [4540,] -0.7492585060  7.550003e-01 -4.677848e-01 -0.1554139134 -
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## [4541,] -1.4168220382 -4.358878e-01  4.033058e-01  0.5014249083
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6.516759e-01
## [4547,]  0.7881404541 -1.817578e-01 -1.248004e+00  0.8171725024
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## [4552,]  0.1774193223  1.766868e-01  6.675628e-01 -1.3664546241
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## [4553,] -1.3089624436 -6.534234e-01  7.750839e-02 -0.1294899024 -
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## [4557,] -0.2773877922  1.937914e-01  2.357574e-01 -0.8328845807
2.265266e-01
## [4558,] -0.4223577978  1.245327e-01  2.083917e-01 -0.7324876787 -
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## [4561,] -0.4194484288 -6.312304e-01 -6.741045e-01 -0.0185808706 -
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## [4562,]  0.0002930151  7.012922e-03 -1.911689e-01  0.1961984919 -
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## [4563,]  0.1773470872 -4.648396e-01 -6.433032e-02  0.3177028828 -
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## [4566,] -0.5113186876 -9.324529e-02 -3.739710e-01  0.2534887494 -
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## [4567,] -0.2062989423  2.712618e-01  8.123705e-01 -0.1688581590
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## [4572,]  1.3288322996 -2.277300e-02 -5.868825e-01  0.0626737017
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## [4574,] -0.3524008632  4.648585e-01 -2.652054e-03 -0.6586838694 -
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## [4575,] -0.3619023481  3.599001e-01  7.493121e-01 -0.2017855538
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## [4576,]  1.0035527355 -2.726078e-01  1.902509e-01 -0.7329371832 -
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## [4578,]  0.2132853070 -1.237669e-01  5.410345e-01 -0.6013525080 -
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## [4579,] -1.7459509773  1.887269e-01 -5.622267e-01  0.5920680320 -
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## [4580,] -0.4510683372  5.309661e-01  4.445767e-01 -1.4836843272
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## [4581,] -0.5338688257  1.170398e+00  3.288059e-01  0.4864163034 -
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## [4583,] -0.2716393452  1.458386e-01  9.003584e-03  0.2659481178 -
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## [4584,]  0.0244899679 -6.977602e-02 -2.571808e-01  0.4651813105 -
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## [4585,]  0.5900450841 -3.042101e-01  1.417926e+00  0.1497509230
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## [4586,] -1.4179035296 -4.104844e-01  4.370388e-01  0.4474527206
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## [4587,]  0.0359295894  4.370755e-01  6.638556e-02 -0.6909830380
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## [4588,] -0.9377890925 -4.891078e-01  4.006528e-02 -0.8776559865 -
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## [4589,]  1.5408061361 -5.952002e-01  6.876654e-01  1.4167861995
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## [4590,] -0.0829354849  4.734484e-01  6.968918e-01  0.7048543402
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## [4591,]  0.0963887378  2.906802e-01  1.013153e+00  0.6166990784
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## [4592,]  0.4108584897  3.317354e-01  1.707286e+00 -0.0059162821
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## [4593,]  0.0479025257  2.953184e-01  7.298645e-01  0.9082639008
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## [4594,]  0.1004752262  1.155589e+00  1.421398e+00  0.1683240524
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## [4595,]  0.2082194265 -1.989403e+00 -3.330005e-01 -1.4343990869
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2.282366e-01
## [4597,] -0.7677535401  1.606929e-02 -6.992349e-01  0.9155974655 -
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## [4598,] -0.0589808608  3.257622e-01 -2.944462e-01  0.3430134465 -
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## [4599,]  0.3631668905  1.359847e-01 -2.398023e-01  0.3881529785
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## [4600,]  0.7060742954 -9.259335e-02 -1.675033e-02 -1.1641661609 -
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## [4601,]  0.3944723509 -2.606592e-02  5.666171e-01 -0.4371849071 -
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## [4602,]  0.4251557566 -2.131172e-01  7.472687e-01  0.5103479443
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## [4603,]  0.8992556863 -1.967576e+00 -2.243020e-01 -0.0466187967 -
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## [4604,] -0.1588143701  3.478648e-01  3.684578e-01 -0.9274985439
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## [4605,]  0.3053359343 -1.892226e-01  4.777879e-01 -0.4543499686 -
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## [4606,] -0.1070363705  1.143426e+00 -3.335103e-01 -0.8411071191 -
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## [4607,] -0.0527775795  3.148783e-01 -1.764134e-01  0.2090726325 -
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## [4608,] -0.3727734884  5.246557e-01 -2.053584e-01  0.2681287133 -
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## [4609,]  0.1575549078 -9.269202e-02  4.848929e-01 -0.5645906529 -
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## [4610,] -1.2949268923 -4.028279e-01  1.445986e-01  1.7273618542
1.279065e+00
## [4611,] -1.1578136516 -1.923116e-01  3.224722e-01  1.1995710227
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## [4612,] -0.4143024923  1.921700e-02 -6.853194e-02  0.2511906419 -
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## [4613,] -0.1110351475  1.371995e+00 -6.679454e-01  0.1602227068 -
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## [4614,]  0.1856792336 -1.633657e-01 -2.427060e-01  0.5893215743 -
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## [4615,] -0.3902055839  8.079097e-01 -8.418654e-01  0.7107473324 -
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## [4616,]  0.1532138860 -4.615940e-01 -9.584816e-02  0.2954559686 -
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## [4617,]  0.4537762440  6.373143e-01  1.777603e-01  1.0457327956 -
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## [4618,] -0.3345492880  3.469190e-01  1.347695e+00  0.5994748861
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## [4619,] -0.6000277113  1.138587e+00  3.442150e-01 -0.8603245795
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## [4620,]  0.0700872578  1.431721e-01 -3.984829e-01  0.5336923161 -
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## [4621,]  0.1956764932  9.630961e-03 -3.513891e-01  0.3182545994
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## [4622,]  0.0249187857  1.472272e-01 -3.400146e-01  0.3938544493 -
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## [4624,]  0.3758069662 -2.855812e-01  4.858089e-01 -0.1020557320 -
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## [4625,] -0.0318263396  2.857118e-01 -2.464257e-01  0.3422049186 -
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## [4626,]  0.2956294298  4.306933e-01  1.585052e+00  0.4224489842 -
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## [4627,]  0.2412961208  3.904472e-01 -3.987373e-01  0.2003303355 -
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## [4628,]  0.2589371064 -3.068935e-01 -6.186830e-02  0.4254756749 -
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## [4631,]  0.0259580135  1.377701e+00 -6.253652e-01 -1.1055351184 -
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## [4632,] -0.6005677976  1.082822e-01 -5.583712e-01  0.9363381447 -
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## [4633,]  0.7868706654 -5.995858e-01 -1.021848e+00  0.7021758339 -
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## [4635,]  0.2190025224  2.148660e-01 -4.914923e-01  0.5774663818
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## [4636,]  0.1815831261  1.138427e-01  5.893940e-01 -0.6444370124 -
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## [4637,] -1.6914899083  1.258792e-01 -3.507504e-01  0.4169456347 -
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## [4639,] -0.5117586206  1.180105e-01  2.435867e+00  0.3326072952
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## [4640,] -1.2731985032 -8.744322e-01 -8.471380e-01  0.7900939760
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## [4641,] -0.4848474943 -2.648068e-01  3.969441e-01  0.7258356346
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## [4642,] -0.1634325083  8.559190e-01 -5.625519e-01  0.5477470303 -
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## [4643,]  0.9615231392 -2.770344e+00 -5.026699e-01 -0.5371182984 -
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```

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1.712750e-01
## [4647,]  0.1419812993  1.368227e-02  1.036427e-02  0.5467958203 -
5.292227e-01
## [4648,]  0.3457680593 -4.423589e-01 -1.755761e-01  0.8706566109 -
2.889035e-01
## [4649,] -0.5316546967 -1.112169e-01 -4.517937e-01  0.3765148819 -
4.963415e-01
## [4650,] -2.1709067896  1.804652e-01  3.902520e-01  1.3315971643 -
1.610547e+00
## [4651,] -0.1762616739  4.024510e-01 -3.096822e-01  0.2909052259 -
9.744044e-02
## [4652,]  0.4972801503 -1.065943e-01  1.327948e-01  0.6932323466 -
4.206314e-01
## [4653,] -0.1027041844  1.867852e-02 -4.471954e-01  0.4165452257 -
1.261532e-01
## [4654,] -0.5672709451  6.402125e-01 -5.462584e-01  0.3098020044 -
2.919534e-01
## [4655,]  0.6167439066 -6.381971e-01 -3.101361e-01  0.0715438521
2.483194e-02
## [4656,]  0.7265480102 -3.019721e-01  5.558697e-01  0.1891788698 -
4.510260e-01
## [4657,] -0.2743237212 -6.273676e-01  4.400150e-01 -0.3991216226
5.653305e-01
## [4658,] -0.1343951623  3.848986e-01 -3.139012e-01  0.3664944456 -
8.558971e-02
## [4659,]  0.3875746042 -2.985842e-01  3.669345e-01  0.0033911043 -
2.159699e-01
## [4660,]  0.4271892841 -2.785494e-01 -1.824191e-01  0.9763186694 -
3.475954e-01
## [4661,]  0.7939152227 -5.950658e-01 -1.024525e+00  0.6970800896 -
8.616545e-01
## [4662,]  0.2554729711  2.022465e-01 -3.664011e-01  0.4715268498
1.962325e-01
## [4663,] -0.3047654696  4.454370e-01 -9.009369e-02 -0.5373874881
6.163556e-02
## [4664,]  0.1923833282  8.178035e-02  6.361476e-01 -0.7373331290 -
1.578279e-01
## [4665,]  0.1044182239 -1.040604e+00 -3.777978e-01  0.1055407884 -
2.857366e-01
## [4666,]  0.4229721829  9.795976e-01  1.498788e-02 -0.7091711110 -
1.279979e-01
## [4667,]  0.0575704917 -9.946400e-01 -3.849866e-01  0.0212359187 -
2.459400e-01
## [4668,] -0.0300794169 -1.274226e-02 -3.285242e-01  0.3101330800 -
1.049550e-01
## [4669,]  0.3773871178 -6.761387e-01  8.481206e-01  0.2337081654
2.198176e-01
## [4670,]  0.9705344143 -6.608658e-01  1.156211e+00  0.7685032774 -
3.027529e-01
## [4671,] -0.1138853059 -1.210126e+00  2.163811e-01 -0.6632574540
```

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5.049403e-01
## [4672,] -1.3780062727 -3.562040e-01  1.972474e-01  1.5409679307
1.258069e+00
## [4673,]  0.4960571944 -5.490383e-01 -5.185969e-01  0.2388683934
4.384578e-02
## [4674,]  0.2129037766  8.215943e-02  6.800319e-01 -0.7519798861 -
1.387090e-01
## [4675,] -1.9081190274 -1.017628e-01 -5.491031e-01  0.8931181825 -
1.853747e+00
## [4676,] -0.0517073069  3.242792e-01 -2.508475e-01  0.3394825454 -
7.933760e-02
## [4677,]  0.5239535111 -6.000165e-01 -3.632647e-01  0.1368259111 -
6.775105e-02
## [4678,]  0.3692652777 -6.147256e-01  4.410081e-02  0.7117462065 -
5.302429e-01
## [4679,]  0.0063526109  1.823107e-01  9.757828e-01  0.8049790249
7.774266e-02
## [4680,]  0.4553285417  9.574096e-01  4.850110e-02 -0.7093322724 -
1.223433e-01
## [4681,]  0.7402196296 -5.767181e-01 -1.013543e+00  0.6530868776 -
9.150195e-01
## [4682,]  0.9020556753  4.203209e-01  1.715180e+00  0.4827610582 -
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## [4683,] -0.1477224407 -1.184453e+00  1.894252e-01 -0.6856755787
5.287902e-01
## [4684,]  0.2697836978 -3.558815e-01  5.110154e-01 -0.2095784318 -
2.338751e-01
## [4685,]  0.0292876959  2.116489e-01  4.935888e-01 -0.3149435378 -
3.458167e-01
## [4686,] -0.0751042907 -3.572736e-01 -6.977017e-01  0.1685090844 -
5.716874e-02
## [4687,]  0.3070730561  1.610356e-01 -3.550817e-01  0.4986052073
2.011936e-01
## [4688,] -0.4755282485  4.433442e-01 -5.021750e-01 -0.9505888375
1.484290e-01
## [4689,] -0.0030122377 -3.155064e-01 -6.696550e-01  1.4050561028 -
1.361122e+00
## [4690,]  0.3745500970 -4.540640e-01  6.493412e-01 -0.3267560378 -
2.464030e-01
## [4691,]  0.4016222068 -3.826246e-01  5.966325e-02  0.3251089907 -
3.314953e-01
## [4692,] -0.6467055634  4.736170e-01 -3.193800e-01  0.0569289184 -
2.715644e-01
## [4693,]  0.3585732485 -7.920465e-01  2.154497e-01 -0.5110617459 -
5.788556e-02
## [4694,] -0.3984111995 -6.411046e-01 -6.596070e-01 -0.0157586420 -
4.663691e-01
## [4695,] -0.5667184235 -8.283574e-02 -3.931840e-01  0.2599617191 -
5.147679e-01
## [4696,] -0.1181239603  3.826935e-02 -1.526643e-02 -0.1188852863 -
```

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1.100170e-01
## [4697,] -0.1526640014  1.302407e+00 -7.307742e-01 -1.1120496347 -
7.782874e-02
## [4698,] -1.3515525661 -3.850666e-01  1.884815e-01  1.6034424689
1.234896e+00
## [4699,]  0.3745014552 -2.824116e-01  3.540292e-01  0.0620635395 -
2.406534e-01
## [4700,] -0.6646121385  1.806733e-01  2.970264e-01  1.2768430109
2.268136e-01
## [4701,]  1.3301687073 -3.757053e+00 -1.061346e+00 -2.0172059369 -
2.092267e-01
## [4702,]  0.2360744575 -2.839802e-01  5.259246e-01 -0.2802068917 -
7.202784e-02
## [4703,]  0.3516747735 -3.085443e-01 -4.498325e-03  0.3596601713 -
2.703220e-01
## [4704,]  0.1538070974 -5.346693e-01 -1.870948e-01  0.3315647658 -
1.065973e+00
## [4705,]  0.3841525881 -3.827113e-01 -6.547929e-01 -0.1248421205 -
3.814657e-01
## [4706,]  0.0315586449 -1.282440e-01  8.241150e-02  0.0136987925 -
4.580579e-01
## [4707,]  0.3816448976 -2.415183e-01  5.865109e-01 -0.4678845590 -
1.391219e-01
## [4708,]  1.5692447025  2.188641e+00 -5.565940e-01 -0.0765554601 -
7.698366e-01
## [4709,]  0.3397122915  1.030197e+00 -1.130671e-01 -0.6354458328 -
1.206115e-01
## [4710,] -0.0523623488  1.136324e+00 -6.352242e-01  0.1136586768 -
4.126705e-01
## [4711,]  0.4053191721 -7.348781e-02  8.664646e-02  0.6463792568 -
4.791965e-01
## [4712,] -0.3908325197  1.204241e-01  1.319977e-01 -0.5402602780 -
9.041295e-01
## [4713,]  0.7181531111  8.547981e-04  5.851504e-01  0.7430003022 -
3.903253e-01
## [4714,]  0.3452549360  1.026486e+00 -2.087669e-02 -0.7726759143 -
1.022635e-01
## [4715,]  0.5566202735  2.885116e-01  1.660838e+00  0.8645654492 -
3.286502e-01
## [4716,] -1.2558891206 -4.151768e-01  2.180690e-01  1.6217950723
1.320433e+00
## [4717,]  0.9164198656 -2.809152e+00 -4.680229e-01  0.8843267063 -
8.218523e-01
## [4718,] -0.5323112838 -9.566639e-02 -3.390170e-01  0.2210965301 -
4.987472e-01
## [4719,]  0.7131154340 -3.648026e-01  2.918781e-01  0.4723811917 -
4.738169e-01
## [4720,] -0.1403796872  1.384871e+00 -6.978611e-01  0.1215452951 -
5.361075e-01
## [4721,]  0.6427989528 -4.076520e+00 -1.570326e+00 -2.3779193458 -
```

```
3.934859e-01
## [4722,] -1.7371652185  1.689403e-01 -5.818440e-01  0.6524318363 -
1.355731e+00
## [4723,] -0.0800061348  5.788646e-01  1.124392e+00  0.5258785801
2.057840e-01
## [4724,]  0.4330599659 -2.065008e-01  7.168437e-01  0.9874469952 -
2.166914e-01
## [4725,] -0.2667651771  9.449947e-01  6.040040e-01  0.4985993671
5.320393e-01
## [4726,] -0.2059586414  3.395584e-01  9.257247e-01  0.6953150707
2.340571e-01
## [4727,]  0.1490912577  2.748067e-01  1.483269e+00  0.1272909246
2.634661e-01
## [4728,] -0.8013362555  1.230122e+00  6.944146e-01 -0.3614735132
9.826371e-01
## [4729,]  0.5467755958 -3.042288e-01  1.544205e+00 -0.1284858136
3.726775e-01
## [4730,]  2.4712177192  2.951136e-01 -1.065459e+00  1.2470269352
8.701480e-01
## [4731,]  0.0952270895  2.261100e-01  1.161833e+00 -0.0325709209
5.277398e-01
## [4732,]  0.4701046048 -1.897118e-01  6.252866e-01  1.3200887079 -
3.658398e-01
## [4733,] -0.4811521769  3.795751e-01  2.174015e-01  0.9503670840
4.924515e-01
## [4734,]  0.4236807747 -1.953758e-01  1.465406e+00  0.4448749116
8.353585e-02
## [4735,] -0.2285117215  8.462156e-01  8.211487e-01  0.1395753744
5.572149e-01
## [4736,]  0.7815662105 -2.567722e-01  1.753591e+00  0.6031683393 -
5.798509e-01
## [4737,] -0.2608336328  1.901359e-01  9.334029e-01  0.2724079983
5.325481e-01
## [4738,]  0.8082780473  3.710215e-01  1.226944e+00  0.8992392113 -
4.790182e-01
## [4739,] -0.1956030862  3.895341e-01  3.579925e-01  1.8133921216 -
1.305649e-01
## [4740,]  0.1772736166 -2.847317e-02  3.370282e-01  1.4360579274 -
2.561164e-01
## [4741,] -0.3101846471  8.156657e-01  8.370905e-01  0.8465464338
7.582895e-02
## [4742,] -0.8843060506  9.106670e-01  1.152765e+00  1.0027071404 -
2.170606e+00
## [4743,]  0.3939898824  1.836490e-01  1.553445e+00  0.7508898668 -
1.964137e-01
## [4744,] -0.1750879510  6.384403e-01  1.255125e+00  0.3338366772
2.457310e-01
## [4745,] -0.2526617083  1.491520e+00  1.420144e+00 -0.1327825849
1.529963e+00
## [4746,]  0.6919936271 -4.923523e-02  2.097638e+00 -0.2412117798
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```
1.379564e-01
## [4747,]  0.4303012455 -2.397193e-01  9.948073e-01  1.5080964318 -
2.791239e-01
## [4748,] -0.4816704484  6.798375e-02  2.441487e+00  1.9269257123
1.089997e+00
## [4749,]  0.4494776351  2.438626e-01  1.233067e+00  0.7813326501 -
4.621160e-02
## [4750,]  0.2367969576 -9.562792e-01  7.948586e-01  1.1885651940 -
3.067491e-01
## [4751,]  0.7881828274 -2.889254e-01  2.207905e-01 -0.1181085784 -
1.694864e-02
## [4752,]  1.2964673327  1.502602e+00  7.794982e-01  0.7958363773 -
6.307142e-01
## [4753,] -2.5675292881 -2.773985e-01  2.539773e-01  0.8655372882 -
7.881760e-01
## [4754,]  0.5294782754 -5.445214e-01  1.329865e+00  0.6931888558
2.154055e-02
## [4755,] -0.6456280920 -4.955307e-01  7.562380e-01  0.7517360086
9.929148e-01
## [4756,] -0.2009433160  2.274444e+00  5.967964e-01 -0.2608004278
1.090331e+00
## [4757,]  0.3666064554 -1.975168e+00 -2.822007e-01  0.2599066015 -
1.770381e-01
## [4758,]  0.5169522090 -2.949118e+00 -8.503665e-01 -0.6873989130
2.834044e-02
## [4759,]  1.3932847757 -6.343107e-01 -5.055654e-01  3.8268085835
1.335616e+00
## [4760,]  0.4932210967  5.871432e-02  5.151813e-01 -0.4631276810 -
1.292563e-02
## [4761,]  0.2991674405  2.039348e-01  5.387658e-01 -1.3502152782
5.031913e-01
## [4762,]  0.3958268516  3.160027e+00  1.146288e+00 -0.5234323552 -
2.622605e+00
## [4763,]  0.1303279057 -1.014413e+00 -5.108652e-03 -0.1081608171
1.721286e-01
## [4764,]  0.0975427582 -1.299854e-01  3.940050e-01  0.9632217473
4.973190e-02
## [4765,]  0.2704389828 -1.910371e-01 -1.177609e-01  1.5638104578 -
4.434342e-01
## [4766,] -1.6035028117 -1.877350e+00 -1.590030e-01 -0.1356709713 -
1.377174e+00
## [4767,]  0.2365390758 -4.296690e-01  1.531113e+00  1.0053720887 -
2.673501e-01
## [4768,]  0.0505730357 -2.466843e-01 -6.755294e-01  1.6765312685 -
5.641668e-01
## [4769,] -0.5674405773  1.106432e+00  4.378430e-01  1.9771798722
3.395620e-01
## [4770,]  1.2486550914  1.407245e+00 -5.296994e-01 -0.6943865781 -
5.952917e-01
## [4771,]  1.0104708870 -1.906282e-01 -7.000554e-01 -0.6620945385 -
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2.910442e-01
## [4772,] -1.0640132217  1.446864e-01  8.900987e-01  1.0823964492
1.178010e+00
## [4773,]  0.6490004911 -4.606612e-01 -1.466076e+00  0.9027871873
2.223017e+00
## [4774,] -0.0701180402  6.608857e-01  6.983806e-01  0.2020822614
5.996020e-01
## [4775,]  0.0124792769  3.363499e-01  9.485705e-01  0.8205826956
1.110407e-01
## [4776,]  1.1577018581 -2.577376e+00 -4.383054e-01 -1.5031979784 -
1.730930e-01
## [4777,]  1.5124357683 -5.698377e+00 -1.765184e+00 -3.0653830618
2.820735e-01
## [4778,]  0.1630992667  2.943673e-01 -9.288068e-02 -0.6019336387
4.310669e-01
## [4779,]  1.1377618454 -1.450737e+00 -8.546258e-01 -0.4420544612 -
1.547112e-01
## [4780,]  0.5621582827 -1.002362e+00  1.007819e+00  0.4923409601 -
1.830686e-02
## [4781,] -0.2139211314 -4.706788e-02  6.325388e-01  0.1219312043
7.639811e-01
## [4782,]  1.1349695663  3.420645e-01  6.738463e-01 -1.8521433554 -
3.557770e-01
## [4783,]  0.7795630987  1.402047e+00 -3.597182e-01 -0.0148992049 -
1.157063e+00
## [4784,] -1.3178236218 -3.834265e-01  2.809826e-01  1.4945441882
1.273703e+00
## [4785,] -0.4982781300 -2.569703e-01  1.305741e+00  1.4678637869
9.369408e-01
## [4786,] -1.7313923201  1.342533e-01  2.039067e+00  1.3023080101 -
9.148509e-01
## [4787,]  0.3857887377 -4.601739e-02 -3.731697e-02  0.3067041445 -
5.648260e-02
## [4788,] -0.8522100083 -5.473348e-01  1.378053e+00 -0.8983092164
8.273565e-01
## [4789,]  0.1679589272  3.539857e-01  1.332584e-01 -0.6359390999
5.129079e-01
## [4790,]  1.2020252749 -4.040516e-01  3.411877e-01 -0.7624473464 -
1.097622e+00
## [4791,] -0.3545696928  3.738953e-01  7.161083e-01 -0.1579680678
7.534564e-01
## [4792,] -0.1865925124  2.283714e-01  4.951389e-02 -0.7005942916
4.994263e-02
## [4793,]  0.2653204222 -3.158549e-01  5.292963e-01 -0.2033461013 -
1.634792e-01
## [4794,]  2.1234279434 -1.712536e-01 -1.627204e+00  1.2473329869
8.964327e-01
## [4795,] -0.3434005473  3.615921e-01  7.141347e-01 -0.0878205003
7.071082e-01
## [4796,]  0.0958322142 -5.814633e-03  3.095534e-02  0.2298320970 -
```

```
2.370653e-01
## [4797,] -0.5244573401 -1.041682e-01 -3.511508e-01  0.2503717631 -
5.044800e-01
## [4798,]  0.1271923916 -3.666206e-01 -4.474660e-01  0.4848501508 -
7.168651e-01
## [4799,]  0.0506000989  4.223044e-02 -7.178677e-02  0.3312814547 -
2.336769e-01
## [4800,]  0.2017047144 -3.944142e-01 -5.246683e-01  0.6644571427 -
6.881172e-01
## [4801,] -0.3201729427  3.617521e-01  7.831175e-01 -0.1650976852
7.275012e-01
## [4802,] -0.7610330951  6.235180e-02  1.361548e+00 -0.2545653291
3.118710e-01
## [4803,] -0.3244060273  3.554337e-01  7.751030e-01 -0.1880593011
7.420148e-01
## [4804,]  0.1835702699 -6.307859e-01  2.208278e-01  0.4856299704 -
4.994922e-01
## [4805,]  0.3638022522 -3.548096e-01 -6.380810e-01 -0.1214109371 -
3.948220e-01
## [4806,]  2.4051524485  4.805459e-01 -2.004275e+00  1.1748680492
8.155829e-01
## [4807,] -1.0839566862  1.010986e+00 -3.734016e-01 -1.1572556056
6.414640e-01
## [4808,]  0.0244311803 -3.854791e-01 -1.573245e-01  0.7461000203 -
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## [4809,] -0.2804519226  5.273934e-01  2.849822e-01 -0.3871299125 -
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## [4810,]  0.3056508303  1.732136e-01 -3.961483e-01  0.5534392405
2.203552e-01
## [4811,]  0.2274978770  8.906571e-01 -1.587369e-01 -0.6647784367 -
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## [4812,] -0.1278516326  5.749266e-01 -6.179991e-01  0.2759226886
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## [4813,]  0.1732565623  3.565405e-02  7.276622e-02  0.4844581041 -
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## [4814,]  0.8456916207 -3.690896e-01  6.520265e-01  0.1787245012 -
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## [4815,]  0.7216341019 -3.120227e-01  6.872620e-01 -0.0193514557 -
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## [4816,]  2.2356175958 -7.150082e-01 -1.963506e+00  1.1142926290
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## [4817,] -0.5922911314  5.110170e-01  5.249036e-02 -0.3358869315 -
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## [4818,] -0.1826085895  2.393923e-01  8.852920e-01 -0.2305500302
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## [4819,] -0.0084998704  1.854029e-01  4.371108e-02 -0.0790776586 -
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## [4820,] -1.7227766614  1.817632e-01 -5.239309e-01  0.5630309446 -
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## [4821,]  0.2190864878  1.431099e-02  1.081961e-01  0.1409495589 -
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3.490364e-01
## [4822,]  0.2876104584 -2.654916e-02  1.358476e-01  0.1850009978 -
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## [4823,]  0.7026751776 -3.867805e-01  3.122375e-01  0.4217615442 -
5.299291e-01
## [4824,]  0.0331643420 -1.213408e+00 -3.475805e-01 -0.0654193983 -
1.787628e-01
## [4825,]  0.4850105596 -6.591278e-01  3.013485e-01 -0.4696771762 -
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## [4826,]  0.4049601397 -4.649515e-02  5.876170e-01 -0.4266182271 -
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## [4827,] -0.0066815914  2.080798e-01 -1.566082e-02 -0.0230241426 -
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## [4828,] -0.9713042561  9.909220e-01 -3.537390e-01 -1.1079298753
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## [4829,] -0.9084220495 -3.537368e-03  1.315800e+00 -0.4343463308
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## [4830,] -0.8220662828  1.348123e-01  1.442477e+00 -0.5355360396
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## [4831,] -2.0095514104 -2.218156e-01 -6.919089e-01  0.9169264428 -
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## [4832,]  0.2749434123  1.719603e-01 -2.951078e-01  0.4141797999
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## [4833,]  0.1640519007  9.741533e-02  5.971880e-01 -0.6955415600 -
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## [4834,]  0.5123128325 -5.101960e-01  6.605212e-01 -0.2359954054 -
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## [4835,]  0.4997746070 -2.856169e-01  6.672977e-01 -0.2194257243 -
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## [4836,]  0.2995702658  9.167128e-02  5.770906e-02  0.4261009590 -
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## [4837,]  0.7312009372 -3.145210e-01  6.946933e-01 -0.0221902278 -
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## [4838,]  0.2715715597 -2.851964e+00 -9.394415e-01 -1.0344654004
1.060342e+00
## [4839,] -1.0102248345 -6.825184e-01  1.413133e+00 -1.1481068523
9.026792e-01
## [4840,]  1.2171876829 -5.401311e+00 -2.623935e+00 -3.3694993121
2.656734e-02
## [4841,]  0.8246653579 -9.384329e-01 -8.152709e-03  0.2322349266 -
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## [4842,] -0.3854422560  2.853009e-01 -3.716410e-02 -0.0558921271 -
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## [4843,]  0.5362818540  5.740600e-01  3.387052e-01 -0.4853212042 -
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## [4844,]  0.1268630469  3.736485e-01  1.047157e+00  1.0330403791 -
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## [4845,] -0.4833368847  3.120610e-01 -1.136995e-01 -0.0287592088 -
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## [4847,] -0.0751958152  5.731608e-02 -3.673692e-01  0.2774428225 -
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## [4850,]  0.1917210549 -3.645804e-01 -5.667590e-01  0.6837316784 -
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## [4851,] -1.2994736619 -4.088565e-01  2.153868e-01  1.6157794366
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## [4861,]  0.1476939848  1.152278e+00 -1.500205e-01 -0.3044244978 -
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## [4862,]  0.4403597509 -4.025497e-01  5.593246e-01 -0.8407142709 -
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## [4863,]  0.4507738527 -5.181953e-01 -4.632287e-01  0.1517949120
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## [4864,] -0.7153903350 -4.658737e-02 -5.691986e-01  0.8721919943 -
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## [4865,] -0.9256820264  5.909249e-01  2.232499e-03  0.5658093712 -
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## [4866,] -1.2928148722 -4.072774e-01  2.524682e-01  1.5707174683
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## [4867,]  0.2581870936 -3.851954e-01 -2.240980e-01  0.8788662486 -
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## [4868,] -1.3272241398 -4.027041e-01  2.284748e-01  1.6357100403
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## [4870,] -1.3017802431 -3.913542e-01  2.609026e-01  1.5773768073
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## [4872,] -0.1611459089  8.707958e-01 -5.628627e-01  0.5477848673 -
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## [4874,]  0.4018836949  4.770105e-01 -1.321778e-01  0.2852570598 -
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## [4875,]  0.3363414915 -1.790551e-01  9.087716e-01 -0.8884007032 -
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## [4876,] -0.2336057442  9.027016e-01 -6.573773e-01  0.6778302383 -
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## [4877,] -0.0467048930 -1.231380e-01  7.217174e-01  1.0118015772
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## [4882,]  0.6064437381  1.885239e+00 -7.111555e-01  0.4270038361 -
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## [4883,] -0.1113519477  2.819087e-01 -6.184582e-02 -0.0501100543 -
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## [4886,]  0.0019755377  1.776319e-01  2.468941e-02  0.0411043143 -
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## [4887,]  0.2062456931 -2.784598e-01 -9.678552e-02  0.8973985048 -
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## [4888,] -0.1558312412  8.757127e-02 -1.330711e-01  0.0288721741 -
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## [4889,] -0.6235625711  7.181178e-01 -2.670353e-01 -0.6443000382
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## [4890,]  0.3249576424 -4.466160e-01 -1.755155e-01  0.9184497296 -
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## [4891,]  0.2272224577 -3.625357e-01 -1.817772e-01  0.7914472379 -
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## [4894,]  0.5284099441  2.411954e-01  1.034256e-01  0.0593570045 -
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## [4897,]  0.4635071342 -4.613859e-01  7.176719e-01 -0.2508095684 -
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## [4899,]  2.4079884961  4.975050e-01 -1.864479e+00  1.0313055669
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## [4904,] -1.6906162124  1.569355e-01 -3.739124e-01  0.4068583197 -
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## [4908,]  0.0081588392  3.906389e-01  1.020864e-01  0.0739524576 -
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## [4909,] -0.0547576735 -4.529331e-01 -2.528908e-01 -0.7668533993
1.147374e-01
## [4910,] -1.3209013651 -3.896516e-01  2.285156e-01  1.5672246930
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## [4911,] -0.2941506145  2.669656e-01 -5.847209e-01  1.1271605762 -
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## [4912,]  0.4618630281 -8.198327e-01  2.042703e-01  0.2891592958 -
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## [4913,] -0.1970029653 -3.739967e-01 -5.132988e-01  0.5527740295 -
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## [4914,] -2.0594377275 -1.926974e-01 -7.327756e-01  0.9441949075 -
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## [4915,] -2.4982183398 -6.704253e-01 -8.115875e-01  0.3870702002 -
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## [4916,] -0.3547024257  3.594571e-01 -3.701599e-01 -0.9647139342
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## [4917,]  0.1198810770 -1.426652e+00  3.720538e-01  1.1043784649
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## [4918,] -0.1916053533  1.001089e-01 -1.549831e-01 -0.0219523086 -
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## [4919,]  0.5853040783 -5.919296e-01 -3.248616e-01  0.0690708554
2.474466e-02
## [4920,] -0.0406666789  1.217967e-01  2.414947e-01 -0.8280750042
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## [4921,]  0.3625664840 -3.252985e-01 -4.632267e-01  0.1999353533
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3.609161e-02
## [4922,]  0.8161854564 -8.944376e-01 -3.229255e-02  0.2960827731 -
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## [4923,]  0.9093179491 -9.559147e-01  2.163953e-02  0.3097688401 -
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## [4924,]  0.5903869922 -6.919380e-01  3.079296e-01 -0.1471627742 -
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## [4925,]  0.6711152204 -3.366523e-01  2.731918e-01  0.4756160597 -
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## [4926,]  0.6661832248 -4.125219e+00 -1.527163e+00 -2.3169191616 -
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## [4927,]  0.1917276264 -2.916908e-02  1.467318e-01  0.4344403699 -
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## [4928,] -0.0932895624  8.326889e-01 -6.510011e-01  0.7980506948 -
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## [4929,] -0.0850075271  5.520104e-01 -4.029967e-01 -0.0209725031
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## [4930,]  0.1050290221  1.342850e+00 -4.960965e-01 -1.1380116275 -
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## [4931,] -0.3699187915  8.353423e-01  6.520651e-01 -0.2589026568 -
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## [4932,] -0.1931199526 -1.155839e+00  2.440200e-01 -0.7667404897
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## [4933,]  0.4016622021  9.849272e-01 -5.704054e-02 -0.6563968300 -
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## [4934,]  0.2319439366  2.246946e-02  1.113356e-01  0.1098961175 -
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## [4935,]  0.1330764162 -1.902222e+00  1.716298e-01  0.0832583015
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## [4936,]  0.7243037434 -2.518331e+00 -2.608416e-01  1.3912448306 -
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## [4937,]  0.4585552310 -9.609207e-02  7.096859e-01 -0.5353668544 -
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## [4938,]  0.1935351088  1.226447e-01  5.841685e-01 -0.6586433649 -
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## [4939,]  0.4622763692 -7.809675e-02  3.151211e-03  0.2768718312 -
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## [4940,]  0.2961482669  1.675312e-01 -2.637926e-01  0.3909864264
1.297649e-01
## [4941,] -0.0179062992 -1.699088e-01 -7.325682e-02  0.2278687250 -
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## [4942,] -1.7080160002 -1.197128e+00  1.101592e+00  1.3433882353 -
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## [4943,]  0.3862662595 -3.655319e-01  6.232522e-01 -0.2631814137 -
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## [4944,] -0.1897698621  3.269556e-01 -1.211315e-02  0.0079086340 -
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## [4945,] -0.4242253428  2.750091e-01 -7.116583e-02 -0.0423662169 -
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7.224953e-01
## [4947,]  0.4344085934 -6.578925e-01  2.719959e-01 -0.4001645296 -
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## [4949,] -1.2573005373 -2.548984e-01  2.773748e-01  0.6971891862 -
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## [4950,] -0.0340264343  5.318771e-01 -5.242878e-01  0.1777962694
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## [4951,] -0.5162140473  9.036528e-01  5.525453e-01 -0.1521326746 -
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## [4952,] -0.3083261849  1.989811e-01  5.219503e-01 -0.2101885542
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## [4953,]  0.2072436245  2.474806e-02 -2.730371e-01  0.2396673683
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## [4954,]  0.1631425765  1.311838e+00 -5.193687e-01 -1.0977470502 -
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## [4955,]  0.2050479786 -4.628773e-01 -3.068005e-02  0.7057377551 -
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## [4956,]  0.2615619426 -3.121360e-01 -6.422745e-02  0.8733949099 -
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## [4957,] -1.0116850049  9.850823e-01 -4.153457e-01 -1.0268029137
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## [4958,]  0.9923772396  6.792304e-01  1.021916e+00 -1.2409808227 -
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## [4959,] -0.3076100602  5.489433e-01  2.634275e-01 -0.3754056492 -
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## [4961,]  0.0858789105 -3.604007e-01 -3.228855e-01  0.1081094641 -
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## [4962,]  1.3363284339 -1.455159e-01 -6.996911e-02  1.5255041416
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## [4965,] -2.0715958910 -1.432771e-01 -7.387605e-01  0.9690609498 -
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## [4966,]  0.7931859539  2.418045e-01  2.385459e-01  0.3333921533 -
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## [4967,]  0.1150140329  1.626824e-01  4.817052e-01 -0.1641004530 -
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## [4968,] -0.2202976862  3.131078e-01  7.116357e-03 -0.0714577593 -
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## [4970,]  0.3808279162 -2.931349e-01 -5.403892e-01  0.3030177030
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## [4971,]  0.3047277903 -1.934852e-01  5.805998e-01 -0.4772927834 -
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2.236525e-01
## [4972,]  0.8091811883  1.472719e-02 -9.641402e-01 -0.2576200785 -
1.835840e-01
## [4973,] -1.2756062759 -4.333619e-01  1.607682e-01  1.8134194331
1.146850e+00
## [4974,] -0.8383583065 -9.592438e-02  1.464074e+00 -0.5722879238
4.313525e-01
## [4975,] -1.2687545242 -4.254040e-01  2.607370e-01  1.6401290185
1.196719e+00
## [4976,] -1.3027307426 -4.135593e-01  2.602729e-01  1.5752660821
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## [4977,]  2.0336228514 -3.149489e-01 -1.680453e+00  1.2337871685
9.765975e-01
## [4978,]  0.3945015028  4.726449e-02  1.090053e+00 -0.0438604700 -
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## [4979,] -0.6327586738  2.892220e-01 -6.983471e-01  0.1806047348 -
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## [4980,]  0.4053228599 -5.629475e-01  3.721629e-01  0.5365550098 -
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## [4981,]  0.0852715335 -2.034140e-01 -1.821223e-02  0.2291951435 -
1.070597e-01
## [4982,]  0.5911570947 -1.455485e-01  1.093006e+00 -0.8491262416 -
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## [4983,]  0.1964590435  3.219342e-02  1.333144e-01  0.0713568200 -
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## [4984,]  0.0794187795 -2.915046e-01 -2.674986e-01  0.1570324229
6.168367e-01
## [4985,]  0.2093208479 -3.651602e-01 -1.880507e-01  0.1695336695
6.555689e-01
## [4986,]  0.2639895996 -5.399313e-02  1.495757e+00  0.0371563729
3.197423e-01
## [4987,] -0.1863665252  2.031768e-01  1.136772e-01 -0.7213253875 -
4.547633e-02
## [4988,] -0.3691145349  8.012267e-01 -7.477990e-01  0.6528643247 -
5.885397e-01
## [4989,] -0.5073155636 -2.614248e-01  1.371775e+00  1.4054487399
8.596790e-01
## [4990,]  0.0144752338 -1.613712e-01 -1.075255e-01  0.2865009482 -
1.230497e-01
## [4991,] -0.0646778879 -1.708881e+00 -4.828035e-02 -0.9269898741
3.723524e-01
## [4992,] -0.7275092333  3.493031e-01 -8.424784e-01  0.2887389573 -
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## [4993,]  0.4789680262 -2.299245e-01 -4.513835e-01 -0.0355833235 -
7.289746e-01
## [4994,]  0.4087640210 -5.993998e-01  4.982358e-01 -0.7489862933
1.948554e-02
## [4995,]  2.4448691670  4.749017e-01 -1.865193e+00  1.0726420686
7.745999e-01
## [4996,] -0.2317996952  7.171224e-02  1.229323e-01 -0.8701632954
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1.538446e-01
## [4997,] -1.6070403480  1.076956e-01 -4.088388e-01  0.5351417450 -
1.334667e+00
## [4998,]  0.1273038290  1.218735e-01 -1.602435e-01  0.8964942433 -
6.946314e-01
## [4999,] -0.4430247179  2.106064e-01 -4.951770e-01  1.0497442703 -
5.429715e-01
## [5000,] -1.3858680948 -3.145065e-01  9.413997e-01  1.0924288589 -
8.360470e-01
## [5001,] -0.0351991663  4.054171e-01  2.471412e-01 -0.1906196217 -
1.646791e-01
## [5002,]  0.6108031009 -1.399832e-01  1.100108e+00 -0.8646830126 -
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## [5003,] -1.6936390844  1.489239e-01 -4.859661e-01  0.6713412234 -
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## [5004,]  0.0782894501 -3.550210e-01  3.731869e-01 -0.2932190343 -
3.561367e-01
## [5005,]  1.8220566319 -1.226680e+00  4.207804e-01  0.0789227850
5.559386e-01
## [5006,]  0.0287728405  2.790767e-01  4.488460e-01  0.3772114048
2.808171e-01
## [5007,]  0.9018675423 -2.712310e-01  2.131541e+00 -0.5467315645
2.809563e-01
## [5008,]  0.4500687295  1.882303e+00  1.227946e+00  0.2465646037
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## [5009,]  0.2903764615 -3.258252e-01  1.192730e-02  0.7824804575 -
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## [5010,]  0.2188951053  9.115976e-01 -7.988261e-02 -0.7992062013 -
4.865642e-02
## [5011,] -1.7512886761  1.989777e-01 -4.507492e-01  0.5280323621 -
1.418229e+00
## [5012,] -0.4743147819  1.113655e+00  5.157033e-01 -0.0611931991 -
2.482833e-01
## [5013,] -1.2555374270 -2.298510e-01  1.716895e-01  0.8345832195 -
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## [5014,]  1.2480537040 -3.040090e+00  1.430813e-01 -0.1960540352 -
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## [5015,]  0.1687292742 -1.930014e-02  2.226796e-01  0.3349730976 -
6.314292e-01
## [5016,]  0.2143155133 -4.076202e-01 -4.540526e-01  0.6058260521 -
7.296923e-01
## [5017,]  0.7965657184  2.425437e-01  1.640498e-01  0.3712416112 -
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## [5018,]  0.6213205072  4.941679e-01 -2.264234e-01  0.7134636045 -
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## [5019,] -0.0463385404  2.859345e-02 -1.080879e-02 -0.0813896224 -
5.692482e-02
## [5020,]  0.1796776981 -4.929172e-01  1.390906e-01  0.7605445086 -
8.824155e-01
## [5021,] -0.3894407994  1.061102e+00  5.310898e-01 -0.0193786310 -
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2.104620e-01
## [5022,]  0.0194168782 -2.699969e-01  3.676731e-01 -0.6323206765
3.792865e-02
## [5023,]  0.2832458696  2.135168e-02  7.176363e-01 -0.6803831715 -
2.182530e-01
## [5024,] -0.1355609280  2.451343e-01 -3.584670e-01  0.8836845196 -
5.886761e-01
## [5025,]  0.0066603684  1.713663e-01 -5.917120e-01 -0.2168136744
6.689691e-03
## [5026,]  0.1879744756 -2.401043e-02  2.364041e-01  0.2903629316 -
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## [5027,]  0.1552644449 -4.038706e-02  5.144748e-01 -0.0374482018 -
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## [5028,] -1.3025385910 -2.236239e-01  2.608984e-01  0.6926332558 -
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## [5029,]  0.6044122784 -6.260375e-01 -3.222529e-01  0.1722301412 -
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## [5030,] -0.5696847201  6.085641e-01 -2.338206e-01  0.1083467218 -
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## [5031,] -0.2057967396  9.013165e-02  3.406642e-01 -0.5937226102 -
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## [5032,]  0.2483666524 -1.814857e-01  4.073358e-01 -0.4235930847 -
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## [5036,] -0.2266833656  3.060256e-01 -4.373995e-01  0.8971731117 -
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## [5037,] -0.5313328999  6.578027e-01 -3.213227e-01 -0.4774998303
1.365589e-01
## [5038,]  0.1989582599  1.160099e-01  5.859682e-01 -0.2317208935 -
3.776578e-01
## [5039,]  0.1137970502  1.119857e-01  2.438412e-01 -0.4598809773
2.195950e-02
## [5040,]  1.1993444584 -2.659726e-01 -1.181102e+00 -0.2660493872
8.440497e-01
## [5041,]  0.1278412855 -3.082725e-01  4.140514e-01 -0.6117582348
9.971472e-02
## [5042,]  0.1802700195 -7.656889e-02  2.485911e-02  0.3673014278 -
2.941931e-01
## [5043,] -0.3906106610 -6.409647e-01 -4.422879e-01  0.0372797249
1.425234e-01
## [5044,] -0.2030906228  1.022259e-01 -1.145064e-01 -0.0697297436 -
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## [5045,] -0.0105705601 -1.262565e+00  3.131735e-01 -0.6704358291
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1.156053e+00
## [5047,] -0.3161735924  1.383644e-01  1.149060e+00 -2.1091362531 -
8.853069e-01
## [5048,]  0.6139128321 -1.439688e-01  1.144293e+00 -0.9481940854 -
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## [5049,] -1.6155170850 -1.268694e+00  1.234421e+00  1.2593695805 -
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## [5050,]  0.1063063431 -2.684656e-02  5.364430e-01 -0.0785313787 -
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## [5051,]  0.7889604825 -4.420719e-01  2.947991e-01  0.5405201162 -
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## [5052,] -0.8487210229 -8.838772e-02  1.432221e+00 -0.4733450131
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## [5053,]  0.6429337163 -8.496598e-01  1.084711e+00  0.2486206405
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## [5055,]  0.2168410231  6.926530e-03  1.717382e-01  0.1026465469 -
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## [5056,]  0.6859930405  9.131729e-02  8.053554e-02  0.4059451612 -
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## [5057,]  1.0234388045 -1.509683e+00 -1.818024e-01 -0.0655897009 -
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## [5058,] -0.6586849874  2.788809e-02  1.498627e+00 -0.3842949323
3.457639e-01
## [5059,]  0.2806712116 -1.932348e-02  6.008913e-02  0.2931608250 -
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## [5060,] -0.4921439952  9.243399e-01  5.455740e-01 -0.2008058917 -
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## [5061,] -0.0055221025 -1.706619e+00 -1.508617e-01 -0.7903842110
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## [5062,]  0.5541017814 -6.587004e-02  5.837658e-01  0.3608885603 -
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## [5063,]  0.2191200231 -4.916377e-01 -7.110545e-02  0.8008180633 -
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## [5064,]  0.1292238852 -2.097526e-01  2.037888e-01  0.0324447707 -
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## [5065,]  1.3628669186  1.294627e+00 -3.177536e-01  0.2196560778 -
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## [5066,]  0.0051604586  2.459308e-01  5.322703e-01 -0.3467972594 -
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## [5067,]  0.5502162767 -5.070115e-01  1.629293e+00  0.2194192259
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## [5068,]  0.7190283399 -1.126995e+00  7.005551e-01  0.6114853272 -
2.708287e-01
## [5069,]  0.0744677715  2.366286e-01  2.134514e-02  0.4426202081 -
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## [5070,]  0.1003140932  2.486339e-01  4.367506e-02  0.4845645183 -
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6.839843e-01
## [5072,] -1.3709905796 -3.822966e-01  1.018127e+00  1.0361496044 -
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## [5073,]  0.2650370228 -9.273566e-01 -8.394816e-01 -0.0897729588
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## [5074,] -0.5580266706  5.995819e-01 -2.509120e-01  0.1896125058 -
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## [5075,] -1.7070247232  1.580401e-01 -4.351195e-01  0.5085338445 -
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## [5076,] -1.6520234129 -1.232081e+00  1.200595e+00  1.2634657647 -
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## [5077,]  1.0767711683  4.161885e-01  8.251872e-01  0.4332647605 -
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## [5078,] -1.0452428114  7.842749e-01 -3.800472e-01 -1.1071515809
7.249881e-01
## [5079,] -0.1135776715  3.126217e-02 -6.920603e-01 -0.2276158976
1.072929e-01
## [5080,]  2.1643348749 -1.958074e-01 -1.590102e+00  1.2926053223
8.304118e-01
## [5081,] -2.0130099376 -2.273659e-01 -5.776418e-01  0.8457959580 -
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## [5082,]  0.3354073876 -5.470997e-01  4.521368e-01 -0.8086549687
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## [5083,]  0.3671406949  1.035525e-01 -3.074611e-01  0.5119394504
1.278895e-01
## [5084,] -0.0112805867 -9.594415e-01 -6.287409e-01  0.1855764579 -
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## [5085,]  2.4043238974 -7.915658e-01 -1.897438e+00  1.1360197433
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## [5086,]  0.3833273948 -7.890987e-02  3.126031e-01  0.0084487061 -
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## [5087,]  0.2001024575 -3.619991e-02  1.965500e-01  0.3560992467 -
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## [5088,]  0.6557827192 -7.000190e-01 -1.611557e-01 -0.0491273439 -
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## [5089,] -0.1613744443  2.893383e-01  4.601201e-02 -0.0596625287 -
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## [5090,]  0.2346949992 -4.051109e-01 -4.156660e-01  0.6032096919 -
7.519440e-01
## [5091,]  0.1655844146 -4.287581e-01 -3.337732e-01  0.2572518911 -
6.406716e-01
## [5092,]  0.6977546384  8.150902e-02  1.041851e-01  0.3984872824 -
7.753348e-01
## [5093,]  0.8403714089  1.256890e+00 -1.540947e+00 -1.5557275392 -
1.139149e+00
## [5094,] -0.3051565496  6.586132e-01 -1.497431e-01  0.3063416709 -
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## [5095,]  0.7857945710 -2.183759e-01 -1.050742e+00 -0.1382614133 -
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## [5096,]  0.2025517435  3.681309e-02  1.649475e-01  0.0708257245 -
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4.123499e-01
## [5097,]  0.2351441671 -2.875925e-01  2.646311e-02  0.7376761071 -
7.967657e-01
## [5098,] -0.1517251431  4.520829e-01  3.664944e-01 -0.2961607801 -
2.523175e-01
## [5099,]  0.2395431355 -4.786214e-01 -3.443255e-01  0.3202822857 -
6.115056e-01
## [5100,]  0.3801583642 -3.424908e-01 -5.022843e-01  0.2837825594 -
2.493953e-02
## [5101,]  0.8310090053 -4.513579e-01  4.355608e-01  0.4037334723 -
5.460288e-01
## [5102,] -0.5289926889 -2.261366e-01  1.405317e+00  1.2896468433
9.063031e-01
## [5103,]  0.3481469338 -6.223077e-01  5.243089e-01  0.5297793345 -
5.694035e-01
## [5104,] -0.3742377627 -8.772367e-01 -4.450083e-01  0.0713761621
2.141277e-01
## [5105,] -1.9809183744 -2.521536e-01 -5.750902e-01  0.8114210967 -
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## [5106,]  0.1396514635 -3.184029e-01 -9.451821e-02 -0.0162772471
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## [5107,] -1.6628482968 -1.198527e+00  1.213628e+00  1.2643023305 -
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## [5108,]  0.0803866841  1.874726e-01  5.468121e-01 -0.2528964470 -
4.297176e-01
## [5109,] -1.3508257262 -1.544549e-01  2.154708e-01  0.6692555980 -
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## [5110,] -0.1887797033  2.762358e-01 -4.128954e-01  0.9765788237 -
6.905441e-01
## [5111,] -0.4270719079  5.855577e-01 -1.918375e-01 -0.6070743238
1.820189e-01
## [5112,]  0.0496457564  4.691728e-01 -3.764861e-01 -1.5595487410
2.661802e-01
## [5113,] -1.3648330673 -3.385393e-01  9.081907e-01  1.1751895919 -
8.718403e-01
## [5114,] -0.8272930182  5.242643e-01  1.136985e-01  0.5302559655 -
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## [5115,] -0.5739635554  2.535434e-01 -7.926811e-01  0.3294425114
8.877355e-03
## [5116,]  0.4186982150  2.551231e-01 -9.935621e-03  0.0791874428 -
8.069050e-01
## [5117,]  1.0491412902 -5.904002e-01  1.753842e+00 -0.4484250011
7.629306e-02
## [5118,]  0.3881838082 -5.648256e-01  5.373860e-01 -0.3430079988 -
3.214237e-01
## [5119,] -0.5113491348  6.159445e-01 -2.701089e-01 -0.5276476699
8.834087e-02
## [5120,]  0.1645822699 -3.610744e-02  3.331916e-02  0.2795855230 -
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## [5121,]  0.1057571203 -1.042246e+00 -2.794351e-01  0.2243892951 -
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5.861261e-01
## [5122,] -0.5011337241  6.453955e-01 -3.438443e-01 -0.4750609312
1.841941e-01
## [5123,]  0.0925218460  1.248942e-01  9.431252e-02 -0.0390407943 -
2.032740e-01
## [5124,]  0.5517622062  8.167148e-01  1.283013e+00 -0.4776792456
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## [5125,]  0.8199261279  5.526695e-01  3.586421e-01 -1.7321031720 -
2.893401e-01
## [5126,] -0.0573218895  1.674699e-01  1.282134e-01 -0.6384127849
3.520297e-02
## [5127,] -1.2556775319 -4.207678e-01  1.068710e+00  1.0011548092 -
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## [5128,]  0.2421311185 -4.928205e-01 -9.798901e-02  0.9234103021 -
6.851691e-01
## [5129,] -0.1249038420 -5.212813e-01  4.595928e-01  1.9062703967 -
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## [5130,]  0.3037543160 -2.015547e-01 -1.126333e-01  0.1906376244
5.533505e-01
## [5131,]  0.3814549844  1.127761e-01 -3.182112e-01  0.5788417557
1.364630e-01
## [5132,] -0.0396380243  1.373444e-01 -8.488909e-02  0.4765730676 -
3.738028e-01
## [5133,]  0.1902344410 -6.837810e-02  4.786442e-01  0.1305664725 -
5.827825e-01
## [5134,]  0.8393786632 -4.607786e-01  4.341357e-01  0.4566767678 -
5.586359e-01
## [5135,]  0.2548106222  3.712253e-02  7.892059e-01 -0.8310402145 -
2.387359e-01
## [5136,] -0.0101031401  1.352632e-01 -8.324473e-02  0.5242631619 -
6.522521e-01
## [5137,]  0.1326399387 -3.249226e-01  4.322365e-01 -0.5994136253
5.759873e-02
## [5138,] -0.2542286199  6.817261e-02  7.008710e-02 -0.8084119653
1.131900e-01
## [5139,]  0.2167015965  7.098741e-02 -2.344894e-01  0.4870077896 -
1.896092e-01
## [5140,] -0.5048771369  1.256254e-01 -3.212418e-02 -0.1926309514 -
2.312269e-01
## [5141,]  0.8221495270 -4.510783e-01  4.340750e-01  0.4440095560 -
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## [5142,] -1.3369825006 -1.860471e-01  2.227460e-01  0.7326049582 -
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## [5143,]  0.6451452760 -1.083666e-01 -1.025831e+00 -0.3381137894 -
1.569297e-01
## [5144,]  0.2225482100  8.086960e-02  6.546736e-01 -0.6988541439 -
1.750342e-01
## [5145,]  0.3405147143 -4.612522e-03  7.171364e-01 -0.6782362232 -
1.671159e-01
## [5146,]  0.1596779277 -3.583410e-02  5.038092e-01  0.0007999846 -
```

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5.405461e-01
## [5147,] -0.0087666552 -4.733636e-01 -2.616592e-01  0.3931974082 -
1.474585e-02
## [5148,] -0.4026751887 -2.867541e-01  1.376038e+00  1.4855786828
9.088161e-01
## [5149,]  0.3435539711 -3.470904e-01 -1.491677e-02  0.9309967282 -
7.678617e-01
## [5150,]  0.3433731569 -4.780077e-01 -3.835865e-01  0.6613486717 -
7.241924e-01
## [5151,] -0.0761757909  5.461345e-01 -5.312958e-01  0.2415282199
4.561813e-01
## [5152,]  0.8567609225 -1.351667e+00 -5.103052e-01 -0.0659070556
6.215079e-01
## [5153,]  0.1297950560 -1.054324e+00 -3.109928e-01  0.2817341575 -
5.727094e-01
## [5154,]  0.3258567118  1.863101e-02  5.706451e-01  0.1817937452 -
7.585885e-01
## [5155,] -1.2373354708 -1.478223e+00  3.768334e-01  0.4853141438 -
2.074139e+00
## [5156,] -1.7346843863  1.038371e+00 -3.164457e-01 -1.5757409303 -
9.085873e-01
## [5157,]  0.3759691915  1.101095e-01 -2.511656e-01  0.4279127039
1.608909e-01
## [5158,]  0.5378134366 -1.331574e-01  3.217019e-02  0.3517230569 -
7.055815e-02
## [5159,]  0.3987539568 -5.787649e-01  6.884517e-01 -0.5331264009 -
3.147719e-01
## [5160,]  0.0698277453  2.198893e-01  4.149174e-01 -0.0975135245 -
3.844336e-01
## [5161,]  2.1007748887  2.382479e+00  1.128054e+00  1.4516281945 -
1.723948e+00
## [5162,] -0.2970551856 -5.534774e-01 -3.168365e-01 -0.6996866053
9.611126e-01
## [5163,]  0.4753192205 -1.707078e-02  7.109752e-01  0.1661284789 -
6.501942e-01
## [5164,]  0.4803751951 -2.825221e-01  1.074989e+00 -0.9922100628 -
2.216386e-01
## [5165,] -1.3515858698 -3.331425e-01  9.467765e-01  1.0766891904 -
8.169136e-01
## [5166,] -0.8572525899 -7.151693e-02  1.452756e+00 -0.5778355468
4.377192e-01
## [5167,] -0.1898949602 -1.690459e-01  3.867300e-01 -1.0624833949
9.851060e-02
## [5168,] -0.2906609343 -7.126056e-01 -3.701711e-01  0.0990190173
8.667323e-02
## [5169,]  0.3641909130  3.584272e-02  6.443061e-01  0.0608703362 -
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## [5170,]  0.2372959349  7.976149e-02  6.553028e-01 -0.6505771437 -
2.165681e-01
## [5171,]  0.4967203555 -6.102802e-01  3.499016e-01  0.7220651044 -
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6.444555e-01
## [5172,]  0.2593463552 -9.249151e-03 -2.279765e-01  0.2537925683
2.466303e-01
## [5173,]  0.4935787602  7.373438e-01 -4.216638e-01  0.1443781841 -
2.880283e-01
## [5174,]  0.2391321158 -1.664849e-01  4.223813e-01 -0.4315339001 -
4.008234e-02
## [5175,]  0.1543369690  1.474425e-01  5.390461e-01 -0.1600066074 -
4.475572e-01
## [5176,] -0.0594054845  2.083496e-01  5.053421e-01 -0.6115221733 -
3.170169e-01
## [5177,]  0.9984768038 -1.009342e+00  1.322868e-01  0.2560505827 -
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## [5178,]  0.2222832235 -8.496287e-02  5.248393e-01  0.0321310522 -
5.414667e-01
## [5179,]  0.0284613044 -1.584484e-02  2.765704e-02  0.0068869763 -
1.256475e-01
## [5180,]  0.3411814266 -1.572628e-01  7.028548e-01 -0.0919740759 -
5.582517e-01
## [5181,]  0.3112027357 -3.327783e-01  4.922212e-02  0.8424038672 -
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## [5182,]  0.2944468216  9.940199e-01 -1.121125e+00 -1.0692266056 -
9.829385e-01
## [5183,] -0.0788585823 -5.628221e-02  1.793485e-01 -0.8026817243
1.237168e-01
## [5184,]  0.1015936640 -3.784810e-01 -5.180859e-01  0.5949057992 -
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## [5185,]  0.3407459619 -5.439955e-01  5.959183e-01 -0.4971022459 -
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## [5186,]  0.0409708832 -3.076255e-01 -2.869959e-01  0.5726572783 -
1.940763e-01
## [5187,]  0.2848693655  6.254343e-01  2.141656e-01 -1.2093915208 -
2.282196e-02
## [5188,]  1.2250957930 -5.154101e-01 -1.158884e+00 -0.3241402839
9.536405e-01
## [5189,]  0.2658379873 -9.342932e-01 -2.518882e-01  0.3660510504 -
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## [5190,] -0.0082425604 -5.274244e-01  3.633778e-02  0.4828537393 -
6.240020e-01
## [5191,]  0.0706785423  1.529023e-01  7.847855e-02 -0.0312044903 -
2.246012e-01
## [5192,] -0.3354811924  3.776726e-01  2.354503e-01 -0.3310646155 -
1.174137e-01
## [5193,]  0.5038210437  9.377144e-01 -2.611028e-01  0.5948714764 -
9.438908e-01
## [5194,]  0.2716711471 -2.955779e-01 -1.328782e-01  0.9877246898 -
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## [5195,] -1.5725052616 -1.235340e+00  1.439590e+00 -0.0151102978
1.824571e+00
## [5196,]  0.4700027818 -2.646651e+00  8.961855e-02 -0.2407355280 -
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5.896079e-02
## [5197,]  1.3078765055 -8.906543e-01 -5.856852e-01 -0.1490492235 -
6.551559e-01
## [5198,]  0.7242721729  7.832721e-02  1.758350e-01  0.2811290195 -
7.437927e-01
## [5199,]  0.0028544263  4.836589e-01 -4.249052e-01  0.1752073893
4.205570e-01
## [5200,] -0.4095476885 -3.031723e-01  1.455991e+00  1.3390017086
9.162387e-01
## [5201,]  0.2241729317 -4.629979e-01 -2.578071e-01  0.2423450512 -
6.828627e-01
## [5202,]  0.4205891092  3.385815e-02  1.042903e+00  0.0551659911 -
9.779281e-01
## [5203,] -0.3581153635  6.848133e-01 -5.345743e-02  0.0939923965 -
3.669190e-01
## [5204,]  0.7606822236 -6.578010e-01  9.804608e-01  1.1466072237 -
4.184181e-01
## [5205,]  1.9385014819  2.859925e+00 -4.542396e-01  2.2396219563 -
2.059324e+00
## [5206,]  0.0704622656 -3.043037e-01 -2.609959e-01  0.4935740818 -
1.198625e-01
## [5207,] -1.6632610656  5.597519e-01  1.005307e-01  0.5141992066
6.098531e-01
## [5208,]  0.2658982646 -9.572844e-01  1.558923e-01 -0.5372089276 -
4.226991e-01
## [5209,]  0.6776222717 -1.702849e-01  1.081608e+00 -0.7989263086 -
2.523639e-01
## [5210,]  0.2874268919 -4.331892e-01 -4.481514e-01  0.6824927589 -
7.296892e-01
## [5211,] -0.1836637774  6.746284e-02 -7.729316e-01 -0.0904838006
7.002672e-03
## [5212,]  0.0624644370 -5.604217e-01  2.964030e-02  0.5467351527 -
5.750246e-01
## [5213,] -0.0053233433 -2.804477e-01 -2.877754e-01  0.4731234188 -
1.578542e-01
## [5214,] -0.0024138933  4.844125e-01 -5.640292e-01  0.3043259032
5.128479e-01
## [5215,]  0.0546112429 -1.800936e-01 -5.100940e-02  0.3348298514 -
1.952563e-01
## [5216,] -0.0185702187  1.902140e-01  5.501519e-01 -0.5918341164 -
3.190540e-01
## [5217,] -1.1781158465 -2.668301e-01  3.033133e-01  0.7084585733 -
2.165132e+00
## [5218,]  0.0678649617  8.583229e-02  2.775513e-01 -0.7204827031
2.380737e-02
## [5219,]  0.1995884613  1.626710e-02  2.382151e-02  0.5127480624 -
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## [5220,]  0.3522968176 -3.037804e-01 -5.230087e-01  0.3535679682 -
8.073914e-02
## [5221,] -0.2547110619  7.190450e-02  2.036005e-01 -0.9186572284
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4.010752e-02
## [5222,] -0.2349924625 -3.022370e-01 -5.421352e-02 -0.6398618789 -
9.926617e-01
## [5223,]  0.3213254989 -3.314033e-01 -4.475939e-02  0.9734596698 -
8.038303e-01
## [5224,] -2.0427217771 -2.175281e-01 -6.285962e-01  0.8754021805 -
1.817105e+00
## [5225,]  0.3739432881 -2.519113e-01  5.645296e-01 -0.5463754973
7.415921e-03
## [5226,]  0.1212541203  2.813368e-01  1.055147e+00  0.3393861933
3.525619e-01
## [5227,]  0.2584965051 -5.147618e-01 -2.118933e-02  0.8421814387 -
7.204011e-01
## [5228,]  0.1734953774 -5.909203e-02  5.090409e-01  0.0440539867 -
6.055650e-01
## [5229,] -0.5099174352 -2.509782e-01  1.341332e+00  1.4947028576
7.952278e-01
## [5230,] -0.3751600096 -3.299604e-01  1.374823e+00  1.4775568122
9.293702e-01
## [5231,] -0.7799477846  1.039999e+00 -1.957516e-01 -0.9941175872
4.911392e-01
## [5232,]  1.1982740328 -1.401199e+00 -3.024678e-01  0.0363716738
4.838060e-01
## [5233,]  0.2572944318 -2.779861e-01  5.183434e-01 -0.2619069124 -
5.063687e-01
## [5234,]  0.2467432352  4.209414e-04  1.132400e-01  0.1870423170 -
4.056652e-01
## [5235,]  0.0339776664 -1.801762e-01 -1.676234e-02  0.2181124048 -
1.892513e-01
## [5236,] -0.1134181175 -4.530386e-02  1.961626e-01 -0.8420214784
8.189828e-02
## [5237,] -0.7907477320  1.921478e-01 -8.343419e-01  0.2213108777
4.059740e-02
## [5238,] -0.3480199957  3.098307e-01 -6.123586e-01  1.0949374186 -
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## [5239,]  0.0064237414  4.711605e-01 -4.651234e-01  0.1902251456
4.660730e-01
## [5240,] -0.1660420280  2.775492e-01  1.126604e-01 -0.0705113758 -
1.500444e-01
## [5241,]  0.4197067874 -3.344249e-01 -5.119191e-01  0.3472497411
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## [5242,] -0.1814293981  9.223175e-02  4.080091e-01 -0.6357055336 -
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## [5243,] -0.0152676304 -3.238814e-02 -5.410595e-01 -0.2574617983
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## [5244,] -0.5134482871  1.905179e-01 -7.754014e-01  1.2021756126 -
6.198547e-01
## [5245,]  0.1143827886  2.344832e-01  7.023669e-02  0.4319998487 -
5.220943e-01
## [5246,] -2.0013805081 -1.376056e+00  3.951624e-01 -0.8952437901
```

```
1.340173e+00
## [5247,]  0.0879849177  9.410271e-02  9.580251e-02  0.3741043621 -
6.627893e-01
## [5248,] -1.4135040269 -2.987294e-01  9.268527e-01  1.0712803223 -
8.695512e-01
## [5249,]  0.1806050151 -7.720541e-01  9.026606e-02  0.8936989098 -
4.797271e-01
## [5250,]  0.4075230942  3.599323e-02  9.665795e-01  0.2183942692 -
1.045371e+00
## [5251,] -0.4382874374 -8.288284e-01 -3.812939e-01 -0.0632557399
1.955639e-01
## [5252,]  0.1715072106  3.151820e-02 -4.077766e-02  0.6362575774 -
6.202152e-01
## [5253,] -0.4902105868 -2.669933e-01  1.354070e+00  1.4663658976
8.297909e-01
## [5254,]  0.5751668191 -4.711597e-01  5.852679e-01 -0.7166523344 -
4.755591e-02
## [5255,] -0.3633580189  6.713363e-01 -7.518354e-02  0.1450649293 -
4.155827e-01
## [5256,]  0.2071789806 -4.643075e-01 -2.977201e-01  0.2500240234 -
6.958388e-01
## [5257,]  0.3576901568 -3.125887e-01  5.620343e-01 -0.2870044453 -
4.219341e-01
## [5258,] -0.2233927021 -3.555894e-01  2.640071e-01 -0.9507169958
1.847190e-01
## [5259,] -0.3370695185  6.788416e-01 -7.997714e-02  0.1767741158 -
3.937406e-01
## [5260,]  0.0251942411 -7.184847e-02 -5.653107e-01 -0.2389240925
3.866018e-02
## [5261,]  0.0695156710 -1.858397e-02 -3.012984e-02 -0.2094582578
1.385487e-01
## [5262,]  0.3520307715 -3.222773e-01  4.821429e-01 -0.7741324183 -
8.898208e-02
## [5263,]  0.1581269238 -6.727021e-01 -7.540156e-01 -0.2590812448 -
7.389710e-02
##                   PC16          PC17          PC18          PC19
##    [1,] -5.250597e-02 -1.751377e-03  0.0129325531  7.248569e-02
##    [2,]  4.277255e-02 -2.825973e-01  0.1665140163  1.216904e-01
##    [3,] -4.099219e-02 -5.048640e-03  0.0651622866  1.132229e-01
##    [4,] -2.629120e-02  4.293605e-01 -0.4445025635  2.291754e-01
##    [5,] -1.261746e-01 -1.163407e-01  0.1344466556  1.117572e-01
##    [6,]  1.238614e-01 -7.867485e-03 -0.0196161139  8.525785e-02
##    [7,]  7.693928e-02 -1.366902e-01  0.0102848391  1.413459e-01
##    [8,]  6.318964e-02  1.673476e-03 -0.0543421153  5.062547e-02
##    [9,]  1.669256e-01 -7.519118e-02 -0.0658414466  1.222315e-01
##   [10,] -9.992451e-02  1.111290e-01 -0.0957617603  4.768662e-02
##   [11,]  3.404184e-01  4.031928e-01 -0.5962371953  1.259636e-01
##   [12,]  3.960970e-02 -7.421052e-02  0.0191963736  9.178278e-02
##   [13,] -9.038092e-02  5.068113e-02 -0.0408500133 -4.418093e-02
##   [14,] -1.315831e-01  3.300365e-02 -0.0820826492 -3.828661e-02
```

```
##   [15,] -3.222724e-02 -1.500584e-01  0.0621174991  6.228174e-02
##   [16,] -1.918626e-01 -1.948804e-01  0.1122515280  1.459801e-01
##   [17,]  4.058522e-01 -3.945049e-01 -0.0875845192  1.159080e-01
##   [18,]  1.242813e-01  3.367876e-01 -0.6265535217  2.645757e-01
##   [19,] -1.362233e-01  6.935669e-02 -0.0314993897  5.063936e-03
##   [20,] -1.629867e-02 -8.090401e-02  0.0325287139  1.261335e-01
##   [21,]  1.164611e-03 -3.962566e-02  0.0082464375  8.073759e-02
##   [22,] -5.202737e-01 -5.065428e-01  0.5292994446 -2.538842e+00
##   [23,] -7.525502e-02  3.487434e-02 -0.0571484021 -6.888343e-02
##   [24,] -1.701966e+00  1.470866e+00  0.1386956431 -2.717343e-01
##   [25,] -3.562692e-01 -1.096736e-01  0.3790873378  2.513145e-01
##   [26,]  6.645732e-02  2.138267e-02 -0.1076962747 -8.611654e-02
##   [27,] -3.259240e-02 -9.308244e-02  0.0328986599  1.261973e-01
##   [28,] -5.378511e-02 -9.156171e-02  0.0521712538 -3.114774e-02
##   [29,]  1.994073e-01 -2.003747e-01  0.0270856633  1.842095e-01
##   [30,] -3.520613e-01  1.255065e-01 -0.1967614540 -2.567993e-02
##   [31,]  1.308355e-02 -2.196690e-01  0.2099053127  1.745629e-01
##   [32,]  1.158739e+00 -7.354778e-01 -0.6036596547 -1.921408e-01
##   [33,]  9.422484e-02  2.635166e-01 -0.3925819363  8.369720e-02
##   [34,]  1.458229e-02  6.157268e-02 -0.1582738862 -1.537777e-02
##   [35,] -4.129631e-02 -1.525135e-01  0.1400464580  1.679857e-01
##   [36,] -3.070577e-02 -1.110618e-01  0.0696735966  1.488465e-01
##   [37,]  2.597212e-01  3.042196e-01 -0.5034149714  4.274360e-02
##   [38,]  3.920845e-01  1.615278e-02 -0.1327607159 -1.400760e-01
##   [39,] -2.255521e-02 -9.170976e-02  0.0508611680  1.195438e-01
##   [40,]  9.398021e-02  1.939591e-01 -0.0947856199  1.039902e-01
##   [41,] -9.043476e-02 -1.862993e-01  0.4056376882  3.247973e-01
##   [42,] -6.468525e-02  2.847150e-02  0.1490856919  2.665679e-01
##   [43,] -9.726896e-02  2.104154e-01 -0.4390350351 -1.526085e-01
##   [44,] -7.896730e-02  1.126694e-02  0.0294737196  9.732021e-02
##   [45,]  5.523912e-01  1.381867e-01  0.2321673725  4.431084e-01
##   [46,] -2.095224e-01 -7.367169e-02  0.2916122415  1.430981e-01
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##   [48,]  1.491653e-03 -1.009451e-01 -0.0116898047  6.950255e-02
##   [49,] -1.902214e+00  9.491367e-01  0.7173996020 -1.546930e-02
##   [50,] -3.842074e-02 -2.137606e-01  0.1218323275 -5.592421e-03
##   [51,] -6.380399e-02 -9.037997e-02  0.1762566371  1.311759e-01
##   [52,] -2.018299e-01  1.764088e-01 -0.2143999150  4.416335e-01
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##   [62,] -8.082718e-02 -2.111954e-02  0.0021106034  3.143796e-02
##   [63,] -1.419960e-01 -4.143469e-02  0.1300516617  1.093827e-01
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##   [68,] -4.686633e-02 -1.466851e-01  0.0967688117  1.279338e-01
##   [69,]  1.814234e-01 -2.599222e-01 -0.0645147777  4.764184e-02
##   [70,] -6.008925e-02 -2.200652e-01  0.0520406784  5.937734e-02
##   [71,] -8.514720e-03 -2.250627e-02  0.0311980389  1.557842e-01
##   [72,]  4.823365e-01  2.610374e-01 -0.9282977557 -1.354377e-01
##   [73,] -6.622525e-02 -2.137571e-01  0.0454731546  5.890389e-02
##   [74,] -2.038637e-01  1.836181e-01 -0.3005203740  4.869008e-01
##   [75,] -1.240412e-01  1.264734e-01 -0.2324509856 -4.491583e-02
##   [76,] -6.784132e-02 -3.347478e-02 -0.0553099999  7.192676e-02
##   [77,]  2.527468e-01  4.316576e-02 -0.0206697560  1.827028e-01
##   [78,]  2.126110e-01 -2.134847e-01 -0.1422140009 -7.734636e-02
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##   [85,]  8.194111e-02 -6.929893e-03 -0.1551973802  8.830251e-02
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##   [94,] -1.363853e-01 -2.973271e-02  0.0532506530  6.555666e-02
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##   [96,]  2.829740e+00  9.236830e-01  1.0569515132 -1.597239e-01
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##  [186,]  3.384283e-01 -1.794072e-01  0.1137691553 -1.919262e-02
##  [187,]  7.724853e-01  1.164905e-02  0.2123176076 -5.376829e-01
##  [188,] -1.833913e-01 -3.576732e-02  0.0436689608 -2.054146e-02
##  [189,]  1.751729e-01 -4.507237e-03  0.0110469944  1.552481e-01
##  [190,]  3.208463e-02  4.463444e-02 -0.1366277959 -3.570984e-02
##  [191,]  6.971977e-01  2.170393e+00  1.8373664674 -3.123770e-01
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##  [193,]  1.208960e-01  1.187401e-01 -0.1051554622  8.810565e-03
##  [194,]  1.054090e-01  2.617935e-03 -0.0199718648  5.031162e-02
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##  [234,]  3.637541e-02 -1.716010e-01  0.1249069659  8.972155e-02
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##  [626,]  4.454120e-02 -5.875515e-02 -0.0651582131 -1.149672e-01
##  [627,]  2.643822e-01 -2.140242e-01  0.0551792752 -6.536688e-02
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##  [631,] -3.018752e-02 -5.681180e-02  0.0454579491 -9.434138e-03
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##  [644,]  2.387493e-01 -1.101328e-01 -0.2421124154 -2.004579e-01
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##  [650,] -3.702336e-02 -9.764453e-02 -0.0315993245  8.601263e-02
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##  [652,] -8.362006e-02 -4.538783e-02 -0.0132093815 -7.500184e-02
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##  [663,] -7.650065e-02  2.384476e-02 -0.0328310272 -1.304269e-01
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##  [670,] -7.779760e-02 -7.917210e-02  0.1083187240  1.115660e-01
##  [671,] -7.215634e-02 -5.532949e-03  0.0322954440  2.785290e-02
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##  [673,] -1.694502e+00 -1.056585e+00 -0.8384499582 -1.457888e-01
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##  [675,]  2.688832e-01  1.434885e-01 -0.3847653181 -1.547190e-01
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##  [688,]  3.434067e-01  3.068632e-02 -0.2058113294  4.417240e-01
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##  [723,]  4.097591e-02 -4.184014e-02  0.0302261818 -4.698645e-02
##  [724,] -6.362407e-01 -5.470187e-01  0.6705589333 -2.523297e+00
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##  [727,]  9.712379e-02  4.373742e-02 -0.2314691217  9.595487e-03
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##  [735,]  1.549771e-01 -1.298889e-02 -0.0781470500  5.604549e-01
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##  [802,]  8.893282e-02 -8.425430e-02 -0.0891828194 -1.384147e-01
##  [803,]  3.053467e-01 -1.291260e-01 -0.0344414518 -6.829241e-02
##  [804,] -4.077526e-02 -7.801983e-02  0.0296840484  4.769325e-02
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##  [821,]  2.385432e-02  1.431245e-01 -0.3000629189 -2.258665e-02
##  [822,] -1.122628e-01 -5.352047e-03  0.2266551139  2.641466e-01
##  [823,]  5.122128e-02 -3.324707e-02  0.0730803523  1.795686e-01
##  [824,] -1.929422e-01  7.994563e-02 -0.3161291838 -9.721146e-02
##  [825,]  2.684257e-01 -6.734067e-02 -0.0542902508 -8.584477e-02
##  [826,] -1.203442e-01  1.009409e-02  0.0783315901  9.801087e-02
##  [827,]  1.989128e-01  4.622634e-02 -0.0325018589  1.776060e-02
##  [828,]  6.332443e-02  1.438059e-01 -0.3687116318  1.459139e-02
##  [829,]  2.809792e-02 -2.976232e-01  0.0391346682 -1.698888e-01
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##  [832,] -7.646242e-02 -4.644244e-02  0.0040469507  5.688914e-02
##  [833,]  4.701164e-02  4.454397e-03 -0.1661893650 -6.897350e-02
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##  [835,]  3.746835e-01  9.944793e-02 -0.3364400867 -5.143940e-02
##  [836,]  5.314875e-02 -2.266596e-01  0.1622265197  1.241482e-01
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##  [875,] -1.037399e-01 -1.008782e-01  0.0545842172  4.349509e-02
##  [876,] -2.267076e-01  8.253482e-02 -0.0987570319  6.987929e-02
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##  [879,] -1.258804e-01 -1.215535e-01  0.1009884436  1.166060e-02
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##  [882,] -2.062616e-01  1.919972e-01 -0.2707954462  4.933419e-01
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##  [947,] -2.085284e-01  1.881102e-01 -0.2630934746  4.959310e-01
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##  [949,] -1.271909e-01 -1.375684e-01  0.1058909313  3.742257e-02
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## [1003,]  1.242821e-01 -2.348961e-01  0.1167618881  1.202390e-01
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## [1006,]  1.796110e-01 -4.787610e-02 -0.0856782323  2.244752e-02
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## [1009,] -1.644559e+00 -1.090993e+00 -0.8699447886 -9.008504e-02
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## [1012,]  1.138637e-01 -4.670246e-02 -0.0984120270  1.756325e-03
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## [1015,] -1.910351e-01  9.055856e-02 -0.2697438074 -6.165248e-02
## [1016,] -7.104701e-02 -2.803814e-02 -0.0343985331 -1.176081e-01
## [1017,]  3.847868e-01 -3.228102e-01  0.0895861904  1.196454e-01
## [1018,]  2.164961e-01  1.483244e-01 -0.0318737620  9.170442e-02
## [1019,] -1.478496e-01  1.091099e-02  0.0558028428  1.745960e-01
## [1020,]  3.470499e-02 -2.014179e-01  0.1490812737  1.186568e-01
## [1021,] -4.215417e-02  2.101774e-02  0.0055658454  1.245668e-01
## [1022,]  8.123407e-03  1.424176e-01 -0.1560856083 -1.224496e-01
## [1023,] -7.275911e-02 -1.108470e-02  0.0475189506  1.155802e-01
## [1024,] -6.388399e-02 -2.225686e-01  0.0909368852  1.893226e-01
## [1025,]  2.168902e-01 -3.415723e-01 -0.1048506970 -7.926493e-02
## [1026,]  5.090830e-02 -1.695180e-01  0.1394064417  1.582067e-01
## [1027,]  8.146000e-02 -2.220633e-02 -0.1057681116 -1.259616e-01
## [1028,] -1.114699e-01 -3.382315e-02  0.0914533508  5.934434e-02
## [1029,]  2.517935e-02  1.137006e-02  0.0512721425  1.694608e-01
## [1030,] -1.072348e-01 -1.272941e-02 -0.0549821896 -2.483738e-02
## [1031,]  2.825182e+00 -1.003965e+00 -0.5319334136 -4.940479e-01
## [1032,] -1.566513e+00  8.895145e-01  0.7372271894  1.497110e-01
## [1033,] -7.974519e-02 -4.771317e-02  0.0195761414  2.145896e-02
## [1034,]  1.126145e-01 -1.824349e-01  0.1783699414  1.533375e-01
## [1035,] -1.276499e-01  1.971783e-02  0.2228356391  2.633668e-01
## [1036,]  2.141721e-01 -7.543259e-02 -0.0194685063  8.669606e-02
## [1037,] -5.105311e-02 -1.183664e-01  0.1007493754  8.171319e-02
## [1038,] -7.805006e-02 -1.115831e-01  0.0865982204 -9.419844e-02
## [1039,]  3.546272e-02 -3.167427e-02  0.0451468973  4.402271e-02
## [1040,]  2.469602e+00  1.652380e+00  0.2338074112 -4.226555e-01
## [1041,]  4.278564e-02  4.951925e-02 -0.2161494256 -8.273943e-02
## [1042,]  4.807852e-01  7.681277e-02 -0.6104110304 -8.778299e-02
## [1043,] -8.039320e-02  6.138597e-02 -0.0506085742  2.114142e-01
## [1044,] -1.120817e-01  3.267275e-02 -0.1363338669 -1.345377e-01
## [1045,]  1.992542e-01 -3.252052e-01 -0.1387295674 -8.205791e-02
## [1046,]  1.276852e-01 -3.242618e-01 -0.0361418387 -7.072980e-02
## [1047,]  9.227647e-02  4.654423e-02 -0.0474035429  3.250801e-02
## [1048,] -3.331760e-01  4.373005e-02 -0.0732665333  5.881973e-01
## [1049,]  7.960502e-02 -1.585278e-01 -0.0912312547 -4.003913e-02
## [1050,] -3.223885e-02  1.996861e-02  0.0154798710  1.392665e-02
## [1051,]  5.204673e-02  2.166049e-02 -0.0824863213 -6.542924e-03
## [1052,] -3.459686e-02  2.551676e-02 -0.1103115550 -6.115421e-02
## [1053,]  1.833610e-01 -2.822523e-01  0.1270112141  5.302183e-02
## [1054,] -8.091901e-02 -1.723438e-01  0.1457215305  1.832363e-01
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## [1058,]  3.954459e-01 -3.034136e-01  0.0595146409  1.207237e-01
## [1059,] -7.327414e-02  3.055911e-02 -0.0112387320  2.256944e-01
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## [1062,]  3.974282e-02 -1.960702e-02 -0.0471944713 -1.211059e-02
## [1063,] -3.186582e-02  4.664210e-01 -0.6381764865 -5.367627e-02
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## [1066,]  5.222220e-02  1.493569e-02  0.1284594279  1.226055e-01
## [1067,]  5.604054e-02 -1.830542e-01 -0.0931901055 -9.890640e-02
## [1068,] -3.182130e-02 -9.151921e-02  0.0906156961  8.857977e-02
## [1069,] -1.629796e-02  2.259546e-02 -0.0697987589 -5.678709e-02
## [1070,]  1.847350e-01 -8.080548e-02  0.0756570045  1.190705e-01
## [1071,] -2.575866e-03 -5.350237e-02  0.0729659636  1.475246e-01
## [1072,]  1.230279e-01  1.505387e-01 -0.4307387539  1.152388e-01
## [1073,]  3.940422e-01  1.780684e-01 -0.1378060189 -7.801425e-02
## [1074,]  2.011507e-01  4.149434e-02 -0.0184567040  1.966088e-01
## [1075,]  1.134425e-02 -2.686428e-01  0.1774234153  1.708185e-01
## [1076,]  2.349550e+00  1.076198e+00  0.9892842961 -2.803491e-01
## [1077,] -3.935243e-02 -1.153999e-01  0.0961782759  4.468053e-02
## [1078,] -1.926463e-02 -2.514795e-02 -0.0129212964  1.849368e-01
## [1079,]  8.915830e-02  2.467329e-01 -0.3912708638 -4.516477e-02
## [1080,] -1.242338e-01  6.066116e-02 -0.2116390798 -5.192412e-02
## [1081,]  4.559405e-02 -1.576704e-01  0.0821838439  9.850544e-02
## [1082,]  5.696879e-02  1.098395e-01 -0.2843988766 -1.667500e-01
## [1083,]  1.931544e-01 -2.501540e-02 -0.0339887538  2.816193e-02
## [1084,]  2.498979e+00  1.746051e+00  0.1350564181 -4.613939e-01
## [1085,]  8.207213e-02  5.099517e-02 -0.0615241513  1.204123e-01
## [1086,] -4.551894e-02 -8.827814e-02  0.0466062262 -1.120390e-01
## [1087,]  2.170340e-01 -6.323752e-02 -0.1375557129  4.105795e-02
## [1088,] -1.705171e+00 -1.074901e+00 -0.8824598726 -1.132693e-01
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## [1095,]  4.692399e-02  9.257093e-03 -0.0753888333 -1.347133e-01
## [1096,] -3.608253e-02  2.119258e-02 -0.1385919914  3.293083e-03
## [1097,]  2.234633e-01 -2.934290e-02  0.0076752499  1.320988e-01
## [1098,] -8.650025e-02 -9.886361e-03 -0.1773335700 -9.941791e-02
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## [1101,]  5.250362e-02 -1.369377e-03 -0.0363293538  1.607288e-02
## [1102,] -7.849459e-02  1.424224e-02 -0.0054037690  1.176909e-01
## [1103,]  7.724140e-02  5.170688e-01 -0.7524911356 -3.566787e-01
## [1104,]  1.755765e-01 -4.358817e-02  0.0285486390  1.036722e-01
## [1105,]  1.139752e-01  3.843998e-02 -0.1647156053 -1.230726e-01
## [1106,]  2.500950e+00  1.728610e+00  0.1349234986 -4.570429e-01
## [1107,]  1.862752e-02 -2.019898e-01  0.0970414147  1.658248e-01
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## [1110,] -1.366633e-02  1.005233e-01 -0.0916711845 -9.073247e-02
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## [1119,]  4.103963e-02  5.373593e-01 -0.8057765136 -5.386804e-02
## [1120,] -1.890210e-01  5.277890e-02 -0.2146910528 -4.285349e-02
## [1121,] -5.163364e-02 -3.791770e-02 -0.0065096164 -8.076689e-03
## [1122,]  9.685816e-02  2.322799e-02 -0.1852526550 -2.350910e-02
## [1123,]  2.490907e+00  1.672413e+00  0.2235014573 -4.485124e-01
## [1124,] -1.499178e+00  9.927580e-01  0.6242202094  1.145177e-01
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## [1127,] -9.434815e-04 -3.623729e-02  0.0434313765  9.448340e-02
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## [1130,]  2.261001e-01 -1.544591e-01 -0.1726029789 -1.871640e-01
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## [1132,]  4.127766e-02 -1.961220e-02 -0.1293356981 -1.091345e-01
## [1133,] -4.992506e-02  6.854402e-02 -0.0855902320  3.373356e-02
## [1134,]  1.530061e-01 -6.799427e-02  0.0943589613  9.113055e-02
## [1135,]  1.312154e-01 -1.819053e-01  0.0733922192 -9.650424e-02
## [1136,]  2.815663e-01  5.559740e-02 -0.0224348026  2.830196e-01
## [1137,]  2.917511e-01 -2.044429e-01 -0.1092982407 -1.500681e-01
## [1138,] -3.261588e-01 -7.292545e-03  0.0041158053  6.034998e-01
## [1139,]  9.053541e-02 -1.839092e-01  0.1372387141  1.352828e-01
## [1140,] -2.083723e-01  9.645014e-02 -0.0526670388 -4.237913e-02
## [1141,]  7.289899e-02 -3.815509e-02  0.0065603051  9.329103e-02
## [1142,]  1.964883e-02  3.169510e-02  0.0276734286  1.325142e-01
## [1143,]  4.135819e-01 -2.015887e-01  0.1714020898  2.928084e-01
## [1144,]  2.961201e-02  9.608778e-02 -0.1119716924  4.968518e-02
## [1145,] -6.676590e-02  4.163445e-01 -0.3610443490  2.618405e-01
## [1146,]  2.535291e+00  9.503245e-01  1.2822404659 -9.356544e-02
## [1147,] -1.653331e-04  3.614114e-01 -0.3049523209  2.443644e-02
## [1148,] -2.211890e-01  1.692279e-01 -0.2863026921 -2.420261e-01
## [1149,] -7.031277e-02 -8.577391e-03 -0.0720125493 -2.757761e-02
## [1150,] -8.272775e-02  1.076602e-01 -0.0812461491  1.238063e-01
## [1151,]  3.060857e-02 -6.363713e-02  0.0108662394  5.195959e-02
## [1152,] -9.270880e-03  3.699121e-01 -0.4993173820 -5.252718e-02
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## [1158,] -1.755218e-01 -7.401137e-06 -0.0656390039 -1.298696e-01
## [1159,]  4.856081e-02 -7.528352e-03 -0.0288395342 -2.037780e-02
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## [1167,]  1.397156e-01 -2.589213e-01  0.0402218294 -2.906110e-02
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## [1189,] -5.300908e-02 -8.410042e-02  0.1163544988  9.815443e-02
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## [1192,] -3.421369e-02  2.446755e-02 -0.2251730374 -2.154588e-01
## [1193,]  4.134234e-01 -2.709653e-01  0.0476781494  3.372003e-01
## [1194,] -1.652095e-01 -7.274613e-02  0.2323159531  2.738368e-01
## [1195,]  6.646809e-02 -3.659055e-02 -0.0704959317  6.901817e-04
## [1196,]  2.618922e+00  9.958319e-01  1.1541668845 -1.319190e-01
## [1197,]  3.368238e-01  3.407900e-02 -0.3935236704  2.086712e-02
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## [1199,]  2.939264e-01  4.048116e-01 -0.5109079942 -2.439978e-01
## [1200,]  2.126839e-01 -2.864322e-01  0.0373801702  7.282297e-02
## [1201,] -1.720821e-01 -5.482758e-02  0.1551104146  1.148214e-01
## [1202,] -5.532992e-03 -1.203473e-01  0.1362551766  2.464411e-01
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## [1207,]  1.964202e-01  1.578669e-01 -0.1451757125  5.951124e-02
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## [1210,] -1.944041e-01  1.565106e-01 -0.2080661878  5.031204e-01
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## [1212,] -1.960245e-02  4.298517e-01 -0.6677766780 -1.908317e-02
## [1213,]  2.060713e-01 -2.604035e-01  0.0886324593  3.878241e-02
## [1214,]  2.822024e-01 -1.526709e-01  0.0928844667  1.053192e-01
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## [1216,]  2.971346e-01 -3.328618e-02 -0.1123330846  6.304248e-03
## [1217,] -3.993068e-01 -1.553400e-01  0.4228546932  3.048922e-01
## [1218,] -1.441769e-01 -4.931595e-02 -0.0495085256 -1.099060e-01
## [1219,]  1.359011e-02  2.425593e-02 -0.0183964161 -3.990221e-03
## [1220,]  7.130429e-02  2.205485e-01 -0.3439050971 -2.686452e-02
## [1221,]  1.958110e-01 -2.342620e-01 -0.2537212573 -1.168144e-01
## [1222,]  3.554531e-01 -3.780061e-01 -0.0040066143 -3.533791e-02
## [1223,] -1.591066e+00  1.022811e+00  0.6305894950  6.735144e-02
## [1224,]  6.961029e-01  2.624893e-02  0.2384574340 -6.398791e-01
## [1225,] -9.899271e-02 -1.493125e-01  0.1265092123  1.716992e-01
## [1226,]  2.737636e-01 -7.229506e-02 -0.0350781245  1.013053e-01
## [1227,] -4.857859e-02  1.304659e-03  0.0462210305  2.494679e-02
## [1228,]  2.116413e-02 -9.881094e-02  0.0705240295  1.420749e-01
## [1229,] -5.995098e-02 -1.365097e-02 -0.1660658505 -6.539328e-02
## [1230,]  1.141423e-01  2.542970e-02 -0.1917633758  5.234141e-02
## [1231,]  2.595007e-01 -1.113755e-01  0.0295757443  1.334455e-01
## [1232,]  9.422130e-02  4.458032e-02  0.0161912116  1.611694e-01
## [1233,] -9.871769e-02 -2.900751e-03  0.0088965709  1.261316e-01
## [1234,]  3.254194e-01 -1.519334e-01  0.1029271284  1.210455e-01
## [1235,] -9.484941e-02 -1.539009e-01 -0.0411067916 -2.497422e-01
## [1236,] -2.330493e-01  1.485972e-01 -0.2022961368  5.193134e-01
## [1237,]  1.341008e-02 -8.680398e-04  0.1037833030  1.983637e-01
## [1238,] -1.002342e-01  7.854651e-02 -0.1858815277  3.968684e-01
## [1239,]  1.695451e-01 -3.096527e-01  0.2308134814  1.472969e-01
## [1240,] -1.710299e+00 -1.113083e+00 -0.8393903724 -8.560712e-02
## [1241,]  5.654972e-01 -2.406130e-01 -0.5404699785 -2.058111e-01
## [1242,]  2.765640e-02  2.719927e-02 -0.0597289938 -9.691251e-02
## [1243,]  1.919201e-02 -8.607903e-02  0.0815235349  1.345410e-01
## [1244,]  8.643774e-01  1.166464e-01  0.1774054930 -6.545952e-01
## [1245,]  1.695591e-01 -1.138150e-01  0.0018684514 -6.561757e-02
## [1246,] -2.014251e-03 -4.369104e-02  0.0361636393 -6.365587e-02
## [1247,]  1.708157e-01 -1.249255e-01 -0.1119912426 -1.962408e-02
## [1248,] -5.799989e-02  4.068280e-02 -0.1365419971 -1.605595e-01
## [1249,]  8.654646e-01  6.054128e-02  0.2505051793 -6.225516e-01
## [1250,]  2.914739e-01 -1.359621e-01 -0.0432026344  1.622169e-02
## [1251,] -1.696100e-01 -3.253951e-02 -0.0008853826 -6.660975e-02
## [1252,]  3.504741e-02  1.818418e-01 -0.3851290832  1.120633e-01
## [1253,] -1.323886e-01 -6.125020e-02  0.0228682902  5.966949e-02
## [1254,]  2.471709e+00  1.186223e+00  0.8851109896 -3.191906e-01
## [1255,] -2.278255e-02 -1.259332e-01  0.1250123711  1.580776e-01
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## [1260,]  1.593997e-01  9.101611e-02 -0.0887320807 -6.919713e-02
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## [1263,]  3.040193e-01 -2.224717e-02 -0.0178370102  5.420787e-02
## [1264,]  1.045011e-01 -1.087573e-01 -0.0914981627 -4.492348e-02
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## [1265,]  3.464044e-02 -9.867808e-02 -0.0625275679 -1.543593e-01
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## [1267,] -7.900969e-02  3.988672e-02 -0.0093501684  2.141663e-01
## [1268,]  1.000905e-01 -6.570083e-02  0.0093930628 -7.445383e-02
## [1269,]  2.597733e-01  2.894753e-01 -0.3023334202 -3.659068e-02
## [1270,]  6.464904e-02  1.203540e-02 -0.1216731809  1.265232e-01
## [1271,]  9.330346e-02 -2.210407e-02 -0.1117646232  1.234948e-02
## [1272,] -9.870464e-02 -2.371549e-01  0.2191918769  1.886177e-01
## [1273,] -6.541587e-02  5.791494e-02 -0.0530512074  2.095987e-01
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## [1275,] -6.710553e-03  1.229007e-02  0.0041006253  1.258384e-01
## [1276,]  7.140837e-01  1.574106e-01  0.2655480132 -3.390732e-01
## [1277,]  7.327433e-02 -2.643231e-02  0.0569204596  5.043440e-02
## [1278,]  7.521086e-02 -7.302669e-02  0.0977094417  1.344082e-01
## [1279,]  2.752847e-01  9.490979e-03 -0.0862032699 -3.169673e-02
## [1280,] -3.279473e-02  2.096278e-02 -0.0731024003 -2.495041e-02
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## [1284,]  8.655238e-02  7.553478e-03  0.0036616229  1.213603e-03
## [1285,]  3.075939e-01 -3.602512e-01 -0.0328574692 -2.399658e-02
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## [1287,]  1.617085e-01 -4.503761e-02  0.0253999771  1.177570e-01
## [1288,] -7.429239e-02  7.092636e-02 -0.1049999134 -9.831250e-02
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## [1297,]  3.158416e-01 -4.644750e-02 -0.0550208047 -1.065522e-01
## [1298,]  4.030907e-01 -1.474466e-01 -0.1253431361  2.657711e-02
## [1299,] -4.415980e-02 -7.090977e-02  0.0495925811  7.612189e-02
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## [1301,] -1.284646e-01 -2.787655e-02  0.0301657805  3.038271e-02
## [1302,]  1.929037e-01 -1.668032e-01  0.0646522315  6.326138e-02
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## [1304,]  4.033079e-01  1.649375e-01 -0.1906398467  3.256267e-02
## [1305,] -1.720284e-02 -3.624326e-03  0.0228268354  5.498459e-02
## [1306,]  2.469771e-01  6.368849e-02 -0.3875186072  1.111612e-01
## [1307,]  2.490947e-01  5.651594e-02 -0.0182449516  2.081234e-01
## [1308,] -7.371296e-02 -6.211442e-02  0.0383165165 -1.071483e-01
## [1309,]  5.833328e-02 -2.399401e-01  0.1979182616  1.280542e-01
## [1310,] -2.698763e-02 -1.218234e-01 -0.0727715685 -2.444852e-01
## [1311,]  5.749386e-02 -6.995253e-02  0.1305119809  2.267990e-02
## [1312,] -7.334153e-02  9.351931e-02 -0.0960328758  1.937356e-01
## [1313,] -3.368149e-02  3.665112e-01 -0.5813894060  4.757302e-03
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## [1316,]  1.056616e-01  1.874356e-02  0.0379065759  1.221545e-01
## [1317,] -7.797105e-02  2.024396e-02 -0.0500101081  4.458506e-02
## [1318,]  4.933612e-01  1.312437e-01 -0.0533885793  6.143553e-02
## [1319,]  2.764675e-01 -2.545952e-01  0.1099813160  2.548557e-01
## [1320,] -1.113872e-01  1.578784e-02  0.0128999092 -7.729498e-02
## [1321,]  9.645975e-02 -2.868529e-01  0.3727417644  5.850639e-01
## [1322,] -7.457809e-02 -4.587758e-02  0.0725425460  7.174209e-04
## [1323,] -4.874717e-02  5.356816e-04 -0.0272725098 -3.465066e-02
## [1324,]  3.587855e-03 -1.714614e-01 -0.0335177967  7.038390e-03
## [1325,] -5.552677e-02 -1.492182e-01  0.1205194986  1.617912e-01
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## [1329,] -6.167605e-02 -2.265277e-02 -0.0957565220 -1.140278e-01
## [1330,]  5.164924e-01  1.534773e-01 -0.0786729644  4.506683e-02
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## [1332,]  1.051085e-01  3.720988e-02 -0.1593634132 -1.178988e-01
## [1333,] -9.652140e-02  2.476969e-02 -0.1104647637  4.157378e-01
## [1334,]  5.827231e-02  1.264868e-01 -0.3460495153  2.533622e-02
## [1335,] -1.682667e-02  8.882034e-03 -0.0584513393 -6.518496e-02
## [1336,] -4.648094e-02  1.661872e-02 -0.1216323082  4.131164e-01
## [1337,] -2.432943e-02  7.202407e-02 -0.0739473424  3.598801e-02
## [1338,] -1.586829e+00  1.221861e+00  0.5682497638 -4.475037e-02
## [1339,]  3.300508e-01  6.864289e-02 -0.2194581182  4.466627e-01
## [1340,] -9.135304e-02  2.137351e-03 -0.2025533549 -9.906114e-02
## [1341,] -4.263474e-02 -9.210229e-02  0.0840063548  6.581210e-02
## [1342,]  4.066479e-01 -1.107509e-01 -0.1758223750  9.935671e-02
## [1343,]  6.721004e-02  9.511915e-02 -0.1519539324 -1.713684e-01
## [1344,]  4.063154e-02  1.235552e-01 -0.3365581702  3.801144e-02
## [1345,]  2.505031e-02  2.794547e-02 -0.0145909843  3.180142e-02
## [1346,]  1.461127e-01  3.932007e-02 -0.0702038646 -1.135470e-01
## [1347,] -5.078415e-02 -4.657920e-02  0.0098506914  2.444184e-02
## [1348,]  2.501965e+00  1.684714e+00  0.2075404516 -4.464692e-01
## [1349,]  8.880981e-02 -9.631292e-02 -0.0559285711 -1.167595e-01
## [1350,]  9.479253e-02  1.009557e-01 -0.1095745659 -8.710381e-02
## [1351,]  1.025545e-01  5.033661e-02  0.0307922350  8.361615e-02
## [1352,]  4.711097e-03 -8.492767e-02  0.0787317717  5.979109e-02
## [1353,]  5.975121e-02  2.040685e-01 -0.3383346528 -4.863854e-02
## [1354,] -2.822276e-03 -3.457118e-02  0.0647475057  1.980044e-01
## [1355,] -1.234494e-02  2.589876e-02  0.0011041762  1.238917e-01
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## [1357,]  1.825739e-01  2.851141e-02 -0.1843210328  2.954065e-02
## [1358,]  4.276887e-01 -7.250648e-02 -0.1994659907  7.671180e-03
## [1359,] -7.091759e-02  1.391898e-01 -0.2390383480 -1.799881e-01
## [1360,] -1.934368e+00  8.267541e-01  0.8366375463 -3.916321e-02
## [1361,]  2.476753e+00  1.705157e+00  0.1737550982 -4.436194e-01
## [1362,]  7.618697e-02  5.680387e-02 -0.0410742570 -2.123625e-02
## [1363,]  1.642030e-01  9.759156e-02 -0.1219465930  9.923763e-02
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## [1369,] -4.878897e-02  2.746290e-02 -0.0151774008  3.267829e-02
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## [1382,] -1.865288e-01 -1.026192e-02 -0.0758729206 -9.584833e-02
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## [1388,]  8.354060e-02 -2.316296e-01  0.1184940258  1.324904e-01
## [1389,]  8.572374e-01  1.385792e-01  0.1616823915 -6.570517e-01
## [1390,]  2.712873e-01  6.503171e-02 -0.1647297162 -6.785562e-02
## [1391,] -1.531757e+00  1.237114e+00  0.5292919325 -4.374137e-02
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## [1393,] -6.103166e-02  1.769245e-01 -0.3400969778 -2.496744e-01
## [1394,]  1.410659e-01 -2.319835e-01  0.1209731358  1.342169e-01
## [1395,] -3.670465e-02  4.554134e-02 -0.1534487678  3.981073e-01
## [1396,]  5.979785e-02  1.103032e-01 -0.2578775050 -1.494488e-01
## [1397,] -8.304581e-03 -1.571690e-02 -0.1120833044 -6.366606e-02
## [1398,]  3.432535e-01 -8.667910e-02 -0.0991035039  7.246176e-03
## [1399,]  1.531023e-01 -4.098951e-03 -0.1858289898  1.214829e-01
## [1400,]  1.158347e-01 -1.606780e-01 -0.0002721281 -6.180524e-02
## [1401,]  9.317566e-02  4.942280e-02 -0.2220990165  4.067220e-02
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## [1408,]  5.035874e-02  9.514333e-02 -0.0137436259  2.267050e-02
## [1409,] -1.089390e-01 -9.946699e-02  0.0848853577  3.508173e-02
## [1410,]  1.675603e-01  6.405158e-02 -0.1481224721  5.543893e-02
## [1411,]  2.603323e+00  8.981681e-01  1.2941055277 -3.219694e-02
## [1412,] -8.202360e-02  1.232585e-02 -0.2030478155 -9.016296e-02
## [1413,]  1.272783e-01 -1.933677e-01  0.2044069215  1.438181e-01
## [1414,]  1.524016e-01 -1.509435e-01  0.1605977150  2.453187e-01
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## [1415,] -9.375136e-04 -3.307684e-03  0.0198980268  1.247150e-01
## [1416,] -2.179559e-01  9.198742e-02 -0.0927417121 -1.557749e-01
## [1417,]  6.620232e-01  1.512961e-01  0.2859859345 -3.194979e-01
## [1418,]  7.354665e-02 -8.402411e-02  0.0794993408 -1.599457e-02
## [1419,]  2.111246e-01  2.494734e-01 -0.2171371696  1.066234e-01
## [1420,]  4.047478e-02 -2.920169e-02  0.1000434702  1.687060e-01
## [1421,]  1.072382e-01  1.396931e-01 -0.4280073997  1.004435e-01
## [1422,]  3.343862e-01 -1.113334e-02 -0.1203446598  4.703603e-01
## [1423,] -6.716147e-02 -7.695684e-02  0.0628988632  7.839259e-02
## [1424,]  2.345715e-01 -1.100595e-01  0.0090674928 -6.177248e-02
## [1425,] -1.169986e-03 -1.991360e-01  0.0441462791  3.547040e-02
## [1426,]  8.146154e-01  3.685301e-02  0.2796135685 -6.190707e-01
## [1427,] -2.341877e-01  1.940364e-01 -0.2606358140  5.058613e-01
## [1428,]  7.329519e-02  6.664133e-02 -0.1781083916  1.095779e-01
## [1429,]  1.514668e-01  1.365943e-01 -0.1514036721  9.749846e-02
## [1430,] -4.387019e-01 -1.920805e-01  0.4451513181  3.448072e-01
## [1431,] -1.231649e-01  4.840729e-02 -0.0264371168  2.173098e-01
## [1432,]  2.320739e-01  1.432272e-02 -0.3213038056  1.101657e-01
## [1433,]  9.068564e-02 -9.459651e-02  0.1217336182  2.020437e-01
## [1434,]  2.408727e-01  2.960209e-02 -0.0653450279  4.828859e-01
## [1435,]  5.438644e-02  9.235133e-03 -0.0848634920  1.471710e-01
## [1436,]  1.078128e-01 -5.355343e-02  0.0669326368  1.795195e-01
## [1437,]  2.594072e-02 -2.478780e-01  0.2339406505  1.447433e-01
## [1438,] -6.549003e-02  5.441348e-03 -0.0381358097 -6.440619e-02
## [1439,]  1.188737e-01 -4.963719e-02 -0.0096647178 -4.424960e-03
## [1440,] -4.051360e-02  2.029363e-02 -0.0491762558  1.725630e-01
## [1441,]  2.705795e-01 -1.013773e-01  0.0424798378  1.180485e-01
## [1442,] -2.683008e-03 -1.028362e-01  0.0723550136 -2.983460e-02
## [1443,]  2.053097e-01  1.983681e-01 -0.3527364604  3.410961e-03
## [1444,]  1.118310e-01 -1.615668e-01  0.1631317270  1.355735e-01
## [1445,]  5.395751e-02  1.864357e-01 -0.4086358153  2.014166e-02
## [1446,] -3.619815e-02 -2.030529e-02 -0.1001046430 -1.162019e-01
## [1447,]  2.431296e-01 -1.695806e-01  0.1071841670  1.222369e-01
## [1448,]  2.022668e-01 -8.954780e-02 -0.0014700543 -6.165679e-02
## [1449,]  4.069007e-02  1.856143e-01 -0.4002170081  2.957232e-02
## [1450,]  2.275099e-01 -1.583408e-01  0.0679433715 -3.401083e-02
## [1451,] -2.280266e-02 -4.058530e-03 -0.0190269616 -4.892491e-02
## [1452,]  4.699653e-02 -3.302520e-02 -0.0158737948  5.712864e-03
## [1453,]  6.650347e-02 -2.125185e-01  0.1401867561  1.776124e-01
## [1454,]  2.274249e-01 -1.680063e-01  0.0881634273  2.333440e-01
## [1455,] -1.061605e-01 -8.649289e-02  0.0843431438  2.922224e-02
## [1456,]  7.683466e-02 -3.708414e-02 -0.1172897631 -1.083166e-01
## [1457,] -8.199394e-02 -4.190906e-02 -0.0684074245 -1.519243e-01
## [1458,] -1.198218e-01  1.734673e-02 -0.0172480247  1.190988e-02
## [1459,] -1.507070e-01  7.156077e-03  0.0013481167 -4.075968e-02
## [1460,] -7.421913e-02 -1.462202e-01  0.1077398603  2.952235e-02
## [1461,] -1.342625e-01 -8.391259e-02  0.1192907283  3.226433e-02
## [1462,]  5.900910e-02 -1.890781e-01  0.1393968156  7.467381e-02
## [1463,] -4.507876e-02 -4.084699e-02  0.0186226635  9.491771e-02
## [1464,] -2.711973e-01 -3.129168e-02 -0.1295900259 -4.338278e-01
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## [1465,]  4.805991e-02  9.826749e-01 -1.3581769257 -1.309295e-01
## [1466,] -1.666847e-01 -4.998162e-02  0.1369069234  1.004934e-01
## [1467,]  3.234904e-01 -1.746213e-01 -0.2189430528 -9.272668e-02
## [1468,]  7.920581e-02  4.848525e-02 -0.0560604758  4.948841e-01
## [1469,] -9.132775e-02 -1.296252e-01  0.1468766140  1.604594e-02
## [1470,] -3.139253e-02 -5.703033e-03  0.0642891888  2.395063e-01
## [1471,]  8.579701e-02 -1.893931e-01 -0.0490074712 -1.301997e-02
## [1472,] -1.882863e+00  9.311720e-01  0.7238715572 -3.240048e-02
## [1473,]  1.542001e-01 -1.574197e-01  0.1490465688  2.313959e-01
## [1474,]  2.967152e-02 -1.517422e-01  0.0349022375  5.657582e-02
## [1475,]  2.978050e-01 -7.526720e-02  0.0015973365  1.373629e-01
## [1476,]  1.010928e-01 -1.103225e-02 -0.1318451732 -1.174504e-02
## [1477,]  3.185783e-01 -6.263348e-02  0.0418861775  4.148174e-02
## [1478,] -6.087174e-02 -2.782269e-03  0.0462095733  1.376523e-01
## [1479,] -1.391235e-01  2.831221e-02 -0.1082572547 -1.952140e-02
## [1480,]  6.432560e-03 -1.008284e-02 -0.0092058078  6.765163e-02
## [1481,]  2.456274e-01 -3.847909e-01  0.2651315946  8.897573e-02
## [1482,] -5.930935e-02 -1.065101e-01  0.0815754920  4.598321e-02
## [1483,]  2.532893e-01 -1.636166e-01  0.1115212525  1.169981e-01
## [1484,]  1.559814e-01 -2.110161e-02 -0.0843029515  1.431131e-01
## [1485,]  2.096331e-01  6.852394e-02 -0.0378172930  2.187314e-01
## [1486,]  6.666362e-02  1.799858e-01 -0.4127777862  1.171532e-01
## [1487,]  2.393096e-01 -2.904991e-01  0.1430958249  1.046706e-01
## [1488,]  8.141329e-01  6.422882e-02  0.2532575024 -6.259839e-01
## [1489,]  7.117660e-01  1.451364e-01  0.2856675197 -3.154910e-01
## [1490,] -8.971100e-02 -1.342663e-01 -0.0490763441  1.098632e-01
## [1491,]  2.643455e-01 -2.177067e-01  0.1521637287  1.507076e-01
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## [1494,] -5.531810e-01 -5.976208e-01  0.8696745176 -2.415253e+00
## [1495,]  9.538107e-02 -5.820480e-02 -0.1356990210 -6.172811e-02
## [1496,] -2.440403e-03  3.603657e-02  0.0006272444  1.391353e-01
## [1497,] -1.605646e-01 -6.370680e-02  0.0186283871  1.721066e-02
## [1498,]  4.636165e-02  1.183688e-02 -0.0285763024 -6.888569e-02
## [1499,] -8.446085e-02  4.912117e-02 -0.0277794120  2.118984e-01
## [1500,] -5.277892e-04 -2.146733e-02  0.0494057136  1.025592e-01
## [1501,]  3.161219e-01 -3.344928e-02 -0.0578335810  1.129726e-01
## [1502,]  2.345373e-01 -1.033867e-01  0.0165664525  1.303869e-01
## [1503,] -7.787890e-03 -7.377673e-02  0.0479778795  2.603662e-02
## [1504,] -7.227361e-02 -1.302285e-03 -0.1700427794 -9.530635e-02
## [1505,]  2.484984e+00  1.158128e+00  0.9253743560 -3.206885e-01
## [1506,]  1.582101e-01 -1.158883e-01  0.1183818340  1.326664e-01
## [1507,] -2.321228e-02 -1.696172e-01 -0.0447753408  1.116859e-02
## [1508,] -2.578009e-02  4.126153e-01 -0.4210851521  2.965446e-01
## [1509,] -2.194188e-03 -1.499672e-02  0.0123198448  5.580652e-02
## [1510,]  1.577161e-02 -9.257464e-02  0.0964562071  7.462465e-02
## [1511,] -1.147259e-01 -1.419910e-02 -0.1101011549  8.622851e-02
## [1512,]  3.933403e-02 -6.076662e-02  0.1264259427  1.832665e-01
## [1513,] -8.728085e-02 -6.397055e-02 -0.1558528425 -2.665409e-01
## [1514,]  7.455002e-02  1.757640e-01 -0.3790552948  1.195252e-01
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## [1515,]  3.060065e-02  3.221101e-02 -0.0956445440 -1.912473e-02
## [1516,] -1.004993e-01 -7.637563e-02  0.1273524855  1.551223e-01
## [1517,] -1.530505e+00  1.241091e+00  0.5555015460 -3.260153e-02
## [1518,]  1.691077e-01  8.556482e-02 -0.1589102676  4.713952e-02
## [1519,]  3.040274e-01 -1.353568e-01  0.0852362978  1.241176e-01
## [1520,]  4.419449e-02  1.310606e-01 -0.3316894883  2.513425e-02
## [1521,]  7.289272e-02  1.401694e-02  0.0077379447  4.172018e-02
## [1522,]  3.794616e-02  1.280969e-01 -0.3261226124  3.085971e-02
## [1523,]  2.752130e-01 -6.615317e-02 -0.0475336084 -1.060501e-01
## [1524,] -1.060269e-04  2.998850e-01 -0.5013895155  2.574530e-02
## [1525,] -8.933310e-02 -9.680114e-02  0.0417281981 -5.338932e-02
## [1526,] -1.380813e-02 -8.314008e-02  0.0925647741  8.232424e-02
## [1527,] -4.141608e-02 -1.017740e-01  0.2067322221  2.853044e-01
## [1528,]  2.342287e-01 -1.005364e-01  0.0195485105 -4.368803e-02
## [1529,]  9.467209e-02  2.973728e-02 -0.1124180382  4.694199e-02
## [1530,] -8.878797e-02 -1.227240e-01 -0.0888805987 -2.601890e-01
## [1531,]  2.582523e-01 -1.066843e-01  0.0018879415 -2.491179e-02
## [1532,]  6.844670e-01  1.532184e-01  0.2926426972 -3.162939e-01
## [1533,]  2.773356e-01  2.098467e-02 -0.3284731473  1.094947e-01
## [1534,] -9.887307e-02  2.129697e-03  0.0136791013  1.232288e-01
## [1535,]  3.441339e-01  1.154855e-01 -0.3705879868  9.245431e-02
## [1536,] -5.976654e-03 -1.913005e-02  0.0478878338  1.425689e-01
## [1537,] -7.723377e-02 -2.895925e-02  0.0355464635  1.343257e-01
## [1538,] -1.120192e-01  4.027756e-02 -0.0117697071  2.326550e-01
## [1539,] -1.721335e-01  2.595536e-03 -0.0817532776 -1.046696e-01
## [1540,]  3.232272e-01 -3.139327e-01  0.0154332349 -3.150147e-02
## [1541,]  1.691747e-01 -2.072072e-01  0.1485869189  7.484646e-02
## [1542,]  1.334535e-01 -6.111251e-02  0.0460206137 -6.612362e-04
## [1543,]  3.753088e-01  5.366827e-02 -0.2995112980  1.057175e-01
## [1544,]  8.095087e-03 -8.712088e-02  0.1025229385  1.568792e-01
## [1545,]  1.177931e-01 -1.697008e-01  0.0010725048 -8.162460e-02
## [1546,]  9.537478e-02 -1.730198e-01  0.2552471079  1.339320e-01
## [1547,]  5.664619e-02  2.054165e-01 -0.1149816949  1.352364e-01
## [1548,]  5.350354e-01  6.930279e-02 -0.0357836089  1.950595e-01
## [1549,]  4.337456e-01 -1.236057e-01 -0.1358847838  4.967445e-02
## [1550,]  2.914396e-01 -5.319148e-02 -0.3451895254  1.005791e-01
## [1551,] -7.963994e-02  1.325516e-02 -0.0715689667 -1.274819e-02
## [1552,]  1.324760e-02  4.321259e-01 -0.6591864820 -9.911146e-04
## [1553,]  2.688625e-01 -2.278397e-01 -0.0501041878  1.480245e-01
## [1554,] -7.295615e-02  4.143538e-01 -0.3482801515  2.668364e-01
## [1555,] -5.555612e-02 -5.556794e-03 -0.0366440606 -3.054523e-02
## [1556,] -2.358284e-01  1.723968e-01 -0.2266389014  5.143373e-01
## [1557,] -9.533197e-02  6.498222e-02 -0.1467425401 -1.585468e-01
## [1558,]  1.642551e-01 -1.596930e-01  0.2414330997  1.507621e-01
## [1559,] -2.312764e+00  1.117987e+00  0.9361187210  1.421780e-01
## [1560,]  1.562830e-01 -1.067172e-02 -0.0092764261 -3.538423e-02
## [1561,]  1.933857e-02 -3.756884e-02  0.0040189810  1.184879e-01
## [1562,] -4.854156e-03  3.486590e-02 -0.0310011786  1.196124e-01
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## [1565,]  3.980916e-02 -1.184332e-01  0.0358888609 -8.860203e-02
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## [1568,]  7.014260e-01  1.074277e-01  0.3361309771 -3.221056e-01
## [1569,] -8.595327e-03 -3.095730e-01  0.3795789056  3.105577e-01
## [1570,]  1.329916e-01  8.685167e-02 -0.3657576483  7.315292e-02
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## [1573,]  2.464238e+00  1.653833e+00  0.2490226458 -4.348548e-01
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## [1578,]  1.531126e-01 -3.096959e-01  0.2163221168  1.879158e-01
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## [1580,] -2.859670e-02  3.899270e-01 -0.6171903463  6.678027e-04
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## [1582,]  1.120492e-02 -1.700570e-02  0.0074478181  5.254692e-02
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## [1584,]  2.531619e-01 -5.210079e-02 -0.0548416255 -9.666259e-02
## [1585,]  2.847378e-02  3.636408e-02 -0.0194195012  3.064048e-02
## [1586,]  2.299640e-01 -1.857945e-01  0.1341109964  1.530076e-01
## [1587,] -1.029200e-01 -3.638529e-02  0.1093149581  1.359641e-01
## [1588,] -1.275017e-01 -1.269305e-02  0.0520592647  1.012491e-01
## [1589,]  8.490881e-02 -7.295785e-02  0.0792812595  5.413592e-01
## [1590,]  4.721645e-02 -2.675446e-02 -0.0420775911  1.041547e-01
## [1591,]  4.055177e-02 -6.168194e-03 -0.0226793515 -1.073891e-01
## [1592,]  6.703141e-01  9.656001e-02  0.1538668493 -6.830334e-01
## [1593,] -7.441322e-02 -9.240080e-02  0.1141898223  1.011025e-01
## [1594,]  2.639437e-01 -3.237875e-01  0.1783724006  1.266249e-01
## [1595,] -1.238427e-01  2.711525e-02  0.0063692143  2.280587e-01
## [1596,]  1.966652e-01 -2.116668e-01  0.1428342652  2.640027e-01
## [1597,] -1.505858e-01 -3.335606e-02 -0.0443120479  9.714629e-02
## [1598,] -5.131174e-01 -6.772895e-01  0.7399649688 -2.350502e+00
## [1599,]  4.017643e-01 -1.312180e-01 -0.1413660070 -1.564473e-03
## [1600,]  2.949013e-01 -1.463268e-01  0.1216404256  1.415450e-01
## [1601,]  2.360988e-01  7.646780e-02 -0.3326090463 -4.544540e-02
## [1602,]  4.097722e-01  3.447557e-02  0.0464494283 -6.707288e-02
## [1603,]  7.884696e-02  1.513726e-01 -0.3414420007  1.273005e-01
## [1604,]  3.699128e-02  2.837655e-02 -0.1319348836 -3.193748e-02
## [1605,] -2.440176e-01 -3.627224e-04  0.0192866157  9.880520e-02
## [1606,] -5.197119e-01 -5.749200e-02  0.1453399528  1.677883e-02
## [1607,] -1.560755e-02  5.499899e-02  0.0691793555  1.019039e-01
## [1608,]  1.893566e-01 -1.147986e-01  0.0243836712  4.217718e-02
## [1609,]  1.704443e-01 -1.422285e-01  0.0834800380  1.121333e-01
## [1610,] -1.590949e+00  1.296644e+00  0.5579244086 -5.232515e-02
## [1611,] -3.993487e-02 -2.469950e-01  0.0623395888  4.505462e-02
## [1612,]  6.480129e-03 -2.475260e-01  0.0691982347  3.278145e-02
## [1613,]  8.136143e-02 -4.089913e-02  0.0153918988 -1.184836e-01
## [1614,] -6.068934e-03 -1.290599e-01  0.0314588434  1.349509e-02
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## [1615,]  2.679107e-01  1.215309e-01 -0.2969451633  9.736604e-02
## [1616,] -5.122567e-02  2.954995e-02 -0.1388219841 -1.240107e-01
## [1617,] -2.240182e+00  1.062377e+00  0.9205776276  1.536752e-01
## [1618,]  5.582352e-02 -1.000114e-01  0.0031885312 -1.013939e-01
## [1619,]  1.890708e-01  9.017893e-02 -0.3651143509 -1.539830e-02
## [1620,]  1.396330e-01 -3.011561e-02  0.0228058593 -2.911710e-02
## [1621,]  8.780471e-02  1.054640e-02 -0.1442070870 -7.465855e-03
## [1622,]  1.161072e-01 -1.615530e-01  0.0912945410  9.774822e-02
## [1623,]  1.759293e-01 -4.617232e-03 -0.0713748650  1.296457e-01
## [1624,]  1.435148e-01 -4.831285e-02 -0.0102296145  3.642403e-02
## [1625,]  1.828030e-02 -5.550324e-02  0.0978381296  2.336585e-01
## [1626,]  1.535708e-01 -6.979593e-02 -0.0579085797 -1.425872e-01
## [1627,] -3.166339e-01 -6.673817e-03  0.0219232840 -2.417524e-02
## [1628,] -2.262480e-01  1.467206e-01 -0.1850277663  5.202781e-01
## [1629,] -5.150098e-01 -7.179978e-01  0.7933086273 -2.346700e+00
## [1630,]  2.385742e-01 -3.067058e-02 -0.0929212693 -1.345957e-01
## [1631,] -7.611278e-02  7.697727e-02  0.0589530844  1.873807e-01
## [1632,] -1.863035e-01 -6.686978e-02  0.1318335993  1.181261e-01
## [1633,]  3.130064e-02 -1.787001e-01  0.1362481365  1.615054e-02
## [1634,]  4.412719e-01  1.775145e-01 -0.3195751070 -3.804842e-01
## [1635,] -5.912815e-02  4.474992e-03 -0.0962935228  4.231006e-01
## [1636,] -1.228773e-01 -1.137710e-01  0.0939916803  4.877991e-02
## [1637,] -1.341425e-02 -1.772087e-01  0.0896156483  3.729532e-02
## [1638,]  2.988386e-01  3.890832e-02 -0.4235611431  1.155022e-01
## [1639,]  7.523781e-02 -6.159811e-02 -0.0492056325  3.327690e-02
## [1640,]  5.871165e-02  1.027591e-01 -0.1025291917 -2.295478e-02
## [1641,]  6.478712e-02 -5.008919e-02  0.0606001057  1.654949e-01
## [1642,]  1.500755e-01 -6.258132e-02 -0.1092086208  1.241967e-01
## [1643,]  3.435950e-01 -3.870161e-01  0.1845344924  1.313752e-01
## [1644,]  2.654504e-01 -2.182848e-01  0.2003258092  1.539232e-01
## [1645,]  7.082392e-01  7.621213e-02  0.1693522535 -6.723599e-01
## [1646,]  2.955754e+00  1.083490e+00  1.1275929711 -2.303013e-01
## [1647,]  1.835750e-02 -2.643910e-01  0.2702953286  1.741317e-01
## [1648,] -5.456296e-05 -1.174583e-02  0.0420456178  4.226629e-02
## [1649,] -8.034931e-02  2.395242e-02 -0.0982334380 -1.365608e-01
## [1650,]  5.021615e-01 -1.777896e-01 -0.5309604661 -2.206468e-01
## [1651,] -1.219184e-01  3.723112e-02 -0.0070449153  2.262191e-01
## [1652,] -1.558658e-01 -5.190800e-02  0.0030212132  1.152514e-01
## [1653,] -2.773053e-01 -5.941689e-02  0.1011988318 -6.418145e-03
## [1654,]  3.520506e-03 -1.126913e-01  0.1171819105  6.779347e-02
## [1655,]  1.465124e-01 -1.276984e-01  0.0313083682 -9.005547e-02
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## [1660,] -4.123486e-02 -7.766900e-02 -0.1159853979 -9.632501e-02
## [1661,]  2.194220e-01  2.408018e-02  0.0263703813  2.252528e-01
## [1662,]  3.001465e-01 -1.339368e-01  0.0255445322  3.305616e-02
## [1663,]  8.380760e-01  1.011079e-01  0.2069426227 -6.380562e-01
## [1664,]  3.196935e-01 -3.676469e-01  0.1586715720  1.306532e-01
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## [1665,] -2.030109e+00  9.891686e-01  0.7466237345 -5.269002e-02
## [1666,] -6.563194e-02 -7.113217e-02  0.0831813672  7.306503e-02
## [1667,] -4.256502e-02  7.860608e-02 -0.0346895309  3.645270e-02
## [1668,]  2.244160e-02 -1.612621e-01  0.0855699451 -5.548361e-02
## [1669,]  2.074060e-02  4.670442e-02 -0.1367237709 -9.676844e-02
## [1670,]  6.896511e-02 -1.306612e-01 -0.0492610998 -3.792937e-02
## [1671,]  2.722899e-01 -3.256644e-02  0.0388149803 -4.457245e-03
## [1672,]  1.493357e-02 -1.357257e-01  0.1296700064  6.723500e-02
## [1673,] -2.265840e+00  1.081638e+00  0.9005344578  1.617939e-01
## [1674,]  5.441059e-01 -6.276027e-02  0.0627079366  1.340808e-01
## [1675,]  3.199791e-01  5.668141e-03 -0.1509623405  4.602249e-01
## [1676,] -3.029514e-04 -9.827502e-02 -0.0899040136 -8.570103e-02
## [1677,]  3.783081e-02  7.376736e-02 -0.2595549685  6.239562e-02
## [1678,] -1.906272e+00  9.268358e-01  0.7380762170 -2.623570e-02
## [1679,] -1.598807e-01  1.155460e-02  0.0519842772  2.345904e-02
## [1680,] -1.622516e-01 -6.056475e-02  0.0785024896  4.262570e-03
## [1681,]  1.281905e-02 -8.448551e-02 -0.1029577396 -8.300922e-02
## [1682,]  1.507704e-01  1.158318e-01 -0.1069450447  9.695212e-02
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## [1684,]  7.300446e-02 -3.503100e-02  0.0478308513  1.384610e-01
## [1685,]  1.109995e-01 -4.047865e-01  0.2928736736  1.888649e-01
## [1686,]  3.138646e-01 -2.856981e-01  0.1633417551  1.419702e-01
## [1687,]  2.463348e-02 -1.732129e-01  0.0887357622  7.571122e-02
## [1688,]  4.598437e-01  1.596338e-01 -0.1401275745  3.190959e-01
## [1689,]  3.398835e-02  8.516544e-02 -0.0873286097 -2.627701e-02
## [1690,]  2.470799e+00  1.698699e+00  0.1787959713 -4.398969e-01
## [1691,] -1.949531e+00  9.327037e-01  0.7149826213 -4.215107e-02
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## [1697,]  2.429806e-02 -1.005443e-01 -0.0024600729 -8.525241e-02
## [1698,] -4.716638e-02 -8.229901e-02  0.0805398803  8.941654e-02
## [1699,] -1.414756e-01 -1.564953e-01  0.1530691665  7.018178e-02
## [1700,]  1.298622e-01 -1.007481e-01 -0.0793901495 -1.265150e-01
## [1701,] -1.605987e+00  1.266136e+00  0.6239750982 -1.737355e-02
## [1702,] -2.316097e-02  2.103669e-01 -0.4194404169  8.762048e-02
## [1703,]  2.632229e-02 -5.380879e-02 -0.1432970505 -8.751166e-02
## [1704,]  6.168774e-02  8.152884e-03 -0.1961153122 -4.656830e-02
## [1705,] -9.938283e-02 -1.789696e-01  0.0157893620  1.353766e-01
## [1706,] -1.904974e-02 -1.667109e-01  0.0522418470  1.647623e-01
## [1707,] -6.298904e-02 -6.091739e-02  0.0454080544  1.719435e-02
## [1708,] -8.419334e-02 -7.093895e-02 -0.0200511595 -8.917892e-02
## [1709,]  1.899541e-01 -5.050111e-02  0.0723693585 -1.495146e-02
## [1710,]  1.213594e-01 -1.372319e-01 -0.0374006625 -8.989185e-02
## [1711,]  3.656633e-01 -1.334043e-01 -0.0454524653  6.711687e-02
## [1712,] -1.859693e-02 -6.604144e-02 -0.0404707276  3.071594e-02
## [1713,] -1.673842e-01  9.850266e-03  0.0649679089  9.271730e-02
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## [1715,]  2.694447e-01  4.151401e-01 -0.4173605009 -7.308779e-02
## [1716,] -8.355326e-02  1.419234e-02  0.0179716700  6.316375e-02
## [1717,]  1.377243e-01  3.363548e-02 -0.0687105929  3.450916e-02
## [1718,] -1.215339e-01 -4.579989e-02  0.1300059497  1.196606e-01
## [1719,] -1.893428e+00  8.660768e-01  0.9013734845  1.090732e-01
## [1720,]  4.991345e-03 -5.824695e-02  0.0226179568 -3.420836e-02
## [1721,] -1.827143e-01 -3.685315e-02  0.1010027512  4.473911e-02
## [1722,] -5.570014e-02 -9.409417e-02  0.0652838189  5.950959e-02
## [1723,] -1.779890e+00  9.169644e-01  0.8900958940  1.370618e-01
## [1724,]  1.276940e-02  6.845150e-02 -0.0741585168  6.993748e-02
## [1725,] -6.660906e-01 -3.067026e-01  0.5108015704 -2.504551e+00
## [1726,] -1.137678e-01 -7.277968e-02  0.1331107228  8.071143e-02
## [1727,] -6.716268e-02  8.388907e-02 -0.0347604279  7.771420e-02
## [1728,] -6.373941e-02 -9.671265e-02  0.0600514745  3.278881e-02
## [1729,]  6.649056e-02  1.303721e-01 -0.0170813145  1.656864e-01
## [1730,]  6.012472e-02 -1.090168e-01 -0.1232585418 -6.647718e-03
## [1731,] -1.255670e-01 -2.727038e-02  0.1104972089  1.131872e-01
## [1732,] -5.424241e-02 -3.154004e-02 -0.0256470166 -1.038704e-01
## [1733,] -3.960563e-01 -9.027501e-03  0.0765178150  1.690507e-03
## [1734,]  8.072561e-02 -1.421307e-01  0.1235677328  2.347874e-02
## [1735,]  4.744948e-02 -1.185268e-02  0.0536426685  6.580004e-02
## [1736,]  1.014042e-01  2.827657e-01 -0.3252469759  4.476479e-01
## [1737,] -6.802307e-04 -4.271115e-02 -0.1091809890 -4.056511e-02
## [1738,] -3.927582e-02 -1.461030e-01  0.1512831795  1.558022e-01
## [1739,]  7.075865e-01  2.273599e-02 -0.5569166921 -1.003011e-01
## [1740,] -1.651561e-01 -2.203344e-02  0.0452050597  7.627862e-02
## [1741,] -4.661200e-03  7.089432e-04  0.1026513890  1.983738e-01
## [1742,] -1.908444e-01 -1.808464e-01  0.1922252558  1.883677e-02
## [1743,] -1.901465e+00 -7.964989e-01 -1.0888230768 -2.938598e-01
## [1744,] -1.986067e-02 -1.119686e-01  0.1820071898  1.724871e-01
## [1745,]  6.238302e-02 -1.985601e-01  0.3172223737  1.914690e-03
## [1746,] -1.697843e+00  9.956003e-01  0.6087278611  1.888410e-03
## [1747,]  1.413969e-02 -1.236276e-01 -0.0846270718 -9.510955e-02
## [1748,] -3.998182e-02  1.549209e-01 -0.1714917335 -2.325698e-02
## [1749,]  4.290839e-01 -2.912058e-01 -0.2274589809  6.779264e-05
## [1750,] -7.693279e-02 -1.485383e-01  0.2573343687  2.811465e-01
## [1751,] -5.702783e-02 -1.801421e-02  0.0219193723  5.058396e-02
## [1752,]  1.505302e-01  2.503096e-02 -0.0601485270 -4.126738e-02
## [1753,]  2.507584e-01 -1.249393e-02 -0.1910789382 -9.232405e-02
## [1754,] -1.995530e-02 -2.286684e-02 -0.0602879738  1.357604e-01
## [1755,]  1.216232e-01 -1.807390e-01  0.1345289501  1.298689e-01
## [1756,] -7.988070e-02  5.696838e-02 -0.0263855404  2.051877e-01
## [1757,]  1.242630e-01 -1.569120e-02 -0.1027827278 -1.391303e-01
## [1758,] -3.339615e-02 -3.514619e-03  0.0375970430  6.987259e-02
## [1759,]  2.170492e-01 -1.440146e-01  0.0444147773 -4.746323e-02
## [1760,] -2.503459e-01 -8.818909e-02  0.2854730341  2.558846e-01
## [1761,]  4.497511e-01 -6.579292e-02  0.0936508377 -2.276426e-02
## [1762,]  2.910526e-01 -2.577464e-01  0.1334362243  1.413284e-01
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## [1767,] -6.536814e-02  3.353959e-01 -0.5210428015  3.541701e-02
## [1768,]  2.635733e-01 -1.102300e-01 -0.1808597794 -2.522242e-02
## [1769,]  1.815354e-03 -1.349625e-02 -0.0273311004  9.190102e-02
## [1770,] -1.683268e+00 -7.762862e-01 -1.1688531859 -3.629582e-01
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## [1772,] -4.904339e-02 -2.950598e-02  0.0424927843  1.414915e-01
## [1773,]  1.563616e-01 -2.033726e-01  0.1183040612 -7.368654e-02
## [1774,] -7.318285e-02 -4.707050e-02  0.0619630634  1.575465e-01
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## [1776,] -1.027230e-01  8.841963e-02  0.0046609168  6.726889e-02
## [1777,] -1.510219e-01  6.875486e-02 -0.0013589728  5.633762e-02
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## [1779,] -1.500689e-01 -5.346341e-02  0.0789591425 -5.163234e-02
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## [1781,] -9.134415e-01 -2.993506e-01  0.3789799295 -2.375413e+00
## [1782,]  1.281070e-01  1.371870e-02 -0.0210938233 -3.880829e-02
## [1783,] -1.179817e-01 -7.620758e-02  0.0479890715  3.606467e-02
## [1784,]  3.179595e-01 -4.487601e-01  0.1033316474 -3.220436e-02
## [1785,]  1.261330e-02  5.347926e-02 -0.0997696915  8.481299e-02
## [1786,]  2.291317e-01 -1.967517e-01  0.1638813839  1.489224e-01
## [1787,]  3.176246e-01  4.551265e-02 -0.1404043994  2.471599e-02
## [1788,]  7.008176e-01 -5.580840e-04  0.2748951423 -6.397687e-01
## [1789,]  6.539177e-02 -9.322074e-03 -0.2167095393 -1.001955e-01
## [1790,]  2.314765e-01  1.796712e-02 -0.0163488337  5.077621e-01
## [1791,] -1.575437e-01 -6.174353e-03  0.0173682602  1.438283e-01
## [1792,]  9.169683e-02 -2.509465e-02  0.0585436284  1.840156e-01
## [1793,] -5.297037e-02 -9.788595e-02 -0.0036800260  9.947236e-02
## [1794,]  2.067684e-01 -5.407483e-02 -0.0666528626 -1.291526e-01
## [1795,]  2.243039e-02 -3.117928e-02 -0.1254998129 -1.568575e-01
## [1796,]  6.086416e-02 -9.200106e-03  0.0362898981  1.119236e-01
## [1797,]  1.266485e-01  2.032057e-02 -0.0606248007  7.282373e-02
## [1798,]  9.864197e-02 -2.289444e-01  0.0277873466 -1.373266e-02
## [1799,]  3.956850e-02  4.400837e-02 -0.0248454824  6.491244e-02
## [1800,] -3.699390e-02 -8.906141e-02  0.1174026228 -7.466973e-03
## [1801,] -1.380386e-01 -1.276518e-01  0.0983051399 -1.433087e-02
## [1802,]  1.488928e-01 -4.678813e-01  0.2805161383  2.136364e-01
## [1803,]  4.806877e-02 -6.226328e-02  0.0062363212  8.060094e-02
## [1804,]  1.175781e-01 -3.030598e-02  0.0331845181  9.582396e-02
## [1805,]  7.683423e-02 -3.771159e-01  0.2550102961  1.892709e-01
## [1806,]  8.292181e-02  9.518791e-02 -0.1869164780 -2.542148e-02
## [1807,]  7.324864e-02  1.225513e-01 -0.0540547978  1.364971e-01
## [1808,]  3.371005e-02  1.583621e-01 -0.3563822784  2.924804e-02
## [1809,]  3.198018e-02 -1.020498e-01  0.0494386690  3.654395e-02
## [1810,]  9.566355e-02 -3.510523e-02  0.0613218746  1.973009e-01
## [1811,]  1.872926e-01 -4.411538e-02 -0.0569142325 -1.349922e-01
## [1812,]  6.268069e-02  1.766140e-03 -0.1312479711 -3.567710e-02
## [1813,]  8.651864e-02 -2.106498e-01  0.2485964861  1.800117e-01
## [1814,] -1.933336e+00  9.029554e-01  0.7685807613 -5.549988e-02
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## [1815,]  8.702195e-02 -1.689841e-01  0.0885240208  4.144327e-02
## [1816,] -6.600531e-02  1.218588e-01 -0.1158587524  7.300817e-02
## [1817,] -1.714771e-01  4.756526e-02 -0.1342669646 -1.071075e-01
## [1818,] -1.580087e+00  9.445102e-01  0.7974717667  8.578968e-02
## [1819,]  1.968632e-01 -9.153388e-02 -0.1027229621  5.699584e-02
## [1820,]  1.568752e-01  3.341690e-04 -0.0313422680  7.971946e-02
## [1821,] -1.939943e+00  8.942399e-01  0.7713336402 -4.067435e-02
## [1822,] -1.240300e-01 -2.350174e-02 -0.0850225193  1.034632e-01
## [1823,]  2.144731e-01 -7.038741e-02 -0.0319142506 -1.202571e-01
## [1824,]  6.576267e-01  1.463256e-01  0.2900568961 -3.135424e-01
## [1825,] -1.080243e-01  8.617085e-03  0.0606210545  8.865606e-02
## [1826,]  1.243761e-01 -2.135226e+00 -1.5479880729 -1.371789e-01
## [1827,]  2.801405e-01 -2.712943e-01  0.0997018001  9.882860e-02
## [1828,] -1.448964e+00  6.038527e-01  0.8696657048  8.697601e-02
## [1829,] -4.194654e-02 -3.172349e-02 -0.1235609276 -1.453399e-01
## [1830,] -1.633571e-02 -3.964752e-02  0.0853914324  2.045837e-01
## [1831,] -1.001549e-01 -1.290416e-01 -0.0610710925 -2.492773e-01
## [1832,]  1.473716e-04  2.253231e-02  0.0178559384  1.434707e-01
## [1833,]  7.812530e-02 -1.016860e-02 -0.0557657243  1.121682e-02
## [1834,] -1.632347e+00  9.214717e-01  0.9337848856  1.369521e-01
## [1835,]  9.177902e-02 -9.817180e-02  0.0983196381 -1.117393e-02
## [1836,]  5.922479e-02 -3.049905e-02 -0.0802678229 -1.296815e-01
## [1837,] -6.542419e-04 -5.516971e-02  0.0862644272  6.617109e-02
## [1838,] -1.509633e+00  1.227915e+00  0.5864033737 -1.956236e-02
## [1839,]  4.326861e-03 -1.033944e-01  0.0159524684  5.357609e-03
## [1840,]  1.426062e-01 -3.365174e-01  0.0922522962  1.117610e-02
## [1841,]  1.129125e-01 -8.051378e-02 -0.1505490922 -4.212239e-02
## [1842,]  2.904697e-01 -9.360748e-02  0.0602643489  5.271079e-01
## [1843,] -1.679696e-01  1.664585e-02 -0.0704282672  1.335327e-01
## [1844,] -1.555042e-01 -7.391796e-02  0.0152004686 -9.259534e-02
## [1845,]  8.111969e-02 -6.656965e-02 -0.1406042064 -8.433896e-02
## [1846,]  3.572699e-01  3.895648e-02 -0.2758846846  1.197130e-01
## [1847,] -3.551371e-02 -1.825235e-01 -0.0003116862  4.705764e-02
## [1848,] -2.306129e-03  6.476534e-03  0.0323473519  5.894301e-02
## [1849,]  1.781366e-01 -3.213601e-01  0.0458615156  1.265833e-02
## [1850,]  4.662700e-02  1.631479e-02 -0.1174110165 -6.191203e-02
## [1851,]  1.358196e-01  1.025213e-01 -0.0936473663  1.143091e-01
## [1852,]  8.628513e-02 -3.607324e-01  0.2510963726  1.753375e-01
## [1853,] -1.319854e-01  4.676074e-02 -0.0430530179  1.112354e-01
## [1854,]  3.666964e-02 -3.098550e-02  0.0953591045  2.123360e-01
## [1855,] -5.370077e-02 -2.269538e-02 -0.0567799356  1.290226e-01
## [1856,] -8.976682e-01 -3.195629e-01  0.4129681984 -2.373611e+00
## [1857,] -6.259596e-01 -6.659449e-01  0.7824628334 -2.476769e+00
## [1858,] -5.015533e-03 -4.259553e-02 -0.1234795112 -1.343226e-01
## [1859,]  6.984740e-02 -2.875385e-02 -0.1327092782 -1.513818e-01
## [1860,]  1.604887e-02 -6.644896e-02  0.0276945643 -1.214418e-03
## [1861,] -1.649621e+00  1.201169e+00  0.6967951761 -3.273903e-02
## [1862,]  9.775543e-02  2.535114e-02 -0.0576598065  7.969337e-02
## [1863,] -1.113722e-01  3.746037e-02  0.0061293033  2.309806e-01
## [1864,]  2.413810e-01  1.168315e-03 -0.0037085366  4.998372e-01
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## [1865,]  4.488530e-02  1.581068e-01 -0.3715723152  1.851801e-02
## [1866,]  7.451206e-02  1.668842e-02 -0.0182867024 -8.144919e-02
## [1867,] -2.855758e-03 -1.536464e-02 -0.1149186962 -7.677096e-02
## [1868,]  1.225044e-01 -1.160146e-01 -0.0605044602 -1.008326e-01
## [1869,]  5.056701e-01 -2.477720e-01 -0.4374524344 -1.861988e-01
## [1870,] -1.631627e+00  9.557536e-01  0.8788644156  1.212202e-01
## [1871,]  2.303423e-02  1.403386e-01 -0.4014312804  9.840565e-02
## [1872,]  5.539551e-02  1.166369e-01 -0.2201703052 -6.097537e-02
## [1873,]  1.975051e-01 -2.068431e-01  0.1518601432  2.721289e-01
## [1874,]  5.695672e-02 -7.932943e-02  0.0767019762  8.107014e-02
## [1875,]  9.840564e-02 -1.497681e-01  0.1567934023  2.481219e-01
## [1876,] -3.197070e-02  3.455270e-04  0.0416705319  6.428623e-02
## [1877,]  6.561047e-01 -8.872595e-02  0.0286371057  1.319096e-01
## [1878,]  6.915659e-01  1.443373e-01  0.2871622167 -3.117228e-01
## [1879,] -1.144990e-01  1.836453e-01 -0.1304488970 -9.175438e-02
## [1880,] -2.023884e-01  5.327295e-02  0.0650428474  9.274528e-02
## [1881,] -5.608046e-02  1.135628e-02  0.0117578010  9.089190e-02
## [1882,] -4.214179e-01 -1.679070e-01  0.1999859474 -2.758118e-03
## [1883,] -1.258421e-01 -3.621374e-02  0.0900521876  1.228905e-01
## [1884,]  2.930304e-01 -3.679699e-01  0.0070983155  9.849590e-02
## [1885,]  2.958054e-03  3.797938e-02 -0.0704422111  4.612192e-02
## [1886,]  5.406169e-01 -1.103889e-01 -0.4668043286 -1.109821e-01
## [1887,]  6.933603e-03  1.448334e-02 -0.0544300156  9.618220e-02
## [1888,] -7.415551e-03 -9.412516e-02 -0.0045770270  6.036730e-02
## [1889,]  1.308997e-01 -1.947849e-02 -0.0954526058  1.190109e-02
## [1890,]  3.183099e-01 -5.785144e-02 -0.1272984193  9.430086e-03
## [1891,]  1.661777e-02 -1.547147e-02  0.0124011806  1.731486e-02
## [1892,] -1.499269e-01 -2.320346e-02 -0.0464985469  9.534042e-02
## [1893,]  2.586896e-03 -6.561874e-02  0.0833492565  1.509125e-01
## [1894,]  6.314981e-01 -9.141785e-02  0.0474148178  1.248869e-01
## [1895,]  2.459634e-01  2.879241e-02 -0.0421685820  4.894093e-01
## [1896,]  2.385073e-02 -3.953672e-03  0.2262887030  3.239932e-01
## [1897,]  2.979199e-01 -3.577655e-01 -0.0195867752 -5.820826e-02
## [1898,] -1.931404e-02  4.130216e-01 -0.4088153767  2.965257e-01
## [1899,]  2.511947e-01 -2.038581e-01  0.1193499738  6.074900e-02
## [1900,]  9.804074e-02 -7.428719e-03 -0.1054493677 -1.511309e-01
## [1901,]  1.373570e-01 -4.274250e-02  0.0402132563 -2.761009e-03
## [1902,]  3.939152e-01  6.098537e-03 -0.0109643092  1.797394e-01
## [1903,]  3.571374e-01  1.566244e-01 -0.0223050848  1.762979e-01
## [1904,]  2.967115e-02 -6.151147e-02  0.0676398710 -7.311862e-02
## [1905,] -3.010519e-02 -7.369429e-02 -0.0511494282  7.886174e-02
## [1906,]  3.074385e-01 -3.832388e-01  0.1893420299  1.477748e-01
## [1907,]  3.374876e-01  1.122970e-01 -0.3670628527  9.336889e-02
## [1908,]  4.214365e-02 -2.153014e+00 -1.5459706731 -1.830683e-01
## [1909,] -8.157059e-03 -5.725006e-02  0.1066590325  1.216402e-01
## [1910,] -1.395022e-01 -1.452249e-02 -0.0953430945  9.166574e-02
## [1911,] -4.557408e-02 -4.814533e-02  0.0186688539  2.201151e-02
## [1912,] -1.522081e+00  1.169582e+00  0.6410511816 -8.347324e-03
## [1913,] -7.596706e-02  2.238733e-02  0.0893566031  9.551737e-02
## [1914,]  1.411689e-01  1.237293e-01 -0.0137601985  8.163064e-02
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## [1915,] -1.315953e-02 -1.754332e-01  0.0756286829  4.389204e-02
## [1916,]  2.668142e-01 -3.158181e-01  0.0075652779 -2.138279e-02
## [1917,]  3.180238e-01 -3.953313e-01  0.0199080060 -3.594992e-02
## [1918,]  2.349595e-01  1.032282e-02 -0.1113544152  2.842950e-02
## [1919,]  3.062162e-02 -2.842444e-02  0.0227751987 -7.416155e-02
## [1920,]  1.542906e-01 -1.122955e-01  0.0084595590  2.733361e-02
## [1921,]  3.041640e-02 -5.241110e-02 -0.0512708481 -1.132974e-01
## [1922,]  3.445820e-01 -2.536832e-02  0.0068500217  6.657178e-02
## [1923,]  1.203352e-02 -5.266608e-05  0.0037455415  1.187539e-01
## [1924,]  6.471194e-02 -4.176107e-01  0.3049463103  2.135378e-01
## [1925,]  6.235796e-01 -1.134081e-01  0.0678500751  1.452202e-01
## [1926,] -3.723153e-02 -1.213958e-01 -0.0740138041 -2.441491e-01
## [1927,]  7.761939e-03  2.259156e-02  0.0291610177  1.336266e-01
## [1928,]  4.314370e-01 -1.986395e-01 -0.0527245100  7.996250e-02
## [1929,]  8.975571e-02  1.341480e-02  0.1384932212  3.498038e-01
## [1930,]  5.834478e-02  4.711757e-02 -0.0372912849  1.018758e-01
## [1931,] -3.978285e-02  1.150382e-01 -0.1625251374 -1.798951e-01
## [1932,] -7.454840e-02 -7.249215e-02  0.0458447616  4.445998e-02
## [1933,] -1.701506e-02 -1.168096e-02 -0.0538749545 -6.287335e-02
## [1934,] -4.800016e-02 -1.519416e-01 -0.0349476032  2.070711e-02
## [1935,] -5.715109e-02 -8.228752e-02  0.0997664978  9.377894e-02
## [1936,]  1.052125e-04 -6.677121e-02 -0.0942701277 -1.047284e-01
## [1937,]  3.461045e-01  8.221002e-02 -0.3240553159  1.127409e-01
## [1938,]  1.056930e-01  4.639020e-02 -0.0586986441 -1.089097e-01
## [1939,]  3.815229e-02 -1.072764e-01  0.0116164467  7.234928e-02
## [1940,]  1.294325e-01 -2.813281e-01  0.2178497442  1.549249e-01
## [1941,]  9.858555e-02  1.718624e-01 -0.0953060689  1.341182e-01
## [1942,]  8.532776e-02 -1.588473e-02 -0.0345067061  7.469035e-02
## [1943,]  5.575540e-02  8.842181e-03  0.0308740224  2.328080e-01
## [1944,] -1.114680e-02  1.781010e-01 -0.4566946924  6.895443e-02
## [1945,]  1.974433e-01  1.450655e-01 -0.1021455240  1.335476e-01
## [1946,]  3.141998e-02  3.437049e-03 -0.0992433134  1.370231e-01
## [1947,]  1.721692e-01  1.022403e-01 -0.0511750296  1.494117e-01
## [1948,] -1.526108e+00  9.173461e-01  0.8416531595  1.024522e-01
## [1949,]  3.580319e-02 -1.046898e-01  0.0154433587  2.068659e-03
## [1950,]  6.057556e-02 -1.129891e-01  0.0212868090 -8.414609e-02
## [1951,] -1.261720e-02 -1.013715e-01  0.1065995348  6.907126e-02
## [1952,]  2.229861e-01 -1.663985e-01  0.0525615732  1.986023e-02
## [1953,]  1.791781e-02  3.767485e-01 -0.5617545221  3.885337e-02
## [1954,] -8.504052e-03 -7.570186e-02  0.1147654626  1.575633e-01
## [1955,]  4.558335e-02 -6.473419e-02  0.0161226819  9.239276e-02
## [1956,]  2.729786e-02 -3.562093e-02 -0.0256763776  1.730886e-01
## [1957,]  8.541968e-02 -2.121476e-02 -0.0834003992 -2.285112e-02
## [1958,]  2.733269e-01 -3.110695e-01  0.1932998609  1.323614e-01
## [1959,] -1.256319e-01 -7.684408e-02 -0.0186833793  1.057296e-01
## [1960,] -4.677098e-02  4.075079e-01 -0.4029438133  3.083795e-01
## [1961,] -5.231358e-02  4.064316e-01 -0.4023207426  3.106582e-01
## [1962,]  6.512474e-02 -4.614559e-01  0.3661931553  2.150896e-01
## [1963,] -1.194541e-01 -2.304105e-02 -0.0493348571  7.200955e-02
## [1964,]  2.970911e-01 -2.375485e-02 -0.0853130232 -7.529755e-02
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## [1965,]  6.864954e-01  2.786820e-02  0.2554920554 -6.436393e-01
## [1966,]  4.655231e-03 -2.707122e-02  0.0118322751  1.343332e-01
## [1967,]  7.901097e-02 -5.241231e-02  0.0606814630  5.220769e-01
## [1968,] -5.682421e-02 -1.731321e-01  0.1465762348 -2.977771e-02
## [1969,]  1.568372e-01 -3.609640e-03 -0.0148099913 -2.914589e-02
## [1970,]  1.938473e-02  5.029544e-03 -0.0931441574 -7.397423e-02
## [1971,]  5.006160e-02  5.009943e-03 -0.1852749148 -3.885914e-02
## [1972,] -6.893228e-02 -3.931898e-02  0.0525227821  1.623068e-01
## [1973,]  1.250627e-01 -2.174118e-01  0.0743477544 -5.865979e-02
## [1974,] -1.586662e+00  1.013377e+00  0.6341535424 -2.888522e-02
## [1975,]  1.411345e-02 -1.219386e-01  0.0303105261 -1.373169e-02
## [1976,]  2.035117e-01 -2.440878e-01  0.1643728164  5.840594e-02
## [1977,] -9.641112e-02  2.578102e-02 -0.1466343623 -1.327314e-01
## [1978,]  1.098475e-01  1.257710e-02 -0.0395903211 -3.819211e-02
## [1979,]  6.138295e-02 -4.017097e-02 -0.1858797593 -4.314598e-02
## [1980,]  7.438439e-03  5.971093e-02 -0.0550669408  9.719187e-02
## [1981,]  2.849233e-02  1.526280e-02  0.0449781663  1.216832e-01
## [1982,]  9.629714e-02  1.014457e-02 -0.0005060065  3.991681e-02
## [1983,]  1.840478e-01 -1.719594e-01  0.0913559007  5.223991e-02
## [1984,]  5.436119e-02 -5.486351e-02  0.1155881768  1.255129e-01
## [1985,]  1.263236e-01 -2.573737e-01  0.3649696453  1.710687e-02
## [1986,] -2.036657e-02 -2.267736e-01  0.0477718399  4.860276e-02
## [1987,]  2.547449e-01 -3.387652e-02 -0.0819391660 -1.177016e-01
## [1988,]  2.850366e-02 -1.134739e-01  0.0334428702 -8.853471e-02
## [1989,]  8.136485e-01  8.805977e-02  0.2302355533 -6.264509e-01
## [1990,]  4.092481e-01 -3.913443e-01  0.2133629426  1.593704e-01
## [1991,]  6.970655e-02 -2.469169e-02  0.0571377046  1.085186e-01
## [1992,]  4.457257e-02  3.533337e-01 -0.3466597953  3.978079e-02
## [1993,] -9.525788e-02 -1.307463e-01 -0.0630888748 -2.526298e-01
## [1994,]  3.863104e-02 -9.117833e-02  0.1141336355  9.899356e-02
## [1995,] -2.779788e-03 -1.750556e-01  0.0810059670  7.170442e-02
## [1996,] -4.144952e-02 -4.452171e-02  0.1068473588  8.147182e-02
## [1997,]  1.342493e-01 -2.250790e-01  0.1698715302  6.860330e-02
## [1998,]  7.098591e-01  8.126857e-02  0.1797100843 -6.507136e-01
## [1999,]  7.081688e-02  9.267108e-02 -0.1618970681  4.807961e-02
## [2000,]  7.993160e-02 -2.040172e-01  0.1343137324  5.066122e-02
## [2001,]  5.787799e-02  7.086845e-02  0.0374575372  8.156150e-02
## [2002,] -9.112332e-02 -5.682097e-02  0.0308552216  2.164104e-02
## [2003,] -7.192977e-02 -6.623648e-02  0.0994290584  9.592059e-02
## [2004,] -8.061411e-02 -1.090462e-01 -0.0827307732 -2.582637e-01
## [2005,]  1.651809e-01 -9.408011e-02 -0.0109217151 -1.123997e-01
## [2006,] -8.148873e-02 -1.031154e-01  0.1398629990  1.697597e-01
## [2007,]  1.889526e-01 -6.389466e-02  0.0011288382  1.059246e-01
## [2008,]  1.787392e-02 -7.277480e-02  0.1390712754  2.369036e-01
## [2009,]  4.187848e-02 -4.747413e-02  0.1032486719  1.304162e-01
## [2010,]  1.214901e-01 -1.960789e-01 -0.0367714195 -1.427002e-02
## [2011,]  2.938470e-01 -1.039759e-02 -0.3805815203  1.013256e-01
## [2012,]  2.680822e-01 -1.888179e-01  0.1076289544  7.432863e-02
## [2013,]  7.211590e-02  3.183461e-02 -0.0184452871  7.050913e-02
## [2014,]  3.733126e-01 -3.546857e-01 -0.0100203123 -4.292476e-03
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## [2015,]  5.700434e-02 -6.625857e-02  0.1112558584  2.169276e-01
## [2016,]  2.056963e-01 -3.626451e-01  0.0896273701 -2.264186e-02
## [2017,] -1.605063e-01  2.132860e-02 -0.0151992532  1.504889e-01
## [2018,] -1.997128e-01  2.448304e-02  0.0575010882  5.252418e-02
## [2019,]  1.050599e-02  1.225462e-01 -0.2724530829  1.596908e-01
## [2020,] -1.518379e+00  1.259063e+00  0.5462903642 -2.187019e-02
## [2021,] -1.852710e-01 -5.088835e-02  0.0133342783  2.390714e-02
## [2022,]  1.042188e-02 -3.062731e-01  0.3867450275  3.103341e-01
## [2023,]  1.329878e-01 -3.495254e-02  0.0476544283  1.063681e-01
## [2024,]  2.064895e-02  2.303239e-02 -0.0224268932  9.944085e-02
## [2025,]  2.340704e-01 -6.764540e-03 -0.0130779293  7.482101e-02
## [2026,]  1.606841e-01  3.269381e-03  0.0082806892  1.156317e-01
## [2027,] -1.769225e-01 -2.371392e-04 -0.0631190687 -1.886290e-03
## [2028,] -5.405482e-02 -1.376014e-01  0.0448662737  1.015352e-01
## [2029,]  5.312058e-02  4.261594e-02  0.0049494920  5.003798e-02
## [2030,]  2.570292e-01  4.893495e-02 -0.1213208491 -4.365249e-02
## [2031,]  3.837660e-01 -3.377067e-01 -0.0310971855 -3.871599e-02
## [2032,] -8.459943e-02  7.787605e-02 -0.0528215878  2.192768e-01
## [2033,] -1.679983e+00  1.253198e+00  0.6330497080 -3.118068e-02
## [2034,]  1.256685e-01 -2.064805e-01  0.1626335707  1.023188e-01
## [2035,]  1.476790e-01 -1.748074e-01 -0.0999410062 -3.434219e-02
## [2036,]  7.272333e-02 -3.520044e-02 -0.1285599238 -3.073395e-02
## [2037,]  2.055466e-01 -7.352684e-02  0.0600836192 -5.357737e-02
## [2038,]  2.117714e-02 -2.080998e-01 -0.0846752121 -1.599712e-01
## [2039,]  2.281472e-03  1.247629e-01 -0.1782440975 -3.422076e-02
## [2040,]  5.485681e-02  1.013126e-01 -0.0510058986  8.469433e-02
## [2041,] -2.562632e-02  1.863944e-01 -0.2050540178  3.741039e-02
## [2042,] -3.551359e-01 -1.311821e-01  0.1269047587  5.399515e-02
## [2043,]  3.881880e-02  1.301411e-02 -0.0180232493  1.400008e-01
## [2044,] -1.898566e+00 -1.150599e+00 -0.4542936987  3.835032e-02
## [2045,]  1.093769e-01 -1.240915e-01  0.0466152620  4.941776e-02
## [2046,]  7.820030e-02 -7.024924e-02  0.1025317051  4.542300e-01
## [2047,]  2.582393e-01 -1.618329e-01  0.0959348610  2.592928e-01
## [2048,]  4.065605e-02  3.295269e-01 -0.2727662974 -1.418255e-01
## [2049,] -7.892608e-02 -1.378384e-01  0.0972902238  5.667128e-03
## [2050,] -1.781132e-01 -2.591540e-02  0.0850558893  6.949644e-02
## [2051,]  5.803527e-01 -3.552944e-01 -0.1073061489  6.333765e-02
## [2052,] -5.416722e-01 -4.780217e-01  0.6053046133 -2.611608e+00
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## [2054,] -2.023359e-02 -1.018907e-01 -0.0820023650 -7.649135e-02
## [2055,]  1.003989e-02 -5.862422e-02 -0.2267597658 -3.168785e-01
## [2056,]  2.480807e-01 -2.447977e-01  0.3325022661  3.025942e-01
## [2057,]  1.771232e-02  3.710225e-02 -0.0089489806  1.147679e-01
## [2058,]  1.648928e-02  1.814824e-03 -0.1783613929 -1.648067e-01
## [2059,]  3.892677e-01 -1.112664e-01 -0.1577352366  2.273819e-02
## [2060,]  1.277005e-01  3.717266e-02 -0.0365425534 -8.837106e-02
## [2061,] -3.358964e-03 -3.256245e-01  0.4133564512  3.066047e-01
## [2062,] -2.164817e-01 -3.896447e-02 -0.0190265073  4.674249e-01
## [2063,]  1.813275e-02 -2.074899e-02  0.0767021581  2.271738e-01
## [2064,] -1.983444e-02  4.292772e-01 -0.6479366624 -3.290255e-02
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## [2065,] -2.662339e-02 -1.607761e-01  0.0821578565  4.779389e-02
## [2066,]  8.501986e-02  6.363525e-02 -0.0301340829  9.150163e-02
## [2067,] -8.240423e-02 -5.939992e-02 -0.0029356747  4.565373e-01
## [2068,]  3.717711e-02 -7.182127e-02  0.0072688519  7.723595e-02
## [2069,]  1.153565e-01 -1.296830e-01  0.1367110488  1.311586e-01
## [2070,] -1.067655e-01  6.473168e-03 -0.0482315171  1.651742e-03
## [2071,]  3.101244e-01 -3.577911e-01  0.0673428858 -2.580419e-03
## [2072,]  2.342724e-01 -1.188513e-01  0.0514732288 -8.530753e-02
## [2073,]  2.204119e-01  5.237277e-01 -0.4112695867  3.214645e-01
## [2074,] -1.811324e-01 -3.706958e-02 -0.0317946882 -8.156693e-02
## [2075,]  2.563072e-02  2.725539e-02  0.0986457657  3.417670e-01
## [2076,] -8.383572e-02  1.278614e-02  0.1613762692  2.744528e-01
## [2077,]  1.619027e-01 -1.275940e-01  0.0330869641  3.400407e-02
## [2078,]  1.261445e-01 -1.386012e-02 -0.0069781372  8.634027e-02
## [2079,] -8.879570e-01 -3.414409e-01  0.4517023830 -2.368480e+00
## [2080,]  7.079930e-02 -6.975472e-02  0.1188999214  1.238356e-01
## [2081,]  1.168180e-01  1.321061e-02 -0.0480922043  8.702387e-02
## [2082,] -3.559744e-03 -1.883706e-01  0.1049492343  4.144394e-02
## [2083,] -9.023870e-03 -8.878280e-02  0.0089387953 -6.074255e-03
## [2084,]  2.201801e-01 -3.632073e-01  0.0740820508 -7.466614e-03
## [2085,] -1.292360e-01 -9.784101e-02  0.1594501603  1.463828e-01
## [2086,]  3.092381e-01 -3.579755e-01  0.0869298009  7.871286e-03
## [2087,] -3.024078e-01 -4.255255e-02  0.0835337527 -1.451705e-02
## [2088,] -1.877971e-02 -1.116939e-01 -0.0724484450 -2.381870e-01
## [2089,] -9.024022e-01 -3.344376e-01  0.4293649318 -2.342711e+00
## [2090,]  7.791336e-02 -3.714863e-02  0.0045770269  8.686421e-02
## [2091,]  2.624679e-01 -1.084773e-01  0.0188866194 -1.033732e-01
## [2092,]  2.183188e-01 -2.001467e-01  0.1102164026  9.148664e-02
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## [2094,] -1.822994e-01 -4.216738e-03 -0.0597432204  9.053026e-02
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## [2096,] -1.092042e-01  6.024939e-02  0.0036702180  7.259048e-03
## [2097,]  3.036445e-01 -8.043092e-02 -0.2015367151 -3.675828e-02
## [2098,] -1.442310e-01  7.926530e-04 -0.0633629724  8.637869e-02
## [2099,]  6.290735e-02  1.101096e-01 -0.1139676411  7.380876e-02
## [2100,]  2.716334e-02  4.474727e-02 -0.0501931449  1.024999e-01
## [2101,]  1.213199e-01 -6.468858e-02  0.0801078483  1.312803e-01
## [2102,]  2.465776e-01  1.645561e-02 -0.0027403685  5.050007e-01
## [2103,] -2.568864e-01 -9.709886e-02  0.0147542204  6.818836e-02
## [2104,] -1.955895e+00  8.608210e-01  0.8158205470 -3.263063e-02
## [2105,] -2.078080e-02 -8.116546e-02 -0.0021077475 -5.537143e-02
## [2106,]  2.847061e-01 -1.275200e-01 -0.1547383647 -1.313448e-02
## [2107,] -2.439725e-02 -1.149689e-01  0.0301407039  6.062607e-02
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## [2113,]  6.869518e-01  1.302752e-01  0.1195326688 -6.800291e-01
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## [2115,] -1.015237e-03 -5.810181e-02  0.1433431404  1.784866e-01
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## [2118,]  8.124819e-02  2.411281e-02  0.0984741070  1.880197e-01
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## [2121,] -8.020807e-02 -2.933673e-02 -0.0394666447  4.449306e-01
## [2122,] -1.769498e-01 -4.870779e-02 -0.0033348966  1.024660e-02
## [2123,]  2.609987e-02 -6.683238e-02 -0.0273419404  3.541085e-02
## [2124,]  7.661598e-02 -8.966511e-02 -0.0925203128 -4.027232e-02
## [2125,]  4.300013e-02 -3.021780e-01  0.3972787105  3.420725e-01
## [2126,]  1.019337e-01  1.425070e-01 -0.1639826407  4.844926e-02
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## [2128,]  6.051607e-02 -8.234604e-02  0.1138975935  1.390051e-01
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## [2130,]  4.915386e-02 -4.257874e-03  0.0351450630  1.904614e-01
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## [2132,]  5.587556e-02  6.623188e-02 -0.1192826894  7.418281e-02
## [2133,] -3.052109e-01 -7.103100e-02  0.1256372747  9.804367e-03
## [2134,] -4.813962e-02 -1.361771e-01  0.0718435455  1.157577e-01
## [2135,] -1.005898e-01 -5.914300e-02  0.0862168585  1.698032e-01
## [2136,]  2.145474e-01 -1.140638e-01  0.1088388232  7.032159e-03
## [2137,] -1.569795e+00  9.244111e-01  0.8453432386  1.317818e-01
## [2138,]  8.064000e-02 -2.866027e-02  0.0858306178  1.940592e-01
## [2139,]  1.854908e-01 -1.807106e-01  0.1200861866  6.194308e-02
## [2140,]  6.407490e-03 -6.985971e-02  0.0631487129  4.018675e-02
## [2141,]  1.707710e-01 -6.773732e-02 -0.1110228342 -1.066644e-01
## [2142,]  7.878392e-04  2.095927e-01 -0.4013840816  7.777481e-02
## [2143,]  3.967508e-02 -3.778653e-02 -0.0796403721 -3.519131e-02
## [2144,] -2.383337e-02 -1.944931e-01  0.1828138984  4.369361e-02
## [2145,]  4.059218e-01 -1.246739e-01 -0.1382256343  1.102222e-02
## [2146,] -1.520593e-02 -1.508543e-02  0.0012906664  1.050981e-01
## [2147,] -4.062565e-03 -5.603954e-02  0.0594301110  5.897849e-02
## [2148,] -1.663748e+00  1.297703e+00  0.5864061451 -4.903847e-02
## [2149,]  8.243751e-02  9.642583e-02  0.0001486489  1.497360e-01
## [2150,] -1.087830e-01 -7.053540e-02  0.0700988550  1.823385e-01
## [2151,]  2.200270e-01  2.120238e-01 -0.4476182574  1.622608e-01
## [2152,]  1.787083e-01  7.450549e-02 -0.0024395773  1.820174e-01
## [2153,]  1.535923e-01 -2.731983e-01  0.2021988452  1.479124e-01
## [2154,]  6.940807e-01  7.450660e-02  0.1878856701 -6.690319e-01
## [2155,]  9.697348e-02 -1.561379e-02  0.0364327238 -6.228125e-02
## [2156,]  3.855339e-02 -5.924081e-02  0.0465064216  4.071637e-02
## [2157,] -1.767646e+00 -1.093822e+00 -0.5996181966  4.166191e-02
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## [2160,]  2.798827e-01 -3.720213e-01  0.1022568760  1.129435e-02
## [2161,]  1.186464e-01  3.444364e-02 -0.1021586930  1.156317e-01
## [2162,]  1.880900e-01 -1.193398e-01  0.0845861897  1.395100e-01
## [2163,] -8.687175e-03 -1.411012e-01  0.0642205556  3.094425e-02
## [2164,]  2.414213e-01 -9.337348e-03 -0.0009505822  5.822407e-02
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## [2167,]  8.419806e-03  6.194562e-02 -0.1156485331  6.019544e-02
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## [2170,]  2.144374e-02 -1.545401e-02 -0.1051013119 -1.264319e-01
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## [2177,]  2.113268e-01 -1.112666e-01 -0.1684910916 -4.115142e-03
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## [2179,]  5.367356e-01  2.315307e-01 -0.6179964320  4.829246e-02
## [2180,]  1.166942e-01 -9.649517e-02  0.0306895667  6.697074e-02
## [2181,]  1.111160e-02 -6.702255e-02 -0.0986515599 -1.501087e-01
## [2182,] -1.531546e-01 -1.411413e-02 -0.0526313122 -9.049763e-02
## [2183,]  3.039234e-01 -1.549185e-01  0.1329524869  1.484214e-01
## [2184,]  3.293457e-01  6.639524e-01 -0.9540950929 -3.618456e-01
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## [2188,]  2.770159e-01 -1.471288e-01  0.1347556036  1.654338e-01
## [2189,]  1.552210e-01 -5.522985e-02  0.0346531618  7.804192e-02
## [2190,] -1.299803e-02 -7.266226e-02  0.0159218054 -5.033072e-02
## [2191,] -1.111191e-02  4.186081e-01 -0.6050893997  2.376334e-02
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## [2194,]  1.700605e-01 -1.500116e-01 -0.1043926958 -4.237853e-02
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## [2197,]  3.116139e-01 -3.727097e-01  0.1065468791  1.811973e-02
## [2198,]  1.826829e-01 -1.330457e-01  0.0631099061 -7.678051e-02
## [2199,]  2.618198e-01 -3.557002e-03 -0.3740846813  1.111012e-01
## [2200,]  5.632042e-02  1.955978e-03 -0.1581101793 -7.580287e-02
## [2201,] -8.658726e-02  1.176762e-01 -0.0350009735  1.203038e-01
## [2202,] -1.116024e-01  1.088030e-02 -0.0171697272  1.923454e-02
## [2203,]  5.951487e-02 -1.347235e-01  0.1427674429  3.759079e-01
## [2204,] -6.072614e-01 -7.119971e-01  0.7806575038 -2.534078e+00
## [2205,]  2.924984e-01 -1.183405e-01  0.0943655100  1.279623e-01
## [2206,]  1.310019e-01 -3.115750e-02 -0.2300138427 -2.855828e-02
## [2207,]  4.897234e-02 -5.126124e-03  0.0142449211  1.657392e-02
## [2208,] -3.854718e-03  1.810929e-01 -0.3591292511  1.298649e-01
## [2209,] -1.606965e+00  8.947905e-01  0.8729786518  1.103652e-01
## [2210,]  1.637843e-02 -5.525648e-02 -0.0575090259 -2.226927e-02
## [2211,]  1.198147e-01  5.617246e-02 -0.0126040020  6.163583e-02
## [2212,]  3.150391e-01 -4.120101e-02 -0.0334019405 -7.933052e-02
## [2213,] -9.739541e-02  1.326619e-01 -0.2141209429  1.336201e-01
## [2214,]  4.333995e-02  1.685275e-02 -0.1565879642 -1.460999e-01
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## [2215,]  1.164467e-02 -1.782119e-01  0.1008180666  9.651186e-03
## [2216,]  1.369898e-01 -1.557485e-01 -0.0983986821 -2.649856e-02
## [2217,]  7.246235e-02 -6.682306e-02  0.0845496656  6.475882e-02
## [2218,] -8.718848e-02  1.700292e-02 -0.1043736078  4.328793e-01
## [2219,] -1.927622e-01 -1.769094e-01  0.1724934828 -1.648722e-02
## [2220,]  2.439148e-01 -1.657631e-01 -0.1290821615 -9.592100e-02
## [2221,]  1.758915e-01 -4.755594e-02 -0.0147794859 -1.112895e-01
## [2222,] -7.254432e-02  5.545961e-05  0.0401723317  3.621949e-02
## [2223,]  1.622647e-01 -1.065505e-01  0.0544473537  1.111015e-01
## [2224,] -1.753894e-01 -4.904441e-02  0.0189932601 -9.551984e-02
## [2225,]  7.170934e-02 -2.193138e-02 -0.1498298534 -7.366380e-02
## [2226,] -1.805291e-02  7.725463e-02 -0.0302196218  1.070915e-01
## [2227,]  1.779802e-01 -1.950295e-01  0.1273588117  6.626797e-02
## [2228,] -2.194289e-02  8.690819e-03 -0.0865738644 -8.336752e-02
## [2229,] -1.549548e-01  1.381806e-01 -0.1866129808 -7.096997e-02
## [2230,]  4.142599e-01 -9.326931e-02 -0.1641159868  5.378997e-02
## [2231,]  1.684917e-01 -1.544722e-01  0.0659692119  5.027383e-02
## [2232,] -1.355893e-01  1.095284e-01 -0.1135276586  1.154126e-01
## [2233,]  1.455080e-03 -6.738309e-02 -0.0221186141 -2.118567e-02
## [2234,]  9.528113e-02  1.294013e-01 -0.1506227349  4.994294e-02
## [2235,] -8.999865e-03 -1.501438e-02  0.0917428464  1.280399e-01
## [2236,]  1.058785e-01 -1.519906e-01  0.0985554658  1.086387e-01
## [2237,]  3.730796e-01 -1.042614e-01  0.0381352223 -4.197410e-02
## [2238,]  9.866509e-02 -3.445576e-02 -0.1051256826  1.319551e-01
## [2239,] -2.608101e-01 -1.438897e-01  0.0738688541  8.196226e-02
## [2240,]  4.431767e-02 -8.971219e-02 -0.0754274588 -3.273151e-02
## [2241,]  5.498666e-02  1.726288e-02  0.0201537202  1.093152e-01
## [2242,]  2.942367e-01 -3.814208e-02  0.0503335333  8.408860e-02
## [2243,]  2.640849e-02 -1.292950e-01  0.0313775756  4.635247e-02
## [2244,]  2.723106e+00  8.981746e-01  1.0428265753 -4.467834e-01
## [2245,]  1.746302e-01  9.664489e-02 -0.0142460525  1.597816e-01
## [2246,]  6.662103e-01  1.116247e-01  0.3597848351 -2.946930e-01
## [2247,]  2.110202e-01 -4.075593e-02 -0.0185102076 -2.984966e-02
## [2248,]  2.146474e-01 -4.896900e-02 -0.1466562067 -3.541143e-02
## [2249,] -1.123980e-01  6.380803e-04 -0.0762221676  7.590175e-02
## [2250,]  3.460405e-03  6.819807e-02 -0.0638564835  7.621581e-02
## [2251,]  1.164734e-02 -1.731225e-02 -0.0942750583  3.500922e-02
## [2252,] -1.759234e-01  1.854489e-04  0.1571717882  8.943772e-02
## [2253,] -1.869750e-01  3.142106e-02 -0.0151275533 -3.652801e-02
## [2254,] -5.227023e-02  1.143540e-02  0.0480519573  1.097683e-01
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## [2256,]  5.928813e-02 -7.824849e-02 -0.0779260583 -1.034404e-02
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## [2258,] -2.265548e-01 -1.458930e-02  0.0392835255  9.505280e-02
## [2259,] -6.563838e-02 -2.281953e-02  0.0779126912  6.188610e-02
## [2260,]  6.053099e-01 -3.435404e-02 -0.0278361341  1.194541e-01
## [2261,]  8.722892e-02 -2.141441e-01  0.0349092139  2.161035e-02
## [2262,] -1.686308e+00  1.014668e+00  0.8045143747  9.385609e-02
## [2263,]  1.053773e-01 -1.217577e-02 -0.1783814118  4.227349e-02
## [2264,] -1.745924e-01 -7.836493e-02  0.0161014039 -8.121159e-02
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## [2265,]  1.478328e-01 -3.242395e-01  0.0303655452  1.311213e-01
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## [2267,]  8.293114e-02 -8.793222e-02  0.0906389878  5.253528e-01
## [2268,]  1.306323e-01 -1.837674e-01 -0.0541823272 -1.528994e-01
## [2269,]  3.630898e-01  4.088440e-01 -0.4684722670 -9.672289e-02
## [2270,] -7.946132e-02  3.550793e-01 -0.5206597466  2.331778e-02
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## [2272,]  2.927405e-01  9.279051e-02 -0.2093437441  2.550953e-02
## [2273,] -2.903442e-01 -6.103386e-02  0.1160275877 -6.402887e-03
## [2274,] -8.316906e-02 -2.549612e-01  0.0877281767 -2.811672e-02
## [2275,] -2.555356e-01 -1.632271e-01  0.1091879717  8.990434e-02
## [2276,]  2.607062e-01 -6.097575e-03 -0.1086259492 -1.436074e-01
## [2277,] -1.255173e-01 -5.117122e-02 -0.0225311409  9.654575e-02
## [2278,] -1.578456e+00  9.260935e-01  0.8460486695  1.081927e-01
## [2279,]  3.179437e-02 -4.350576e-03  0.0200589170  2.991177e-02
## [2280,] -1.348305e-01 -2.176360e-02  0.0978519166  5.412820e-02
## [2281,] -8.401929e-02  6.607439e-02 -0.0433540368  3.675806e-02
## [2282,]  5.558889e-02  5.529627e-03  0.1570667662  3.636099e-01
## [2283,]  1.455896e-01 -1.439481e-01 -0.1151406005 -3.247911e-02
## [2284,]  1.334726e+00 -2.234081e-01 -0.2525120062 -2.311431e-01
## [2285,]  1.730060e-01 -1.807574e-01  0.1559966379  1.506937e-01
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## [2287,]  9.276011e-02  4.927697e-02 -0.0623146224  5.886092e-02
## [2288,] -1.855457e-01 -1.248702e-01  0.1449879260  1.696141e-01
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## [2290,] -4.481358e-01 -7.047611e-01  0.7962525269 -2.468041e+00
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## [2292,]  2.403165e-02 -3.840769e-02  0.0660081048  4.211898e-02
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## [2295,]  6.091147e-02 -9.170407e-02  0.0587951093  9.088794e-02
## [2296,]  7.632478e-03 -2.608387e-02  0.0663370190  1.602627e-01
## [2297,]  1.113851e-01 -1.079784e-01  0.0301504084  5.685097e-01
## [2298,] -1.815395e+00 -1.129183e+00 -0.5418592715  2.185297e-02
## [2299,] -1.788629e-02  8.544031e-04 -0.0278431410  8.666632e-02
## [2300,]  2.219367e-02  7.948080e-02 -0.1603495771  1.087041e-01
## [2301,]  1.473273e-01 -3.295337e-01  0.2678228542  1.881126e-01
## [2302,]  2.459955e-02 -4.141247e-02  0.1178312203  2.383697e-01
## [2303,] -2.282110e-01 -1.820623e-01  0.3891435141  2.738455e-01
## [2304,] -4.595200e-02  4.069389e-01 -0.3918958891  3.103051e-01
## [2305,] -1.410512e-02 -1.166694e-01  0.0464075150 -8.778726e-03
## [2306,] -3.071351e-01  1.409336e-02  0.0202864045 -3.485613e-02
## [2307,] -1.963350e-01  1.447774e-01  0.0160105492  9.987103e-02
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## [2310,] -2.709152e-01 -3.418455e-02  0.1666757915  5.542997e-01
## [2311,] -1.969790e+00 -1.073548e+00 -0.7243278296 -1.026448e-01
## [2312,] -9.671765e-02  2.005892e-02  0.0708856205  1.051549e-01
## [2313,] -7.390998e-02  8.045609e-02 -0.1847992434 -2.760396e-01
## [2314,] -1.809689e+00 -1.024132e+00 -0.9157868508 -3.303421e-01
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## [2315,] -1.002804e-01  3.494010e-02 -0.0332529374 -8.820954e-02
## [2316,]  7.447489e-02 -2.497514e-01  0.1905949626  1.033084e-01
## [2317,] -1.419428e-01 -1.104192e-01  0.1699919733  7.195700e-02
## [2318,]  3.128284e-01 -1.458971e-01 -0.0011327579 -1.069448e-01
## [2319,] -1.792019e-02 -3.019869e-01  0.1908694801  8.630655e-03
## [2320,]  2.726801e-01 -8.113656e-02  0.2822260269  8.046959e-02
## [2321,]  1.858016e-01  1.360946e-01 -0.1613932750 -1.414513e-01
## [2322,]  1.196578e-01 -4.739592e-02 -0.2372966587 -1.551356e-01
## [2323,]  1.765716e-02  1.160618e-02  0.0342876627  1.946977e-01
## [2324,] -7.531308e-02  5.484991e-02 -0.1366550586  1.003326e-01
## [2325,]  1.691925e-01  5.753467e-02 -0.1322441799  1.253523e-01
## [2326,] -2.428876e-02  2.968471e-02 -0.2187554015 -2.569150e-01
## [2327,]  2.404456e-01 -6.361572e-02  0.0760118355  9.467653e-02
## [2328,]  2.305272e-01  7.289752e-02 -0.0728397379  8.110143e-02
## [2329,]  5.634315e-01  5.922592e-02 -0.5644454045 -1.325339e-02
## [2330,]  2.391620e-01  8.394636e-02 -0.1710222524  3.162126e-03
## [2331,]  9.999030e-02  2.299140e-02 -0.2219327152  4.111407e-02
## [2332,] -1.425509e-01 -2.224219e-02  0.0541083680  1.916811e-01
## [2333,]  2.258562e-01 -1.501736e-02  0.1052471074  2.191720e-01
## [2334,] -1.178731e-01 -1.995719e-03 -0.0727133579  7.922667e-02
## [2335,]  4.744576e-02 -1.088485e-01  0.0954747316  1.139164e-01
## [2336,]  3.920723e-01  2.615792e-01 -0.0136451877  2.600277e-01
## [2337,] -2.830723e-02 -1.467653e-01  0.0456862887  9.306392e-02
## [2338,]  1.068543e-01 -5.184578e-02  0.0409722907 -2.076587e-02
## [2339,]  3.331657e-02 -1.137495e-02 -0.2106036853 -9.179799e-02
## [2340,]  1.591770e-01 -1.213425e-01  0.0453418358  4.572117e-02
## [2341,]  2.293636e-01 -2.285460e-01  0.1178991414  7.165634e-02
## [2342,]  1.457367e-01 -1.217090e-01  0.0636264293  5.673087e-01
## [2343,]  2.704465e-01  1.144454e-01 -0.1003659580 -3.581716e-02
## [2344,]  5.921733e-02 -5.283142e-02 -0.0307660642  1.058674e-02
## [2345,]  1.666509e-01 -1.451896e-01  0.0744147187  4.642138e-02
## [2346,]  1.120510e-02 -3.260790e-02  0.1178901798  1.465202e-01
## [2347,] -1.774837e+00 -1.094093e+00 -0.5792145440  3.197786e-02
## [2348,]  1.478218e-01 -1.287834e-01  0.0980901271  1.392811e-01
## [2349,] -5.319575e-02 -9.105216e-02 -0.0073549581  8.744271e-02
## [2350,]  7.854733e-02 -1.183484e-01 -0.0490610134 -6.810565e-02
## [2351,] -1.379946e-01  9.557369e-02 -0.1832267553 -2.625129e-01
## [2352,]  6.470121e-01 -8.034536e-02  0.0325910938  1.236632e-01
## [2353,]  1.572957e-01 -3.668448e-02  0.0370337275  1.004631e-01
## [2354,]  7.776324e-02 -3.480255e-02  0.0603223013  5.052848e-02
## [2355,] -2.395503e-01  5.570760e-03  0.0353788969  5.762816e-01
## [2356,] -1.667404e+00 -1.048451e+00 -0.9340835603 -3.317751e-01
## [2357,]  1.125809e-01 -1.418857e-01  0.0807779449  5.801270e-01
## [2358,]  6.970269e-02  6.084043e-02 -0.0687969913 -1.149203e-01
## [2359,] -4.030548e-02 -6.163047e-02  0.0467912166  4.451720e-02
## [2360,] -8.809756e-02 -8.191756e-02  0.0631332252  4.608350e-02
## [2361,] -1.572251e-03 -6.464295e-02 -0.0476856432  9.063823e-02
## [2362,] -1.494177e-02  5.963067e-02 -0.0856566193  8.928958e-02
## [2363,]  1.179795e-01 -1.984027e-01  0.1358064556  6.261221e-02
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## [2371,] -1.097103e-01 -4.523398e-02  0.0908766084  4.138054e-02
## [2372,]  3.486857e-02  2.585004e-02  0.0201252161  6.666702e-02
## [2373,] -1.640231e+00  1.208691e+00  0.7020343534 -1.947007e-02
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## [2375,]  9.638164e-02 -4.152052e-03 -0.1030037458 -1.423587e-01
## [2376,]  3.292945e-02 -7.879867e-03  0.1630626547  3.502397e-01
## [2377,] -1.776045e+00 -1.123823e+00 -0.5427649033  4.908256e-02
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## [2379,] -6.529706e-02  1.183728e-02 -0.1408227429  4.474672e-01
## [2380,] -4.638108e-02  9.685210e-02 -0.1711165602  1.102687e-01
## [2381,]  5.786021e-02  2.500794e-02  0.0122130815  1.867666e-01
## [2382,]  1.140216e-01 -3.016416e-02  0.0051157350  6.432275e-02
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## [2385,] -1.354636e-03  7.044270e-02 -0.1289122782  1.436786e-01
## [2386,]  2.024794e-01 -7.357724e-03 -0.2384502282  7.348761e-02
## [2387,]  6.510764e-02 -3.653128e-03  0.0195623229 -8.696112e-02
## [2388,] -9.047609e-01 -3.196809e-01  0.4288014204 -2.367751e+00
## [2389,] -1.672365e-01  1.866129e-02 -0.0051129679  1.456010e-01
## [2390,] -1.622259e-01 -6.114127e-02  0.0800366464  1.630188e-01
## [2391,]  3.299175e-02  2.956357e-02  0.0089031118  1.099371e-01
## [2392,] -2.618698e-01 -1.085609e-01  0.0355694161  6.528398e-02
## [2393,]  1.047254e-01 -4.089655e-02  0.0638448025  1.008951e-02
## [2394,]  1.418881e-01 -1.656013e-01  0.1032299337  5.634204e-02
## [2395,] -2.450633e-01 -1.330732e-02  0.0344710672 -3.319193e-02
## [2396,] -1.173025e-01  1.987318e-02 -0.0908995746 -7.307857e-03
## [2397,]  2.826881e+00  9.356311e-01  1.0533344432 -4.823524e-01
## [2398,] -6.183895e-02  1.415847e-01 -0.2477148975 -2.669102e-01
## [2399,] -8.009473e-02 -1.108142e-01  0.0279451211  4.948932e-02
## [2400,] -3.115733e-01 -1.133167e-01  0.1804573341  2.702179e-02
## [2401,]  3.469750e-02 -3.806666e-02 -0.1165815881 -1.362397e-01
## [2402,]  1.579157e-02 -1.700735e-01  0.1059787016  3.706456e-03
## [2403,] -1.467158e-01  3.662341e-03 -0.0394424553  1.502856e-02
## [2404,] -7.390406e-02 -9.871522e-02  0.1480391920  1.847345e-01
## [2405,]  4.576972e-02 -6.296760e-02  0.1079128255  1.628664e-01
## [2406,] -7.875266e-02 -1.061653e-01  0.1594522540  1.852939e-01
## [2407,] -1.777735e+00 -1.084285e+00 -0.5786655665  3.157998e-02
## [2408,]  2.620520e-01 -1.749006e-01  0.1160798190  7.248306e-02
## [2409,] -1.350670e-01 -5.684414e-02  0.0848582868  2.104430e-01
## [2410,]  7.802706e-02 -4.615774e-02  0.0518107795  8.467576e-02
## [2411,]  3.562604e-01 -1.350034e-01  0.1053314978  3.267251e-01
## [2412,]  2.570736e+00  1.000805e+00  1.1829720873 -2.619789e-01
## [2413,] -1.832640e-01  3.195455e-02  0.0365790903  9.915935e-03
## [2414,]  1.612908e-01 -9.236858e-01  0.7911159754 -3.278261e-01
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## [2415,] -2.619153e-03 -4.758516e-02 -0.0495689934 -1.636850e-02
## [2416,]  4.585429e-02  3.443655e-02  0.0663533748  1.668484e-01
## [2417,]  1.044085e-01 -6.989141e-02  0.0037487600  5.666416e-01
## [2418,] -1.829212e+00 -1.083929e+00 -0.6007054071  2.348498e-02
## [2419,]  6.554664e-01 -1.037428e-01  0.0696724931  1.388356e-01
## [2420,]  3.586468e-02 -4.173148e-03 -0.0474262153 -1.068154e-01
## [2421,]  5.516769e-02 -9.995667e-02  0.1048047409  1.067168e-01
## [2422,] -1.373802e-01  1.918706e-01 -0.1223186079  1.285196e-01
## [2423,]  6.852766e-02 -1.915119e-02 -0.1409618780 -2.841413e-02
## [2424,]  6.829515e-02 -7.152449e-02  0.1221524268  2.151702e-01
## [2425,] -1.491739e-01 -8.553471e-02  0.0980930601  1.173121e-01
## [2426,] -1.811043e-01 -1.449615e-03  0.0336317987 -2.459368e-02
## [2427,]  1.154606e-01 -6.568462e-02 -0.0091092923  5.569207e-01
## [2428,] -6.516630e-02  4.059824e-02 -0.0691080179 -1.043142e-02
## [2429,]  3.552748e-02  3.889030e-01 -0.6598088959 -1.851189e-01
## [2430,]  6.141698e-02 -4.043873e-01  0.3046276916  2.228051e-01
## [2431,] -1.092845e-01  1.434257e-02  0.0080435153  1.783936e-01
## [2432,]  3.503223e-02 -5.764000e-02 -0.0957015940 -1.462823e-02
## [2433,]  9.281194e-03  5.794245e-02 -0.0340964657  9.950327e-02
## [2434,]  4.943485e-02  1.839812e-02  0.0023097353  1.144266e-01
## [2435,]  1.259630e-01 -2.226165e+00 -1.4732603431 -1.570873e-01
## [2436,] -1.765853e+00  8.276374e-01  0.6937285566 -2.440599e-01
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## [2438,] -5.876490e-02  9.063746e-02 -0.1107114064 -2.516467e-03
## [2439,] -2.088485e-01 -1.919192e-01  0.2014117153 -7.837227e-03
## [2440,] -6.337915e-02 -3.753575e-02 -0.0697038876  4.646392e-01
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## [2443,]  2.316663e-02 -7.451428e-02  0.0421594819  9.309951e-02
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## [2449,] -7.326951e-04 -3.249933e-01  0.2483153595  1.891687e-02
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## [2465,] -2.419208e-02 -7.267773e-02 -0.0413452075 -9.437316e-03
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## [2475,]  3.169098e-01 -1.416290e-01 -0.1281126386  1.250288e-01
## [2476,]  4.677010e-01 -2.367496e-02  0.4958582919 -4.016510e-01
## [2477,]  7.286955e-02  1.668260e-01 -0.3198720466  6.641132e-02
## [2478,] -4.682040e-02  4.026089e-02  0.0804193379  1.719444e-01
## [2479,] -2.558237e-01 -2.199072e-01  0.2304001081 -2.992584e-02
## [2480,]  3.918801e-02 -3.617609e-02  0.1004430979  2.278403e-01
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## [2486,] -1.822597e+00  8.366020e-01  0.7795339563 -2.470800e-01
## [2487,] -2.468291e-01  8.002086e-02 -0.0735543696  7.356197e-02
## [2488,]  6.498742e-02  9.739448e-02 -0.0922383729  9.241979e-02
## [2489,] -1.284871e-01 -3.912980e-02  0.0439152395  1.163695e-01
## [2490,]  2.162920e-02 -8.550790e-02  0.1127389858  8.723218e-02
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## [2494,]  4.388562e-02 -1.500341e-01  0.0346669934  9.616073e-02
## [2495,] -3.736279e-02  9.135571e-02 -0.0724664402  1.689369e-01
## [2496,] -2.048156e-01 -1.677586e-01  0.1639143049 -2.426409e-02
## [2497,]  1.584747e-01 -3.693752e-02 -0.0182759046  1.471649e-01
## [2498,]  4.857922e-02  5.298996e-03 -0.1315755306 -2.871863e-02
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## [2500,]  1.547772e-01  9.464266e-03 -0.0992880208 -1.234572e-01
## [2501,]  6.955650e-02 -4.395669e-02  0.0698203296  1.141959e-01
## [2502,] -2.966383e-01 -1.709946e-01  0.1213360828  9.736653e-02
## [2503,] -2.253562e-01 -2.012990e-02  0.0664364697  1.025439e-01
## [2504,]  5.172867e-02  6.618855e-02 -0.0506447390  1.579576e-01
## [2505,] -1.644656e-01 -5.485506e-02  0.0268419344  4.164620e-03
## [2506,]  1.481445e-01 -1.827266e-01  0.1488487129  8.809550e-02
## [2507,]  2.823110e-01  8.071068e-02 -0.1574612604  2.074671e-02
## [2508,] -1.042793e-01  6.236366e-02 -0.0563327572  6.619333e-03
## [2509,] -4.917608e-02 -1.527488e-01  0.0888278636  3.481532e-02
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## [2511,] -7.992867e-02  9.892939e-02 -0.0701999909  1.486355e-01
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## [2513,] -1.337303e-01 -7.591894e-02  0.1028010648  1.339602e-01
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## [2515,]  1.367725e-01 -4.643462e-02 -0.0133010139  5.535800e-01
## [2516,]  5.820466e-02 -3.153151e-02 -0.0214136357  6.539033e-02
## [2517,]  7.201046e-02  8.667137e-02 -0.1482112429 -1.248845e-01
## [2518,]  5.367738e-02  9.874748e-02  0.0012554362  5.544787e-01
## [2519,] -1.868431e-02 -1.666656e-01  0.1001559584  1.201642e-01
## [2520,]  1.049414e-01 -1.574857e-03 -0.1723095659  6.905258e-02
## [2521,] -1.840811e+00  9.210606e-01  0.8929973763  1.333774e-01
## [2522,] -2.260263e-01  1.407752e-01 -0.1894583917 -1.720962e-01
## [2523,] -5.826382e-02 -3.016251e+00  4.1195496392  1.179824e+00
## [2524,] -6.009992e-02  5.423155e-01 -0.3641960029 -1.571839e-01
## [2525,] -4.180837e-01  1.768403e-02  0.0002203531  1.673499e-02
## [2526,] -7.404884e-02  1.638396e-01 -0.1632924451  9.503904e-02
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## [2534,] -2.043024e-01  8.337856e-02 -0.1359289124 -2.378133e-01
## [2535,] -1.021642e-01 -1.327005e-01  0.0609229832 -3.914319e-02
## [2536,] -3.257113e-01 -4.231309e-02  0.0460472208  1.388054e-02
## [2537,] -1.914247e-01  7.004380e-02 -0.0025033769  3.114902e-02
## [2538,]  2.221793e-01  2.732498e-01 -0.6121187242  8.675932e-04
## [2539,] -1.368233e-01  1.079634e-01 -0.0785075322  2.705590e-02
## [2540,]  1.153299e-01  4.930915e-01 -0.3319309493  2.102554e-02
## [2541,] -1.902318e-02 -4.985867e-02 -0.0480141163  7.448453e-02
## [2542,] -6.665492e-02  2.082881e-02  0.0850287519  1.314492e-01
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## [2544,]  5.354876e-02 -4.786308e-02  0.1556660501  8.987450e-02
## [2545,] -2.619997e-02  4.582068e-02 -0.0626661030  8.756631e-03
## [2546,] -5.756838e-02 -1.412120e-01  0.0576730070 -3.365758e-02
## [2547,] -1.638296e-01 -5.786137e-02  0.2279440063  2.125789e-01
## [2548,]  4.092066e-01 -2.813355e-01 -0.1572104189  6.000398e-03
## [2549,] -1.201887e-01 -2.089285e-02  0.0677406919  4.877214e-02
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## [2551,] -2.558155e-01  1.884184e-01 -0.1402870803  4.763295e-01
## [2552,]  1.790667e-02  2.898505e-01 -0.2786973479  1.348011e-01
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## [2559,] -1.800676e+00  1.090001e+00  0.7273170172  2.122684e-01
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## [2561,] -3.917698e-01 -2.407823e-01  0.2519772076  1.123756e-01
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## [2592,] -5.240132e-02  2.915935e-01 -0.3903656900 -1.889525e-02
## [2593,]  1.133839e-01 -1.322942e-01 -0.1226722570 -4.732670e-02
## [2594,]  7.444778e-01  2.225480e-01  0.0685410312  3.352839e-01
## [2595,]  1.167558e-01 -7.462818e-03 -0.1123148268  4.315930e-02
## [2596,]  1.445349e-01 -6.152287e-02  0.1000452994  2.922369e-01
## [2597,]  3.351364e-02 -1.462179e-01 -0.0779087891 -3.213346e-02
## [2598,] -1.011804e-01 -2.587725e-01  0.5159749962  2.581015e-01
## [2599,]  4.312570e-02 -2.361862e-01  0.0416353118  2.575757e-02
## [2600,]  7.603103e-01  1.232758e+00 -1.9294317579 -2.916822e-01
## [2601,]  2.015402e-01 -4.127489e-02  0.0404711583  2.846201e-01
## [2602,] -1.914112e-02 -3.113808e-01  0.4340893392  3.912712e-01
## [2603,] -3.270217e-02 -3.603291e-02  0.0693665234  1.212980e-01
## [2604,]  2.200019e-01 -9.222273e-02 -0.1842976908  9.801256e-02
## [2605,]  7.970070e-01 -3.171339e-02 -0.3648309189  9.282644e-02
## [2606,]  1.492249e-01  1.792388e-01 -0.4460110959  2.005820e-02
## [2607,] -1.593486e+00  1.210008e+00  0.1397824286 -1.558873e-02
## [2608,]  1.426113e-01 -2.666313e-03 -0.0169465917  6.911168e-02
## [2609,]  8.244158e-02 -1.387437e-01  0.0080835533  2.373180e-01
## [2610,] -2.320088e-01  9.682107e-02 -0.0495551135 -1.365177e-01
## [2611,]  1.178429e-01 -3.274464e-03  0.0461821829 -1.570559e-01
## [2612,]  2.364853e-01  4.671307e-02 -0.1421663333  2.205541e-02
## [2613,]  1.561886e-01 -1.552482e-01  0.0331461053  6.451407e-02
## [2614,]  2.442637e-01  3.380280e-01 -0.4034363876  9.916159e-02
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## [2615,] -2.637627e-02  1.258785e-01 -0.2213249257 -2.528381e-01
## [2616,]  9.640221e-02  1.365069e-01 -0.1335418933  7.522181e-02
## [2617,]  8.438396e-02  1.633639e-02  0.0072027640  1.266050e-01
## [2618,] -9.133482e-01 -3.425761e-01  0.4558597676 -2.360861e+00
## [2619,] -2.150063e-01  2.715731e-01 -0.4869465665 -4.216996e-01
## [2620,]  1.357466e-01 -1.113704e-01  0.0457034919  5.713178e-02
## [2621,] -1.796584e+00  8.785876e-01  0.8400975799  1.125567e-01
## [2622,] -2.019533e-02  5.121536e-02 -0.0857706426  8.339990e-02
## [2623,]  5.533425e-02 -2.096698e-01  0.0996604632  1.430243e-01
## [2624,]  4.232478e-02 -7.966822e-02  0.1162466713  4.799361e-02
## [2625,]  4.690593e-01  2.120055e-01 -0.1254078784  1.044255e-01
## [2626,]  6.236678e-01  5.206967e-02  0.3301899133 -4.167700e-01
## [2627,]  9.066728e-02  1.161219e-01 -0.1028389258  8.269066e-02
## [2628,]  6.459002e-02  9.727043e-02 -0.0784430069  9.697387e-02
## [2629,]  2.788856e-02 -2.359437e-02  0.0793878866  1.248443e-01
## [2630,] -1.568764e-01 -7.462440e-02  0.1053670311  1.366084e-01
## [2631,]  3.668123e-02  2.449935e-01 -0.0568655909  1.782627e-01
## [2632,] -1.178963e-02 -8.270269e-02  0.1032461575  7.836041e-02
## [2633,] -5.383379e-02 -6.840700e-02  0.0005219800 -1.580317e-02
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## [2636,] -5.083747e-01 -9.518710e-03  0.2541585606 -2.717720e+00
## [2637,] -1.264887e-01  1.618571e-02 -0.0025692095  1.303241e-01
## [2638,]  1.094150e-01  2.488614e-01 -0.2973253619 -4.305052e-02
## [2639,]  2.473193e-01 -1.972034e-01  0.0688155814  7.433527e-02
## [2640,]  2.426742e-01  5.473823e-02 -0.1278831167  3.214975e-02
## [2641,] -3.105326e-01 -9.496952e-02  0.1681518216  1.402004e-02
## [2642,] -5.547656e-02  4.854278e-02 -0.0113338700  9.372622e-02
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## [2644,] -5.437258e-02  7.755155e-02 -0.0634151948  1.372863e-01
## [2645,] -3.675331e-02  4.800570e-02  0.0049539737  1.877860e-01
## [2646,] -1.834615e+00 -1.103700e+00 -0.5725597959  9.708040e-03
## [2647,]  1.153350e-01  2.840090e-03 -0.0978431575 -1.380620e-01
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## [2651,]  7.014402e-03  2.840449e-03  0.0782234149  2.356596e-01
## [2652,] -9.766437e-02  1.489888e-02  0.0028590899  1.371439e-01
## [2653,]  1.472798e-01 -1.688304e-01  0.0943285981  6.511890e-02
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## [2655,]  4.698608e-02 -1.260861e-01 -0.0219665752  1.081989e-01
## [2656,] -2.056268e-02 -1.469990e-01  0.1793591935  8.553613e-02
## [2657,]  9.176373e-02 -5.675366e-02 -0.0928815570  8.857441e-02
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## [2659,]  4.900621e-02 -5.739170e-02  0.0871812170  1.537695e-01
## [2660,] -8.941351e-01 -3.452299e-01  0.4645005073 -2.366289e+00
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## [2665,]  1.815251e-01 -2.184420e+00 -1.5547062058 -1.901648e-01
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## [2668,] -2.477439e-01 -2.416854e-02  0.0514643133 -7.843151e-03
## [2669,]  2.055227e-01 -6.223334e-02 -0.1160305420 -9.558838e-03
## [2670,] -2.939059e-01 -2.198553e-02  0.0625509799 -7.503085e-03
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## [2672,]  4.335981e-02  1.061470e-01 -0.0146217492  9.746437e-02
## [2673,]  2.070027e-04 -9.212944e-02  0.1033598074  7.463953e-02
## [2674,] -2.698094e-01  3.497289e-01 -0.3574035373  6.486492e-02
## [2675,]  2.821948e+00  9.418137e-01  1.0285283590 -4.599243e-01
## [2676,]  9.478322e-02 -5.191378e-02  0.0590238813  8.869009e-02
## [2677,]  1.950026e-01  3.278568e-01 -0.3788361385  1.159685e-01
## [2678,] -1.381138e-01  6.104741e-02 -0.1037061782  3.932165e-02
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## [2680,]  1.341422e-01 -5.719770e-02 -0.0132084462  5.486661e-01
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## [2682,]  8.379006e-02  1.136543e-01 -0.0827786302  4.416932e-02
## [2683,]  6.129144e-02  8.701115e-01 -1.3069465241 -3.150328e-01
## [2684,]  2.354299e-01  1.703558e-01 -0.0942841508  1.409825e-01
## [2685,] -8.730962e-02  1.196277e-01 -0.1625815268  1.472492e-01
## [2686,]  2.907614e+00  8.903740e-01  1.0100265447 -4.468747e-01
## [2687,] -2.732352e-02  7.944392e-02 -0.2439691586  1.341140e-01
## [2688,] -6.518004e-01 -4.834261e-01  0.4233772939 -2.694282e+00
## [2689,]  1.827648e-01 -7.987027e-02  0.0853210330  1.174524e-01
## [2690,] -5.442836e-02 -2.744305e-02 -0.0779587689  4.597920e-01
## [2691,] -3.097566e-01 -2.361956e-02  0.0797942315 -1.606816e-02
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## [2693,] -1.565573e-01 -2.684912e-02  0.0949890312  2.685260e-02
## [2694,] -8.601821e-02 -1.133864e-01  0.2367548783  1.382996e-01
## [2695,] -3.250881e-02  7.997476e-02  0.0243174341  8.656807e-02
## [2696,]  1.296076e-01 -4.508227e-02 -0.0506567258 -9.092049e-02
## [2697,]  1.014363e-01 -2.567107e-01  0.3830007581 -3.696205e-03
## [2698,]  8.089328e-02 -9.217066e-02  0.1523317305  9.431227e-02
## [2699,] -2.362815e-01 -2.187102e-01  0.1701672105  9.313731e-02
## [2700,]  7.151515e-02 -1.827195e-01  0.1393778758  7.645759e-02
## [2701,] -1.348336e-01  2.840855e-02 -0.1059659741  8.828724e-02
## [2702,] -5.691863e-02 -1.373775e-01  0.1694030553  1.175906e-02
## [2703,]  7.894960e-02  1.829631e-01 -0.2323777970 -2.720585e-02
## [2704,]  1.887082e-01  2.215696e-01 -0.3449338039  3.243041e-02
## [2705,]  2.890595e-02  2.079778e-01 -0.0119479089  1.742522e-01
## [2706,] -2.301657e-01 -1.772114e-01  0.1694244283 -2.914651e-02
## [2707,]  8.087931e-02  1.316223e-01 -0.0971849332  1.811817e-02
## [2708,]  4.830596e-02  6.516203e-02 -0.0277330696  7.942175e-02
## [2709,] -1.986320e-01 -9.395682e-03 -0.0150821453  1.041471e-01
## [2710,]  2.335143e-01  2.979212e-02 -0.0410779094  9.843978e-02
## [2711,]  3.050055e-01  1.710261e-01 -0.0962736193  5.724575e-03
## [2712,] -2.142677e-02 -2.048626e-01  0.1576079017  6.382268e-02
## [2713,] -2.336477e-02  2.783875e-03  0.0525643262  1.166201e-01
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## [2715,] -6.944008e-02 -1.407095e-01  0.0809295913  1.264595e-01
## [2716,]  4.379468e-03  9.028916e-02 -0.1540726096  1.163362e-01
## [2717,] -8.210936e-02  1.927868e-01 -0.2922855903  1.094415e-01
## [2718,]  1.869068e-01 -2.569771e-01  0.1643386857  7.098820e-02
## [2719,]  1.557183e-01 -2.576296e-01 -0.0191016842 -1.193179e-01
## [2720,] -1.556788e-01  8.304565e-02 -0.1240002511  1.625875e-02
## [2721,] -7.874542e-02  1.439117e-01 -0.1766399835 -1.087372e-01
## [2722,]  8.746565e-02  6.737852e-02 -0.0183648707  7.253207e-02
## [2723,] -3.312544e-02 -1.887933e-01  0.1199951172  2.224449e-02
## [2724,] -1.245212e-01 -1.057090e-02 -0.0635078597  8.651829e-02
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## [2726,] -7.467783e-03  8.297279e-02 -0.1372468897  1.272678e-01
## [2727,] -4.075473e-02 -2.880171e-01  0.3172948508  1.416149e-01
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## [2735,]  9.312001e-02  2.128882e-02  0.0222029054  8.490756e-02
## [2736,]  3.569659e-02 -1.681572e-03  0.0486469991  1.044957e-01
## [2737,] -6.980757e-03 -4.668379e-02  0.0251587787  8.364090e-02
## [2738,]  2.917592e-01  5.234742e-01 -0.7633819841 -2.842128e-01
## [2739,] -1.662136e+00  9.285213e-01  0.9331341133  1.223597e-01
## [2740,]  1.574738e-01  7.518294e-02  0.0067947313  1.694466e-01
## [2741,] -1.851036e-01 -2.107754e-01  0.1589582663  8.205967e-02
## [2742,] -4.319795e-02  3.727531e-04 -0.0341680470  1.367611e-01
## [2743,]  2.796704e+00  9.695416e-01  1.0049657074 -5.013944e-01
## [2744,]  7.147198e-02  2.127786e-02  0.0228876566  7.462462e-02
## [2745,] -1.925225e+00  8.818141e-01  0.9262318159  1.093974e-01
## [2746,]  4.053098e-02 -5.194069e-02 -0.1457171710 -6.084748e-02
## [2747,]  6.419994e-01 -1.256028e-01  0.1118932217  1.612654e-01
## [2748,] -1.221153e-02 -2.016958e-01  0.1426965405  2.632228e-02
## [2749,]  6.886253e-01  3.413940e-03 -0.0503131773  1.187357e-01
## [2750,] -1.605392e+00  9.752553e-01  0.6577295565  2.030316e-02
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## [2765,] -1.594049e-01  1.959805e-01 -0.1208353343  1.067781e-01
## [2766,]  4.652715e-02  1.322971e-02 -0.0059919344  6.809266e-03
## [2767,]  3.857159e-02 -2.445676e-01  0.1266044581  5.543906e-02
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## [2777,] -8.024385e-02  5.645129e-02 -0.0650910616  1.051962e-01
## [2778,]  9.101564e-02 -1.588716e-01 -0.1239919145  5.462091e-03
## [2779,] -7.846994e-02 -6.222706e-03  0.1330436808  1.889988e-01
## [2780,]  3.044174e-02 -8.448857e-02 -0.0088902204 -3.065662e-02
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## [2783,]  2.359685e-01  2.981179e-01 -0.5394922118 -4.902458e-02
## [2784,]  2.257721e-01  5.874545e-01 -0.8538016373 -3.285875e-01
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## [2786,]  6.402160e-01 -1.510831e-01  0.1286674236  1.490294e-01
## [2787,] -1.566570e-01  5.217121e-02 -0.0748103240  6.187564e-02
## [2788,]  1.913515e-01 -8.382574e-02 -0.0597659078 -3.483864e-02
## [2789,]  5.292033e-02 -1.192366e-01 -0.0120474728  1.054105e-01
## [2790,] -1.876308e-01 -5.419386e-02  0.0623852490  1.363106e-01
## [2791,] -1.639547e-01 -6.183184e-02  0.0889684250  1.797412e-01
## [2792,] -1.657325e+00  1.108753e+00  0.6656167383  1.981995e-01
## [2793,] -2.171948e-03  6.246536e-03  0.0544616902  1.632965e-01
## [2794,]  1.819576e-01 -2.562260e-01  0.2264902928  1.029217e-01
## [2795,]  3.409909e-01 -9.024293e-01  0.7196626644 -3.500724e-01
## [2796,]  2.066401e-02 -3.981623e-02  0.0833542577  3.260314e-02
## [2797,]  9.083241e-03 -8.443450e-02  0.0143740685 -2.267800e-02
## [2798,] -1.796132e+00 -1.113120e+00 -0.5384101270  4.365506e-02
## [2799,]  6.619827e-01 -8.535671e-02  0.0623271847  1.767549e-01
## [2800,]  4.415459e-02 -4.062330e-02 -0.0174346982  8.702114e-02
## [2801,] -1.864693e-01  4.916952e-02  0.0599757298  5.577630e-02
## [2802,] -6.385887e-01 -4.511141e-01  0.5422012627 -2.529245e+00
## [2803,] -1.345276e-01  4.739110e-03  0.0302226871  1.449846e-01
## [2804,] -2.037604e-02  2.338159e-01 -0.4025213572  6.695466e-02
## [2805,]  1.609190e-01 -1.954237e-01  0.1403280049  8.198629e-02
## [2806,]  1.251654e-01  2.219073e-01 -0.0230424491  1.854880e-01
## [2807,] -1.696067e+00 -1.025508e+00 -0.9559840083 -3.424927e-01
## [2808,] -2.727954e-02  3.726305e-02 -0.0613645427 -3.052853e-02
## [2809,] -7.414135e-03 -2.265653e-01  0.1260339763  1.447100e-01
## [2810,]  4.766673e-02  2.415622e-02  0.0117262418  1.633492e-01
## [2811,]  6.457016e-01 -5.914406e-02  0.0121634903  1.343384e-01
## [2812,]  4.696927e-02 -1.776567e-01  0.0134249221 -1.913579e-02
## [2813,]  2.626665e-01  8.825928e-02 -0.0037179256  8.360709e-02
## [2814,] -7.500244e-02 -2.847797e-02 -0.0775555423  4.683221e-01
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## [2815,] -1.902400e+00  9.215153e-01  0.8781842362  1.156803e-01
## [2816,]  3.187330e-01  6.277963e-01 -0.8979533833 -3.316677e-01
## [2817,]  2.183724e-01  2.701317e-01 -0.2983047341  1.243854e-01
## [2818,] -1.031414e-01 -2.540814e-02 -0.0326191508  9.308163e-02
## [2819,] -2.833383e-01  2.865532e-01 -0.5114796492 -4.533124e-01
## [2820,] -1.779974e+00 -1.096848e+00 -0.5547006793  4.334775e-02
## [2821,]  9.555811e-02 -6.901442e-02 -0.1094585339 -4.962483e-02
## [2822,]  5.590120e-02  1.914642e-02  0.1413027428  3.599819e-01
## [2823,]  2.089101e-01  5.468851e-03 -0.0438726258  1.050906e-01
## [2824,]  3.844450e-01  1.699887e-01 -0.3701417254 -1.850332e-01
## [2825,]  7.801381e-02 -9.315057e-02  0.1345484584  5.009486e-02
## [2826,] -6.348210e-02  4.366871e-01 -0.8096853054 -2.100451e-01
## [2827,] -1.749806e+00 -9.546597e-01 -0.9140280477 -1.055129e-01
## [2828,]  4.024301e-02 -1.862452e-03  0.0349339349  1.606613e-02
## [2829,] -4.339676e-01 -7.244188e-01  0.7579861809 -2.538158e+00
## [2830,]  6.105121e-02  3.780461e-02  0.0137710652  7.418253e-02
## [2831,]  4.820008e-02 -2.425153e-01  0.1378092124  6.543886e-02
## [2832,]  2.085487e-01  4.543077e-04 -0.0535361515  5.220380e-02
## [2833,]  2.724785e-01  1.202775e-01 -0.3043739851  6.516116e-02
## [2834,] -6.255101e-02  1.000552e-01 -0.2762698377  1.414533e-01
## [2835,]  4.614599e-02 -2.789243e-02 -0.0165974200  6.513904e-02
## [2836,] -1.683890e+00 -9.864692e-01 -0.9979292578 -3.664138e-01
## [2837,] -3.650514e-04  1.027718e-01 -0.1675779998  1.478269e-01
## [2838,] -5.982495e-02  1.186652e-01 -0.2899318899  1.357037e-01
## [2839,] -1.699126e-01  5.283639e-02 -0.0277809979  1.234569e-01
## [2840,] -2.294667e-01  1.903710e-02  0.0053005453  4.819607e-03
## [2841,] -5.856090e-02 -5.631418e-02  0.1079564080  1.784705e-01
## [2842,]  4.022144e-01 -1.740509e-01 -0.0010335680 -8.014456e-02
## [2843,] -1.878685e-01 -6.992245e-02  0.0692747105  1.311493e-01
## [2844,]  2.885602e-02 -1.735993e-01  0.0199189198  1.961554e-02
## [2845,]  9.694865e-02 -6.025576e-02 -0.0183099421 -5.106057e-02
## [2846,]  1.169975e-01  1.865199e-01 -0.2789670854  1.031005e-02
## [2847,]  1.712079e-01  1.472565e-01 -0.1335377773  9.129062e-02
## [2848,]  2.061826e-01  2.564105e-01 -0.3943617486  2.414720e-02
## [2849,] -1.781829e+00  1.070299e+00  0.7884784651  2.158065e-01
## [2850,]  1.577818e-01  2.558861e-01 -0.4018534576  1.853046e-02
## [2851,] -1.946390e-02 -6.406373e-02  0.0877768110  7.271419e-02
## [2852,]  5.292974e-02  1.007989e-03  0.0675695297  8.908862e-02
## [2853,] -1.541454e-01 -8.288710e-02  0.1104353362  1.838070e-01
## [2854,] -5.241559e-02 -4.711120e-02  0.0555105026 -2.241590e-02
## [2855,] -1.231408e-02  9.488682e-03 -0.0603634933  1.404416e-01
## [2856,]  1.831866e-01 -2.136433e-01  0.1820143235  2.148855e-01
## [2857,] -1.581778e+00  9.705273e-01  0.6592353466  2.655823e-02
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## [2859,] -3.319891e-03  5.538461e-02 -0.0147672387  1.386212e-01
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## [2861,] -1.477931e-01  6.414193e-03  0.0647733309  1.503404e-02
## [2862,]  4.485852e-02 -3.222602e-01  0.0581016298 -9.357911e-02
## [2863,]  9.310651e-02 -9.165355e-02  0.1545454787  1.153516e-01
## [2864,]  1.084186e-01 -2.839956e-01  0.2461281789  1.077759e-01
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## [2865,]  1.307227e-02 -2.747203e-01  0.4231148082  8.903379e-02
## [2866,]  1.659715e-01 -6.654094e-03 -0.1280922573  5.546546e-02
## [2867,] -2.575346e-01 -1.733245e-01  0.1297968584  1.076173e-01
## [2868,] -1.798555e+00 -1.103048e+00 -0.7434657054 -1.009939e-01
## [2869,] -6.411166e-02 -6.796581e-02  0.1367882060  8.633117e-02
## [2870,]  1.154790e-01 -1.472425e-01 -0.0182142911  1.318573e-01
## [2871,]  1.573308e-01 -2.393577e-02 -0.0527456910 -1.041599e-01
## [2872,]  6.273776e-02  9.048804e-01 -1.3517458533 -3.101735e-01
## [2873,]  1.260366e-01 -1.347651e-01  0.1498761419  1.747053e-01
## [2874,] -1.119806e-01  1.127706e-01 -0.1653543579  1.434172e-01
## [2875,] -6.253764e-02  3.184508e-02 -0.0237596645  3.888228e-02
## [2876,]  5.654877e-01  3.977834e-02  0.3495249924 -4.083735e-01
## [2877,]  1.549209e-01 -2.006844e-01  0.0780090034  9.387653e-03
## [2878,]  5.405057e-02  6.939976e-02 -0.1168893053 -1.201960e-01
## [2879,] -1.071906e-01 -4.867955e-03 -0.0065210840  1.583420e-01
## [2880,]  4.328196e-02  8.873498e-01 -1.3049353829 -2.804501e-01
## [2881,] -2.807104e-03 -1.221995e-02  0.0554238517  3.579558e-02
## [2882,] -2.142597e-01 -2.513641e-01  0.2149980600  1.176885e-01
## [2883,]  1.128548e-01 -6.190611e-02  0.0022746225 -1.062927e-01
## [2884,] -1.982108e-01  1.754940e-01 -0.1143971463  2.492126e-02
## [2885,] -1.240229e-01 -2.873623e-03  0.0424930474  1.332852e-03
## [2886,] -1.641461e-01 -8.707705e-02  0.1557263733  1.242668e-01
## [2887,] -1.478028e-01  7.167698e-02 -0.0418462966 -5.190089e-02
## [2888,] -1.668352e-01  1.930497e-01 -0.2150049961  3.184184e-03
## [2889,] -1.990215e-01  4.572656e-02  0.0517709273  4.737563e-02
## [2890,] -5.402212e-02 -1.372751e-01  0.1199500091  2.801721e-02
## [2891,]  2.432542e+00 -9.970288e-01 -0.6783620105 -6.040131e-01
## [2892,] -2.250851e-01  6.273151e-02  0.0487791560  6.821135e-02
## [2893,]  1.541123e-01  5.724989e-01 -0.7888660213 -3.321737e-02
## [2894,] -5.368523e-02  2.512384e-02 -0.1231240666 -1.812127e-02
## [2895,]  5.708666e-01  6.008446e-02  0.1473837032  6.118080e-02
## [2896,]  3.025252e-01 -4.487007e-02 -0.1642957906 -1.559178e-02
## [2897,] -1.608652e-01  1.282880e-02  0.0579739698  4.193099e-02
## [2898,] -1.721869e+00  8.763925e-01  0.8276073638  1.040869e-01
## [2899,] -2.843935e-01 -1.171914e-01  0.0556422514  7.917996e-02
## [2900,] -1.833576e+00 -1.098375e+00 -0.5741240817  1.068873e-02
## [2901,]  1.150307e-01 -2.158282e-01  0.1847591175  1.934582e-01
## [2902,] -1.720461e+00  8.499861e-01  0.6930823912 -2.115036e-01
## [2903,]  1.020798e-01 -8.328203e-02  0.1529314620  1.692569e-01
## [2904,] -4.310313e-02 -6.689658e-03 -0.1381311985 -2.366720e-01
## [2905,]  2.682924e-01 -4.036333e-02  0.0738160306  1.205735e-01
## [2906,]  5.814049e-01 -1.313775e-03  0.4106868565 -3.862190e-01
## [2907,] -2.535521e-01 -2.176679e-01  0.2393232243 -2.980674e-02
## [2908,] -1.790111e-01  2.942726e-02 -0.0377801546  6.007975e-02
## [2909,]  8.476847e-03 -1.650183e-01  0.0577821707  1.376763e-01
## [2910,] -1.164636e-01  6.780412e-02 -0.0480850254  1.491452e-01
## [2911,] -2.110773e-01 -4.515465e-02  0.0534193057  1.047236e-01
## [2912,]  3.651441e-02 -1.609769e-02 -0.0309840206  7.968988e-02
## [2913,]  2.425286e-01 -5.160744e-02  0.0741505717  8.393748e-02
## [2914,]  2.343393e-01  6.739247e-02 -0.3396147751 -2.646015e-01
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## [2915,] -1.803514e-01 -2.633140e-02  0.0250710916  1.402745e-01
## [2916,]  3.281586e-03  2.213568e-01 -0.3188366823 -1.092427e-02
## [2917,]  6.892488e-02 -9.260106e-02  0.2599338815  3.386035e-01
## [2918,] -2.555070e-01 -1.232915e-01  0.0692680761  8.525497e-02
## [2919,]  6.971294e-02 -1.716817e-01 -0.0072672265 -3.809448e-02
## [2920,] -2.983061e-02 -1.973687e-01  0.1579263821  2.613585e-02
## [2921,] -8.983115e-02 -8.225332e-02  0.0947839037  1.869520e-02
## [2922,] -6.754071e-02  3.517663e-02  0.0135128466  6.378585e-02
## [2923,] -1.368841e-01  6.086478e-03  0.0086777050  8.801875e-02
## [2924,]  1.761920e-01  2.816382e-02 -0.0402939459  8.073649e-02
## [2925,] -1.518784e-01  3.355437e-02  0.0754260101  6.304224e-02
## [2926,] -9.533915e-02 -9.046331e-02  0.1145314662  1.625900e-01
## [2927,]  9.865155e-02 -1.023280e-01  0.1797407688  1.253846e-01
## [2928,] -1.696785e+00  1.166505e+00  0.6604417903  2.017916e-01
## [2929,]  5.176127e-02 -1.600552e-01  0.0850525027  6.082599e-02
## [2930,] -9.502554e-02 -5.416397e-04  0.0110144020  4.155555e-02
## [2931,] -1.092572e-01  1.709342e-02  0.0415028030  8.686144e-02
## [2932,] -1.784795e+00 -1.093644e+00 -0.5486638047  4.956325e-02
## [2933,]  6.555133e-02  8.147487e-01 -1.2343297120 -2.593800e-01
## [2934,]  1.633002e-01  6.316986e-02 -0.0150893317  3.298842e-02
## [2935,] -1.550876e-01  6.899391e-03  0.0018916307  1.425819e-01
## [2936,]  2.886900e+00  8.614667e-01  1.0654102243 -4.236728e-01
## [2937,] -1.540192e-01 -1.617636e-02 -0.0010443353  5.318500e-02
## [2938,] -8.356339e-02  8.532051e-02 -0.0633852069  5.727473e-02
## [2939,]  1.578869e-01 -1.398655e-01  0.1091331103  1.150878e-01
## [2940,] -1.760646e+00 -1.026494e+00 -0.8141288431 -6.191582e-02
## [2941,] -1.761921e-01  5.104374e-02 -0.0892439295  4.686520e-02
## [2942,] -1.767431e-02  9.292368e-02 -0.0599674412  1.739429e-01
## [2943,]  9.360592e-02 -1.241002e-01 -0.0182675351 -3.765069e-02
## [2944,]  7.618154e-02 -2.199663e-01  0.1100300401  1.678561e-01
## [2945,] -1.820111e+00  1.398638e+00  0.2555489840 -1.135443e-01
## [2946,] -2.315566e-01  3.283435e-01 -0.3133621561  8.620425e-02
## [2947,]  9.803391e-02 -6.059806e-02  0.1237504517  1.896343e-01
## [2948,] -1.693516e-01  7.529996e-02 -0.1081709270  3.575657e-02
## [2949,]  1.015460e+00  2.201520e-02 -0.4767132972  2.097270e-02
## [2950,] -1.933403e+00 -1.056281e+00 -0.6656438654 -3.291514e-02
## [2951,]  1.981509e-01 -1.661206e-01  0.1439999596  1.883906e-01
## [2952,] -4.698572e-01 -6.866348e-01  0.7221001415 -2.541568e+00
## [2953,] -1.650290e+00 -1.001090e+00 -0.9816781153 -3.360475e-01
## [2954,] -9.978021e-02 -1.466584e-03 -0.0252920459  4.888782e-02
## [2955,] -7.007274e-02 -1.748187e-01  0.1125125792  4.366386e-03
## [2956,]  8.093817e-01  1.179397e+00 -1.9115399732 -2.904452e-01
## [2957,]  5.211095e-02 -2.469592e-01  0.1326701386  1.451414e-01
## [2958,]  9.881404e-02 -8.392868e-02  0.1575608771  1.161412e-01
## [2959,]  4.978839e-03  5.849237e-02 -0.0301438439  9.592995e-02
## [2960,]  9.192925e-02 -1.956479e-02 -0.1335619065  7.613709e-02
## [2961,]  2.148651e-01 -1.277513e-02  0.0394559403  4.085002e-02
## [2962,]  3.868247e-02  5.749652e-02 -0.1353311246 -2.534411e-01
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## [2965,]  9.221634e-02  3.664544e-01 -0.6820365629 -1.401758e-01
## [2966,]  3.869530e-02 -1.739002e-01 -0.0346381493 -2.381237e-01
## [2967,] -1.782799e+00  8.421249e-01  0.7974757409 -2.110363e-01
## [2968,] -8.093037e-02 -3.037033e-02  0.0125756230 -5.253879e-03
## [2969,]  6.350464e-02 -1.486231e-03 -0.1205098873 -1.877506e-01
## [2970,]  2.616352e+00 -9.534986e-01 -0.7763025572 -6.610120e-01
## [2971,]  8.226637e-02 -1.912763e-02  0.0900131362  1.712164e-01
## [2972,]  1.479623e-02  9.146457e-02 -0.0808521055 -4.179671e-02
## [2973,] -9.083879e-02  1.705627e-01 -0.0912171792  1.389130e-01
## [2974,] -6.123143e-01 -4.844881e-01  0.4301182218 -2.694758e+00
## [2975,] -3.115968e-01 -1.393737e-01  0.0953811570  8.933959e-02
## [2976,]  1.432384e-01  7.012214e-02 -0.0166681108  9.871167e-02
## [2977,]  1.753427e-01 -1.421533e-02 -0.0108721733  1.481951e-01
## [2978,] -3.034288e-01  2.084248e-01 -0.4060444760 -4.039510e-01
## [2979,]  1.553283e-01 -2.740186e-01  0.2611221915  2.249658e-01
## [2980,] -3.406681e-04 -3.260802e-02  0.1223968499  1.513702e-01
## [2981,]  1.222516e-01  1.302048e-01 -0.1162976493  9.211999e-02
## [2982,]  1.018887e-01  7.939377e-02 -0.1450256450 -3.794408e-02
## [2983,]  2.760540e-01 -3.752389e-02  0.0686160316  9.736491e-02
## [2984,]  9.841471e-02 -9.872170e-02  0.0557030718  5.831142e-01
## [2985,] -1.117860e-01  8.210966e-02 -0.0257310392  6.905098e-02
## [2986,] -1.173580e-03  4.897063e-02 -0.0668484965 -3.967800e-02
## [2987,]  1.232905e-01 -3.487534e-01  0.3435420249  1.351988e-01
## [2988,] -7.069589e-02 -4.536576e-02 -0.0503862165  4.749687e-01
## [2989,]  2.782319e-01 -5.006013e-02 -0.2693603453 -2.137743e-01
## [2990,] -3.790650e-02  4.077944e-01 -0.7827593007 -2.035013e-01
## [2991,]  2.556664e-01 -2.657872e-02  0.0720923019  1.076054e-01
## [2992,] -2.837423e-01 -1.403706e-01  0.0897540357  8.928030e-02
## [2993,]  2.898814e+00  8.669020e-01  1.0582116460 -4.670390e-01
## [2994,] -8.048089e-02  1.821965e-02 -0.0065433486  2.457091e-02
## [2995,] -4.591479e-01 -1.742061e-02 -0.0587827025 -2.103489e-01
## [2996,]  2.027628e-02 -3.489830e-02  0.0854521241  9.796970e-02
## [2997,] -1.350994e-01 -4.332178e-02 -0.0120908837  1.153328e-01
## [2998,]  5.950068e-01  4.451275e-02  0.3524747320 -4.208918e-01
## [2999,]  6.152205e-02 -1.367245e-01  0.2158135040  1.189945e-01
## [3000,]  1.345578e-01  1.257344e-01 -0.1766281637 -3.746440e-02
## [3001,]  7.560808e-02 -1.526222e-01  0.0067161045 -2.682585e-02
## [3002,] -1.340837e-01 -5.549670e-02  0.1026589350  1.393263e-01
## [3003,] -1.698966e+00  7.913663e-01  0.7793012008 -1.987414e-01
## [3004,] -9.123468e-02 -1.860635e-02  0.0174025930 -2.032178e-02
## [3005,]  1.202090e-02 -1.577930e-01  0.0825834755  1.584249e-01
## [3006,] -7.802202e-02 -9.919795e-02  0.0255317474  4.954087e-01
## [3007,] -7.151549e-02 -3.843061e-02  0.0493827587  1.309401e-01
## [3008,] -1.864957e-01 -1.560566e-01  0.1626824811 -1.812655e-02
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## [3010,] -1.783404e+00  1.442139e+00  0.2013043396 -1.002993e-01
## [3011,]  3.955165e-02 -2.019199e-01  0.1463281347  8.852361e-02
## [3012,]  2.325588e-01  2.642263e-02  0.0517533250  7.052405e-02
## [3013,]  1.932252e-01  9.263019e-02 -0.0304915820  6.685523e-02
## [3014,] -5.319260e-02  3.526597e-02 -0.1924833146  1.355313e-01
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## [3015,]  1.216373e-01 -2.807339e-01  0.4112755655  3.443427e-02
## [3016,] -1.804254e+00 -1.022294e+00 -0.8344452757 -1.121376e-01
## [3017,] -1.689792e+00 -1.070473e+00 -0.9258043575 -3.409464e-01
## [3018,] -1.875118e-01 -7.594249e-02  0.0856905135  1.841788e-01
## [3019,] -8.773530e-03 -2.273287e+00 -1.4436686175 -1.984296e-01
## [3020,]  2.599332e-01 -1.039297e-01 -0.1195782711 -4.801519e-02
## [3021,]  1.691815e-01 -6.768538e-02  0.0327339455  6.883425e-02
## [3022,] -2.326973e-01  4.287818e-02  0.0365373830  1.584411e-01
## [3023,]  1.411013e-01 -2.939407e-01  0.1334613731  9.122825e-03
## [3024,]  3.152277e-02 -2.203466e-02  0.1825641922  3.635633e-01
## [3025,] -2.037720e-01 -1.506107e-02  0.0958089211  6.205730e-02
## [3026,]  1.261843e-01 -2.318769e-03  0.0818296562  1.948203e-01
## [3027,] -4.831389e-02 -2.570844e-01  0.1810013700 -2.898927e-03
## [3028,]  1.762568e-01 -2.149639e-02 -0.0426313753 -2.521826e-02
## [3029,]  2.878188e-01 -2.065443e-01 -0.0709259059 -1.184666e-01
## [3030,]  1.519938e-01  3.228479e-01 -0.1269593373 -2.771171e-02
## [3031,]  2.901869e-02  9.553188e-02 -0.0897156690  1.605648e-01
## [3032,] -5.502360e-02 -3.355469e-02 -0.0202293390  1.099396e-01
## [3033,]  3.454888e-01  5.884217e-01 -0.8363365238 -2.973842e-01
## [3034,] -5.660812e-02  4.338122e-01 -0.7949675537 -2.139614e-01
## [3035,]  2.713213e-01 -6.298458e-02  0.1234355289  8.406699e-02
## [3036,]  5.330131e-04 -2.318259e-01  0.1383439859  1.309664e-01
## [3037,]  6.008249e-02 -5.515158e-02 -0.0186657800 -4.821826e-02
## [3038,] -1.988776e-02  9.489833e-01 -1.3152189601 -4.145932e-01
## [3039,]  8.302140e-02  7.304348e-02 -0.0299768094  1.099434e-01
## [3040,] -1.724106e+00 -9.584154e-01 -0.9045650927 -7.999064e-02
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## [3042,]  2.005987e-01 -1.573936e-01  0.1205364911  1.854891e-01
## [3043,] -1.796238e+00 -1.109677e+00 -0.5335686928  6.828747e-02
## [3044,] -2.827827e-02  9.057307e-02 -0.0462113418  1.728319e-01
## [3045,] -2.121215e-01 -6.110113e-02  0.1033554253  2.088866e-01
## [3046,]  2.654829e-02  4.465546e-01 -0.7066952361 -1.665995e-01
## [3047,] -8.926441e-02  3.539699e-02 -0.1553496810  4.503847e-01
## [3048,] -1.685475e+00  1.056764e+00  0.6486347888  1.749826e-02
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## [3065,] -4.476510e-02  7.921588e-02 -0.1213256057 -7.378720e-02
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## [3067,] -9.595900e-02  5.360124e-02 -0.1543142211  3.523412e-02
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## [3070,]  6.529202e-02 -5.641873e-02 -0.0678043748  1.102559e-01
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## [3072,] -5.608158e-02  1.465532e-03  0.0754081795  1.756128e-01
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## [3078,] -1.783689e+00 -1.026918e+00 -0.8026738733 -1.106434e-01
## [3079,]  3.875630e-02  2.357768e-01 -0.0335344711  1.594805e-01
## [3080,]  1.906589e-01 -1.421677e-01  0.0356615878  8.607216e-02
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## [3082,] -1.060855e-01  7.201132e-02 -0.0535416373  1.148326e-01
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## [3084,]  2.972556e-02  1.393134e-02 -0.1355956701 -1.897363e-01
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## [3087,]  8.668707e-02  1.358254e-01 -0.1605115627 -1.056780e-01
## [3088,]  2.468462e-01  3.657422e-01 -0.4164593329 -1.247319e-01
## [3089,]  1.689821e-01 -7.075928e-02 -0.1025717900  1.484174e-01
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## [3094,]  5.130317e-02 -1.154857e-01  0.1980474921  5.516084e-01
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## [3096,] -3.004947e-01 -1.617729e-01  0.1232581786  9.819161e-02
## [3097,]  2.771286e+00  9.762951e-01  1.0251820736 -4.653239e-01
## [3098,]  7.693249e-01 -2.410025e-01  0.0211176246  6.020430e-01
## [3099,]  2.482723e-01  1.434926e-01 -0.0667949812  5.199813e-02
## [3100,] -3.844945e-02  5.097752e-02 -0.0278674104  8.450998e-02
## [3101,] -8.927961e-02 -1.973962e-01  0.1781962529  6.113639e-02
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## [3103,]  7.609187e-02  2.234207e-01 -0.2567522263 -2.684201e-02
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## [3105,]  7.044879e-03 -2.025498e-01  0.1147942291  1.234890e-01
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## [3107,]  5.565086e-02 -1.075872e-01 -0.0356582570  3.019851e-02
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## [3115,]  3.069067e-01 -1.712626e-01 -0.2232524940 -5.043325e-02
## [3116,]  6.103406e-02 -1.487824e-01 -0.0808293655 -2.714017e-01
## [3117,] -1.800779e+00 -1.085675e+00 -0.7405043975 -9.199486e-02
## [3118,] -1.671162e-01 -1.460136e-02  0.0286731405  7.314669e-02
## [3119,]  1.601030e-01 -1.114347e-01 -0.0027886452 -1.283996e-02
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## [3121,]  5.589349e-02 -1.159989e-01 -0.0544500069 -5.896566e-02
## [3122,]  2.950092e-02 -2.485242e-01  0.1469360547  1.711114e-01
## [3123,] -1.742126e-02  1.466762e-01 -0.1122230056  1.573443e-01
## [3124,] -1.305108e-01 -3.882905e-02 -0.0152632107  1.010330e-01
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## [3129,] -5.732795e-02 -4.169249e-02  0.0194612279  1.196002e-01
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## [3131,]  3.041231e-02  5.580561e-01 -0.4270506170 -1.661053e-01
## [3132,]  1.866986e-01 -3.201426e-02  0.0240736754  1.764766e-01
## [3133,]  1.196671e-01  9.725505e-02 -0.0456622261 -5.315351e-03
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## [3137,] -2.169501e-01 -1.929103e-01  0.1460681680  9.999143e-02
## [3138,] -1.776168e-02  6.574559e-02 -0.0571427147  1.031605e-01
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## [3140,]  8.275619e-02 -6.869121e-02 -0.0797428238  1.010241e-01
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## [3143,] -1.531640e-01 -1.145370e-01  0.1499832245  1.372466e-01
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## [3145,]  2.210799e-02 -2.587103e-01  0.1677631246  1.354055e-01
## [3146,]  2.094859e-01  2.915586e-01 -0.3167538859  1.343849e-01
## [3147,] -3.149358e-02  1.114393e-01 -0.1263157559  8.474916e-02
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## [3149,]  2.623722e-02  1.755868e-01 -0.1885235354 -2.762472e-02
## [3150,] -1.688761e-01  3.160176e-02  0.0307019211  1.160959e-01
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## [3161,]  1.922428e-02 -1.716763e-01  0.0225193368 -1.441114e-01
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## [3172,] -1.710818e+00 -9.260902e-01 -0.9391501176 -7.084742e-02
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## [3180,]  1.820063e-01  1.716930e-02 -0.1388916619 -5.661074e-03
## [3181,]  1.596449e-01  3.552658e-01 -0.6364246163 -3.728438e-01
## [3182,] -6.876270e-02  1.043878e-01 -0.2625756276  1.484374e-01
## [3183,] -7.123088e-02 -6.169323e-02  0.0666425470  8.816686e-03
## [3184,]  3.165387e-01  5.232748e-01 -0.7828181736 -4.988406e-02
## [3185,] -1.832551e+00 -1.047338e+00 -0.7361741952 -7.543025e-02
## [3186,] -1.110473e-01 -6.905688e-02  0.0255955549  1.203991e-01
## [3187,] -1.753257e+00  1.425831e+00  0.2345668450 -9.182207e-02
## [3188,] -1.806687e-01 -3.131632e-02  0.1122871916  1.468557e-01
## [3189,] -8.567507e-02  1.829767e-01 -0.1644851151 -4.175676e-02
## [3190,]  5.904935e-02  1.616614e-02  0.0321739764  1.819769e-01
## [3191,] -1.010078e-03  1.404773e-01 -0.3061613209 -2.777284e-01
## [3192,] -1.641749e+00 -9.663367e-01 -1.0217478236 -3.470052e-01
## [3193,]  1.121878e-01  1.411761e-01 -0.1120334578  1.410757e-01
## [3194,] -1.323303e-02  1.435126e-01 -0.3177112042 -2.930597e-03
## [3195,] -1.472803e-01  1.583239e-01 -0.0447020998  1.376780e-01
## [3196,] -2.655828e-01  2.271140e-01 -0.4130868872 -4.250823e-01
## [3197,]  2.632422e+00 -9.991118e-01 -0.7290817725 -6.036801e-01
## [3198,]  9.841979e-02 -3.060726e-01  0.2906945423  1.266252e-01
## [3199,]  2.424367e-02 -2.912801e-01  0.2092863842  1.981445e-01
## [3200,]  2.290739e-01 -2.847833e-01  0.1999455039  9.034301e-02
## [3201,]  1.644077e-01 -1.135841e-01 -0.0333472286 -1.618206e-02
## [3202,] -6.382632e-01 -4.999031e-01  0.4693644297 -2.667908e+00
## [3203,] -1.705079e+00 -9.822895e-01 -1.0185600513 -3.638790e-01
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## [3205,]  1.962078e-01  2.716281e-01 -0.2937849730  1.366845e-01
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## [3207,]  7.854104e-02 -8.529315e-02  0.0806212562  1.544663e-01
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## [3211,] -2.960946e-02  2.586956e-01 -0.3404090880 -2.245690e-02
## [3212,] -6.324487e-01 -6.440092e-01  0.7434542943 -2.546342e+00
## [3213,] -8.412203e-02  9.550231e-02 -0.0391791322  1.521903e-01
## [3214,]  4.303063e-01  5.175894e-02 -0.0592955730 -2.564246e-01
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## [3215,]  2.378361e-01  1.642202e-02 -0.0097875712 -1.571625e-01
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## [3217,]  6.610783e-02  2.092485e-02 -0.0435627151 -2.966349e-02
## [3218,]  2.478419e-02  1.295642e-02  0.0063134916 -1.941334e-04
## [3219,] -6.853218e-02  5.453366e-02 -0.0107984959  5.151745e-02
## [3220,] -9.708559e-02  2.153736e-02  0.0038043003  3.748663e-02
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## [3222,]  1.506273e-01 -1.037485e-01  0.1090544572  1.825322e-01
## [3223,]  1.211229e-01 -2.106835e-01  0.1801638717  1.992058e-01
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## [3225,] -9.043348e-02  1.786036e-02  0.0070937029  1.574164e-01
## [3226,]  5.906773e-02  1.389421e-01 -0.1018107305  5.990371e-02
## [3227,]  2.766115e-02  1.376895e-01 -0.3289013781 -3.433089e-03
## [3228,] -2.194071e-01  3.039407e-01 -0.5126547018 -4.431241e-01
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## [3230,]  1.190210e-01 -1.075727e-01  0.1208612064  1.003594e-01
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## [3232,]  7.436155e-02  4.076704e-02 -0.0689669944 -1.237658e-02
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## [3237,]  4.954657e-02  5.865530e-02 -0.0059057708  7.731270e-02
## [3238,]  1.418833e-01 -1.050757e-01  0.1303186948  1.807085e-01
## [3239,] -1.296360e-01 -6.970647e-02  0.0391359393  1.299881e-01
## [3240,] -1.713206e-01 -5.834309e-02  0.0758628800  9.770635e-02
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## [3265,]  1.337581e-01 -2.347918e-01  0.2069458644  1.228461e-01
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## [3267,] -2.759438e-01  3.074959e-01 -0.5260591185 -4.611462e-01
## [3268,] -1.005099e-01 -1.313916e-02 -0.0429116947  1.056114e-01
## [3269,] -6.261016e-02 -2.515903e-01  0.0839047277  3.280833e-02
## [3270,]  1.542532e-01 -9.579994e-02  0.0473964334  4.983029e-02
## [3271,] -8.096565e-02 -9.443777e-02  0.1209032691  1.556519e-02
## [3272,] -1.761889e+00  1.379517e+00  0.2804641881 -8.449548e-02
## [3273,]  1.045432e-01 -2.032035e-01  0.0515040742  1.594144e-01
## [3274,]  2.616907e-01  1.508413e-02 -0.1838580804  4.624768e-02
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## [3276,]  1.374404e-01  2.228177e-01 -0.3007123573  4.480964e-02
## [3277,]  1.345105e-01  4.066405e-01 -0.7011495497 -3.616710e-01
## [3278,] -6.396892e-02 -7.844413e-02  0.0981609942 -4.994164e-03
## [3279,] -2.286952e-01 -2.955014e-01  0.2918210959  1.365903e-01
## [3280,]  2.415582e-01 -1.132212e-01  0.1712259909  4.878485e-01
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## [3283,] -5.343911e-01 -6.411063e-01  0.5916971908 -2.590564e+00
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## [3286,] -2.420409e-03 -4.539122e-03  0.0685910747  1.218704e-01
## [3287,]  3.207009e-01 -2.435035e-02 -0.0577072617  9.923362e-02
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## [3290,]  8.575958e-02 -2.509454e-01  0.1729546382  1.688033e-01
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## [3296,] -1.788417e+00 -9.991710e-01 -0.8373092968 -6.668356e-02
## [3297,] -7.339130e-02  4.017953e-01 -0.5390868195 -1.091538e-01
## [3298,]  7.342273e-02 -3.238571e-03 -0.0192361694 -9.878738e-02
## [3299,]  5.604527e-02 -7.987238e-02  0.0146018516  2.381109e-02
## [3300,] -3.254567e-01  3.146524e-01 -0.2911494064  9.506040e-02
## [3301,]  1.801699e-01  1.918402e-01 -0.3044900611  5.279926e-02
## [3302,]  2.282105e-02 -1.255936e-01  0.0455339168  1.238846e-01
## [3303,] -3.995045e-03  2.578121e-02  0.0270083348  1.142699e-01
## [3304,] -1.602512e-02  6.589136e-02 -0.0415629452  6.273386e-02
## [3305,]  3.108781e-02 -3.719013e-02  0.1030718016  1.240079e-01
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## [3311,]  3.736890e-01 -2.474591e-02  0.0807346668  1.871813e-01
## [3312,] -1.042943e-01 -5.765300e-02  0.1075903463  7.280048e-02
## [3313,]  6.486559e-02  6.839746e-02 -0.0239582534  1.280852e-01
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## [3315,]  1.794042e-01 -3.118831e-02 -0.1003031288 -4.913940e-02
## [3316,] -1.963304e-01 -7.926879e-02  0.1114112524  1.159836e-01
## [3317,]  6.612917e-02 -6.118597e-02  0.0733028103  1.292233e-02
## [3318,]  1.536855e-01  4.879718e-02  0.0326098089  5.725276e-02
## [3319,] -1.476167e-01  1.964088e-01 -0.0918416684  1.364612e-01
## [3320,]  1.320346e-01 -1.265933e-01  0.1468773522  1.967108e-01
## [3321,] -1.014976e-01  1.805193e-01 -0.1647721168 -3.096804e-02
## [3322,]  8.965126e-02  3.686725e-01 -0.6854787207 -1.289554e-01
## [3323,]  3.444717e-02  1.278857e-01 -0.0750152202  6.257298e-02
## [3324,] -2.093468e-01 -1.655021e-02  0.0319937737  1.073542e-01
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## [3329,]  8.129002e-02  7.646154e-02 -0.1138358017 -8.782114e-02
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## [3331,] -1.149307e-01 -1.119572e-01  0.1438079199  1.827336e-01
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## [3336,]  9.711421e-02  9.359938e-02 -0.1253322617 -1.223518e-02
## [3337,]  9.488450e-02  2.373276e-01 -0.0194420520  1.946863e-01
## [3338,] -1.078079e-01  1.813306e-01 -0.1594564001 -4.553848e-02
## [3339,] -1.959396e-01  1.904060e-02  0.0330615146  1.197777e-01
## [3340,] -4.587752e-02  3.064712e-02 -0.0359381812 -2.102276e-02
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## [3342,]  1.714252e-02 -9.936783e-02  0.0097752056  5.465558e-02
## [3343,] -5.905492e-02  8.046725e-02 -0.0264093804  1.526354e-01
## [3344,] -5.300999e-02  2.156143e-02 -0.0045959269  6.896355e-03
## [3345,] -2.467575e-01  3.324632e-01 -0.2978102132  9.672303e-02
## [3346,]  1.042707e-01 -1.548882e-01  0.2575743796  1.541278e-01
## [3347,] -7.475775e-02  4.671898e-03  0.0291819257  5.380368e-02
## [3348,]  3.126692e-02 -1.948699e-01  0.0522109907 -5.177951e-03
## [3349,] -1.015159e-01  5.430547e-02 -0.0355564542  1.195111e-01
## [3350,]  1.769345e-01 -5.792779e-02 -0.0329729873  1.077732e-01
## [3351,]  2.586713e+00 -9.922900e-01 -0.7291303081 -6.102469e-01
## [3352,]  3.404690e-02  1.429555e-01 -0.3290274142 -4.698399e-03
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## [3359,] -8.808157e-02 -9.623209e-03  0.0437854038  8.752314e-02
## [3360,] -7.628355e-02  3.714755e-01 -0.7151043654 -1.714609e-01
## [3361,]  1.315774e-01  1.697278e-01 -0.2346159574 -5.425604e-02
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## [3370,] -1.815386e+00 -1.060761e+00 -0.7511714206 -1.008551e-01
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## [3373,] -1.781871e+00  1.378507e+00  0.3122355405 -7.692623e-02
## [3374,]  1.479914e-03  1.679433e-01 -0.2502360498 -1.978357e-01
## [3375,]  2.168361e-01 -2.111087e-01  0.1152661936  9.913840e-02
## [3376,]  1.899404e-01 -1.171434e-01 -0.0476202611 -1.481614e-01
## [3377,] -1.811483e-01  6.885117e-02 -0.0295346697  9.718622e-02
## [3378,]  2.081722e-02 -9.675410e-02  0.2732793385  3.345617e-01
## [3379,]  2.291570e-02 -3.123743e-02  0.0911528109  1.556173e-01
## [3380,] -7.298584e-02  5.399383e-02 -0.1087806810 -2.293958e-01
## [3381,]  2.965926e-01 -1.490060e-02  0.0420928002  1.621719e-01
## [3382,] -1.615522e+00 -1.000084e+00 -0.9622748718 -3.464187e-01
## [3383,] -1.885628e-01  7.467547e-02 -0.0895951770  3.975686e-02
## [3384,]  9.240088e-02 -1.042286e-01 -0.0299128860 -4.064841e-02
## [3385,]  5.563265e-01  4.766546e-02  0.3537147115 -4.045949e-01
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## [3387,] -1.136808e-01 -5.657759e-02  0.0651820957  1.350949e-01
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## [3389,] -8.360500e-02  1.894479e-02  0.0003401592 -6.114822e-03
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## [3393,] -4.181537e-01  2.596440e-01 -0.3138616389 -1.169324e-01
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## [3400,] -3.414754e-02  4.251885e-01 -0.5635988201 -5.706000e-02
## [3401,] -2.577429e-01  1.901035e-02  0.0707845074 -2.155383e-02
## [3402,] -4.002833e-03 -5.087201e-02  0.0936381856  1.040225e-01
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## [3406,] -1.762465e+00  1.107153e+00  0.7447231245  2.107781e-01
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## [3411,]  4.594141e-02  2.943723e-02 -0.1434435134 -3.491057e-02
## [3412,]  4.861359e-02 -6.160009e-02  0.0373733235  1.026549e-01
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## [3424,] -5.280740e-02  4.097169e-01 -0.7612444824 -1.813886e-01
## [3425,]  9.324933e-02 -5.207466e-02  0.1255973795  1.781538e-01
## [3426,]  3.021325e-01  2.090968e-02  0.0277690317  1.554621e-01
## [3427,]  1.156028e-01 -9.097145e-02  0.1090396088  1.661166e-01
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## [3431,]  7.066423e-02 -8.298334e-02  0.1673616133  1.801241e-01
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## [3438,]  4.353225e-02  1.937704e-01 -0.3386094470  9.174381e-03
## [3439,]  6.353495e-02  9.231601e-01 -1.3374575101 -3.724406e-01
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## [3482,]  1.950335e-01  9.894986e-03 -0.1208367960  4.101544e-02
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## [3484,]  2.419591e-01 -2.445953e-01  0.1518330375  1.521897e-01
## [3485,]  1.196197e-01 -1.215824e-01 -0.0016740299 -3.749091e-02
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## [3487,]  2.639319e-01 -3.090014e-01  0.2042297431  1.622747e-01
## [3488,] -3.979078e-02 -2.494731e-02  0.0376555231  4.441282e-02
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## [3496,]  6.521334e-02 -1.093408e-01  0.0522187441 -4.734545e-02
## [3497,]  1.631322e-01 -1.335287e-04  0.0155544448  1.151227e-01
## [3498,]  6.421866e-02  9.301852e-02 -0.0773122286 -1.621358e-02
## [3499,] -6.777607e-03  1.325394e-01 -0.1655746189 -7.370284e-02
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## [3503,] -5.836213e-02  3.248298e-01 -0.4157354133 -5.352076e-02
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## [3517,] -2.073399e-02 -2.072805e-01  0.1283472256  1.273859e-01
## [3518,]  7.624094e-01  3.179077e-02  0.2313900817 -6.005372e-01
## [3519,]  9.716676e-02 -5.182520e-03 -0.0063276949  5.835931e-02
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## [3521,]  2.125228e-01  1.772793e-02 -0.0082577975  7.641855e-02
## [3522,]  1.977786e-01  9.457146e-02 -0.0228771641  4.622683e-02
## [3523,]  1.055815e-02  1.693584e-01 -0.1404350726  1.154999e-02
## [3524,]  3.218356e-01  4.879149e-02 -0.0264832968  1.349982e-01
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## [3530,] -3.900662e-02  1.392983e-01 -0.1719819783  4.322198e-02
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## [3543,] -2.111512e-01 -7.957967e-02  0.3878308716  1.836348e-01
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## [3546,]  1.504148e-02  3.046089e-02 -0.0084938357  4.111911e-02
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## [3548,] -2.121400e-02 -1.687622e-01  0.0801857546  1.240679e-01
## [3549,]  5.040651e-02 -1.740925e-01  0.0320541341 -2.802597e-02
## [3550,]  1.421113e-01 -1.922528e-02 -0.0683982116  6.737181e-02
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## [3573,] -9.378548e-02  3.576572e-03  0.0116415668  5.153499e-02
## [3574,]  2.636854e-01  4.701984e-01 -0.6548515033 -1.173638e-01
## [3575,] -1.434145e-02 -2.507553e-01  0.1153901784  4.379063e-02
## [3576,]  3.956365e-01  1.702503e-01 -0.3798054918 -4.955924e-02
## [3577,]  1.306501e-01  2.405073e-01 -0.3299569016  1.828854e-02
## [3578,]  2.015230e-01 -9.486359e-02  0.1057720073  1.554791e-01
## [3579,]  1.803442e-01  3.207153e-01 -0.3448828165  1.202911e-01
## [3580,]  7.576681e-02  4.129212e-02 -0.0695266515  6.421100e-02
## [3581,] -5.323283e-02 -3.218546e-02  0.0007042226 -1.270961e-02
## [3582,]  2.628060e+00 -9.865035e-01 -0.7256957118 -6.494014e-01
## [3583,]  2.304743e-01 -2.048209e-01  0.0923830936  1.358026e-01
## [3584,] -1.961285e-02  1.268200e-01 -0.1421579316  7.788915e-02
## [3585,] -1.309776e-01 -5.425383e-02  0.0540343285  1.392978e-01
## [3586,]  9.943143e-02  1.064045e-01 -0.3018295906 -2.632325e-02
## [3587,]  6.451647e-03  1.696178e-01  0.0630572404  1.934340e-01
## [3588,]  6.779279e-02 -1.005602e-01  0.1284884549  1.824441e-01
## [3589,]  1.543104e-02 -1.029521e-02  0.0514803056  1.657407e-02
## [3590,]  1.026537e-03  2.401248e-02 -0.0165330582 -2.879356e-02
## [3591,]  3.256881e-02 -2.855236e-01  0.1950611282  1.769531e-01
## [3592,]  1.512663e-01 -8.339389e-03  0.0145447843  5.907880e-02
## [3593,] -5.341097e-01 -6.162055e-01  0.5670504372 -2.596291e+00
## [3594,]  4.412139e-01 -7.665102e-02 -0.2222680307  8.285602e-02
## [3595,]  1.681454e-01 -1.194617e-02 -0.1549808760 -5.792789e-02
## [3596,] -3.435215e-02  7.457546e-02  0.0380039018  1.497086e-01
## [3597,] -1.796490e-01 -5.136305e-02  0.0447932194 -5.745755e-02
## [3598,] -2.405394e-01 -2.445310e-01  0.2362991593  1.231335e-01
## [3599,] -9.160841e-03  9.184480e-02 -0.2478077978  2.088904e-02
## [3600,] -1.582499e-02  2.182881e-01 -0.3715575277  6.638843e-02
## [3601,] -3.222193e-02  2.218794e-01 -0.1997586171  4.400916e-01
## [3602,]  1.457072e-01  1.889469e-01 -0.2535629729  5.526445e-02
## [3603,]  4.363137e-02 -6.051140e-02  0.0287303136 -2.774421e-02
## [3604,]  5.651278e-02 -8.656170e-02  0.0240462057  1.576762e-01
## [3605,]  9.015703e-02  4.481096e-02 -0.2685852025 -3.450567e-01
## [3606,]  1.987978e-01 -9.415599e-02  0.1030686471  1.452190e-01
## [3607,]  2.058398e-02  1.227513e-01 -0.2871635656  2.259810e-03
## [3608,]  1.043918e-01 -2.238153e-01  0.2239093135  2.098979e-01
## [3609,]  3.551197e-01  6.048871e-03  0.0383155894  1.783957e-01
## [3610,]  3.558916e-01  1.176061e-02 -0.1043937014 -2.896795e-02
## [3611,] -5.747209e-02  4.195296e-01 -0.7639703010 -1.954130e-01
## [3612,] -1.368324e-01  1.371471e-01 -0.0921080868 -2.107664e-02
## [3613,] -2.976513e-01  1.178222e-01 -0.0442692485 -8.356865e-02
## [3614,] -1.693125e+00  1.196296e+00  0.6432954536  1.839853e-01
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## [3616,] -1.386705e-01 -7.256591e-02  0.0531148408  1.462315e-01
## [3617,] -1.031632e-01 -2.625098e-01  0.1236281244  3.599309e-02
## [3618,]  3.560146e-02  8.820276e-01 -1.2848811283 -3.019962e-01
## [3619,] -7.286256e-02 -3.818806e-02  0.0735417162  8.418930e-02
## [3620,] -7.760570e-02 -1.149150e-01  0.1588520509  1.655665e-01
## [3621,]  6.662028e-01  9.542427e-02  0.3126450329 -4.876529e-01
## [3622,] -1.174464e-01  3.989254e-02  0.0494915713  1.028847e-01
## [3623,] -2.597091e-01  8.416032e-03  0.0002371682  4.605229e-01
## [3624,]  6.185800e-01  2.153757e+00  1.7329092143 -5.273023e-01
## [3625,] -1.939144e+00 -1.157839e+00 -0.7256039326 -1.734147e-01
## [3626,] -7.036596e-02  6.243431e-02  0.1077138620  1.499975e-01
## [3627,]  3.400670e-01 -1.731882e-01 -0.2507378515  3.429801e-02
## [3628,]  2.626008e-01  6.537169e-02 -0.0540003121  1.209098e-01
## [3629,] -1.169491e-01 -3.227098e-01  0.3345674341  2.035452e-01
## [3630,] -2.364204e-01 -2.485457e-02  0.1944585596  1.745333e-01
## [3631,]  2.604589e+00 -1.000384e+00 -0.6995617000 -6.457827e-01
## [3632,] -6.041189e-02 -1.343554e-01  0.1734030432  1.122052e-01
## [3633,] -5.384523e-02 -1.418608e-01  0.0454859414 -3.465198e-03
## [3634,]  1.418479e-01 -2.274121e+00 -1.4813368432 -2.677461e-01
## [3635,]  3.846640e-01  9.667587e-02 -0.1368580267 -1.960693e-01
## [3636,] -4.023837e-02  4.898965e-02  0.0583200135  7.365368e-02
## [3637,]  3.385704e-01  2.400601e-01 -0.3478191851 -2.681972e-03
## [3638,]  1.841294e-01  1.090405e-01 -0.0274363074  6.336568e-02
## [3639,]  1.728425e-01  2.018088e-02  0.0788121496  9.492492e-02
## [3640,]  6.490911e-02  4.141109e-02 -0.0372897964 -2.153901e-02
## [3641,]  3.369073e-01  2.809738e-01 -0.4040934838 -3.045099e-02
## [3642,]  3.719371e-02 -1.571433e-01  0.1024012935  6.723610e-02
## [3643,]  8.799577e-02  6.273183e-02 -0.2240168512  3.449624e-03
## [3644,] -2.284665e-03  1.775560e-01 -0.3575130109 -9.136918e-04
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## [3646,] -4.331192e-02  1.634919e-01 -0.1685191606  8.947436e-02
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## [3652,]  2.594342e+00 -1.029724e+00 -0.6645561373 -5.834031e-01
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## [3658,] -1.660124e-01  3.329808e-01 -0.3348153414 -3.179624e-02
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## [3660,]  3.467589e-01  5.401424e-01 -0.7604000912 -3.499150e-02
## [3661,]  6.754642e-02  1.246933e-02 -0.0597986180 -1.957548e-02
## [3662,]  5.159891e-01  1.177827e-01  0.0796861989  3.077805e-01
## [3663,]  3.201759e-01 -3.949035e-02 -0.0399060405  6.248908e-03
## [3664,]  2.880749e-01 -3.491607e-03 -0.0916995579 -3.861316e-02
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## [3665,]  8.155475e-02  8.482373e-02 -0.0735382809  1.089859e-02
## [3666,] -1.815770e+00 -1.030515e+00 -0.7450584473 -4.959599e-02
## [3667,] -1.893984e+00 -1.148509e+00 -0.8061214887 -1.629569e-01
## [3668,]  8.778265e-02 -4.800842e-02  0.0461354738  1.291542e-01
## [3669,]  8.475458e-02 -2.940190e-02  0.0076051320 -2.065265e-03
## [3670,]  4.846572e-02  5.856917e-03  0.0551753865  1.204418e-01
## [3671,] -2.534362e-02 -7.842405e-02  0.0268971671 -3.052569e-02
## [3672,]  3.156454e-01 -9.563123e-02  0.0352094706  1.343181e-01
## [3673,]  7.779159e-02 -1.776848e-01  0.2131433965  6.461744e-01
## [3674,] -5.113588e-02  3.118774e-01 -0.3604545071  1.125912e-02
## [3675,] -3.513146e-02  3.604403e-01 -0.4409853919 -2.013250e-02
## [3676,]  2.653400e-01 -1.491342e-01  0.0942510658  1.404377e-01
## [3677,] -1.844157e+00 -1.143252e+00 -0.8089438825 -1.522082e-01
## [3678,] -1.333377e-01 -8.752129e-02  0.0902966075  1.646702e-01
## [3679,] -3.480091e-01 -4.606560e-02  0.0429451567  2.283305e-01
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## [3681,]  5.538665e-02 -3.936835e-02  0.0266921593  1.501041e-01
## [3682,] -4.763968e-02  3.350070e-01 -0.4043698436 -1.287610e-02
## [3683,] -5.226009e-02  4.076434e-02 -0.0922594273  4.252802e-01
## [3684,] -1.840853e+00 -1.511922e+00 -0.0603961353  2.686703e-02
## [3685,] -1.627849e-02 -2.468022e-01  0.1192113713  5.297217e-02
## [3686,]  5.794958e-02  2.180292e-02  0.0446740172  1.704015e-01
## [3687,] -6.110696e-02  3.238293e-01 -0.3910227870 -1.746968e-02
## [3688,] -5.936226e-02 -6.729469e-02  0.0636305487  1.175257e-02
## [3689,]  2.949098e-01  2.050271e-01 -0.2937517480 -1.047473e-02
## [3690,]  3.504511e-01  2.004468e-01 -0.2928537908  1.000317e-02
## [3691,] -5.160293e-01 -4.473556e-01  0.5129495610 -2.515008e+00
## [3692,] -9.006328e-02 -2.626532e-01  0.2184655264  9.634964e-02
## [3693,]  1.463291e-03  8.362310e-02 -0.0851327570 -1.364315e-02
## [3694,]  7.224920e-03 -1.135612e-01  0.0643066464  1.511511e-01
## [3695,]  7.277036e-01  2.476398e-02  0.2517172744 -5.675602e-01
## [3696,] -2.765985e-02 -6.515893e-02  0.1733924970  1.778783e-01
## [3697,] -8.592300e-02 -3.327944e-02  0.0007651625  4.648196e-01
## [3698,] -2.831873e-02  2.052315e-01 -0.2455075993  2.726232e-02
## [3699,]  2.675831e-01 -1.441988e-01  0.0833949465  1.438984e-01
## [3700,]  2.949540e-02  7.348939e-02 -0.1839452497 -3.838596e-02
## [3701,] -1.326516e-01  1.732274e-01  0.0628526036  2.111658e-01
## [3702,]  3.911895e-02 -2.161869e-01  0.0546927596  4.649641e-02
## [3703,]  6.763251e-02  1.450973e-01 -0.1625114484  3.767480e-02
## [3704,]  1.593804e-01 -1.680713e-02  0.0715328747  9.090540e-02
## [3705,]  8.358873e-02  9.976243e-01 -1.4221512938 -4.035909e-01
## [3706,]  8.638721e-01  1.220902e-01  0.2229878438 -5.122133e-01
## [3707,] -3.632288e-01 -1.369257e-02 -0.0076533240  2.395515e-01
## [3708,] -1.870043e+00 -1.460299e+00 -0.1285479897 -1.048772e-02
## [3709,]  1.846667e-02  6.394900e-02 -0.1356413081 -2.173028e-01
## [3710,] -2.208386e-01  2.874846e-01 -0.3926386065 -1.461039e-01
## [3711,]  2.356504e-01 -1.034882e-01  0.1373191935  1.525864e-01
## [3712,] -2.570552e-02 -2.923969e-02  0.1019456515  1.003668e-01
## [3713,] -5.695850e-03 -6.570391e-02  0.1123015438  2.038372e-01
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## [3715,]  8.941876e-02 -5.682611e-02 -0.0187842453  1.287296e-02
## [3716,]  1.553157e-02 -1.405452e-01  0.1475277446  7.519355e-02
## [3717,]  5.069522e-02  5.975138e-02 -0.0565651012 -1.059432e-03
## [3718,] -1.823653e+00 -1.015291e+00 -0.7682386180 -7.617073e-02
## [3719,] -3.470400e-01 -1.359824e-02  0.0065868960  2.115891e-01
## [3720,]  2.641488e-01 -9.653138e-02  0.0096798892 -1.197346e-02
## [3721,]  7.853558e-01  2.138936e+00  1.6917560495 -5.255791e-01
## [3722,]  2.761594e-02  2.288848e-02 -0.0361922568 -4.578038e-02
## [3723,] -2.024644e-02  1.437938e-01 -0.3099112666  5.903470e-03
## [3724,]  1.773534e-01  1.156044e-01 -0.0229353086 -2.455510e-02
## [3725,] -6.136962e-02 -8.582479e-02  0.1207503267  1.847865e-01
## [3726,] -6.343225e-02  9.653388e-02 -0.1002821301  3.345021e-02
## [3727,]  2.820191e-01  5.566726e-01 -0.8036207631 -4.292100e-02
## [3728,] -1.019721e-01  1.231288e-01 -0.0691431315 -4.326831e-03
## [3729,] -3.189742e-01  1.052495e-01 -0.0236174204 -8.358059e-02
## [3730,]  2.933838e-01 -1.157878e-01 -0.1190228245 -8.788946e-03
## [3731,] -1.945523e-01  4.120420e-02  0.0233944164  1.256877e-01
## [3732,]  2.513404e-01  1.713623e-02  0.0594957125  2.273939e-01
## [3733,]  3.296354e-01  6.193857e-01 -0.8558909697 -5.255511e-02
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## [3737,] -8.726486e-02  3.846690e-03 -0.0450616255  4.515680e-01
## [3738,]  2.771412e-01 -1.708240e-01  0.1038817694  1.545715e-01
## [3739,]  1.632816e-01  3.905551e-01 -0.6443027062 -3.299140e-01
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## [3741,] -1.839922e-01  8.245298e-02 -0.0203835932  1.010609e-01
## [3742,] -1.380785e-01  1.360259e-02  0.0416919382  7.905270e-02
## [3743,] -3.189866e-02  2.276679e-01 -0.2824070093  2.826576e-03
## [3744,]  7.192804e-01  2.194289e+00  1.7250288118 -5.358241e-01
## [3745,]  1.170022e-01 -9.490439e-02 -0.0667715905 -5.832664e-02
## [3746,]  8.494752e-01  7.625909e-02  0.2762547138 -4.970905e-01
## [3747,] -6.092933e-02  5.675189e-02 -0.1132143650  4.241123e-01
## [3748,]  2.893865e-01 -2.312700e-01  0.1200255738  1.480593e-01
## [3749,]  6.834490e-02  2.383199e-02 -0.1850986355  7.628926e-05
## [3750,] -8.652570e-02  3.466105e-01 -0.4416560715 -8.434363e-02
## [3751,]  4.113571e-01 -2.667474e-01 -0.0750782733  2.078617e-01
## [3752,]  1.866625e-01 -1.246928e-01 -0.0208196953 -2.777397e-02
## [3753,]  1.172769e-01  2.893161e-02 -0.0433399536  1.500397e-01
## [3754,] -3.281489e-01  1.057008e-01 -0.0246840455 -7.889366e-02
## [3755,] -2.326219e-01  2.317417e-01 -0.3157765874 -1.229497e-01
## [3756,] -1.063880e-01 -6.083680e-02  0.1279110547  1.144213e-01
## [3757,] -4.834055e-02 -8.762175e-02  0.0539579513 -1.789662e-02
## [3758,] -1.903603e+00 -1.490220e+00 -0.0969410199 -7.012607e-03
## [3759,]  1.601561e-01  1.034301e-01 -0.1553357017  2.599905e-02
## [3760,] -1.137697e-01  1.736041e-01 -0.0081188816  2.230015e-01
## [3761,]  9.758546e-03 -1.343040e-01  0.1050373261  9.725146e-02
## [3762,] -2.398420e-01 -7.730516e-02  0.0632955948  5.102872e-01
## [3763,] -2.453192e-02  9.450828e-02  0.0046702367  7.977999e-02
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## [3765,]  1.878041e-02  7.137754e-02 -0.1302849086 -2.147765e-01
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## [3768,]  7.581504e-02  3.058385e-03 -0.0202434854  5.069109e-01
## [3769,]  2.614827e-01  2.990474e-01 -0.3435596977  2.066429e-01
## [3770,]  1.176113e-01  2.948555e-02  0.0957921293  2.939366e-01
## [3771,] -7.281464e-02 -8.447717e-02  0.0661439326  6.109093e-02
## [3772,]  5.438904e-02 -1.362973e-01  0.2273605831  2.126827e-01
## [3773,] -1.028532e-01 -2.387202e-02  0.0383358340  3.716248e-02
## [3774,]  1.267200e-01  4.271196e-01 -0.6439472595 -3.076847e-02
## [3775,] -1.996717e+00  1.221652e+00  0.6591412256  4.675093e-02
## [3776,] -9.336391e-02  3.409184e-01 -0.2379414883  7.223741e-02
## [3777,]  2.617606e+00 -1.063447e+00 -0.3416271503 -4.187542e-01
## [3778,]  7.521577e-02 -4.334038e-02  0.0623095134  1.485742e-01
## [3779,]  1.781509e-01 -3.946949e-02 -0.3067012552 -1.477552e-01
## [3780,] -2.103366e-01 -1.561629e-01  0.3173056975  1.643665e-01
## [3781,] -1.667687e-02  1.680582e-01 -0.0893575389  1.129200e-01
## [3782,] -2.059986e-01 -6.283061e-02  0.0281649173 -9.173111e-02
## [3783,]  4.094590e-02 -8.009997e-02 -0.1455117694 -1.111209e-01
## [3784,] -1.762756e-01  1.259024e-01  0.0218252306  6.820028e-02
## [3785,] -1.528412e+00  6.804837e-01  0.6826997112  3.827445e-02
## [3786,] -5.801723e-02  1.821907e-01  0.0547165777  2.465973e-01
## [3787,] -4.538177e-02  7.748725e-03  0.0797107985  1.630235e-01
## [3788,]  2.861231e-01 -2.077741e-01  0.0754141639  1.462094e-01
## [3789,] -1.940301e+00  8.728339e-01  0.8161775658 -1.411179e-01
## [3790,] -1.483879e-01 -3.233582e-02  0.0841156819  7.602535e-02
## [3791,]  1.846217e-02  1.201651e-01 -0.4890302589 -2.947190e-01
## [3792,] -3.828236e-01 -4.246860e-02  0.0951120663  4.255421e-03
## [3793,] -1.325759e-01 -4.762069e-01  0.6890278515  1.488625e-01
## [3794,] -1.450358e-01  1.143497e-01 -0.0314982291  3.144707e-02
## [3795,]  7.329771e-03 -1.894574e-01  0.1832667473  2.025311e-01
## [3796,]  1.072305e-01  6.611913e-01 -0.6681383649  1.684730e-02
## [3797,] -4.315816e-01 -6.230629e-02  0.1689740741  9.869498e-02
## [3798,] -9.119412e-03 -1.835266e-01  0.0926241104  3.660798e-02
## [3799,] -1.199262e-02  1.120708e-01 -0.0690504148  7.809853e-02
## [3800,] -4.018498e-02  6.787045e-01 -0.9305006920 -9.653759e-02
## [3801,] -1.001961e-01  6.995070e-02  0.0087577861 -1.213411e-02
## [3802,]  7.231749e-01 -3.820928e-01 -0.1288984891  2.746854e-01
## [3803,] -2.728338e-01  3.774316e-03  0.0487558210 -2.684648e-02
## [3804,]  4.515992e-02  1.075132e-01 -0.2741759616 -3.716345e-02
## [3805,] -8.629834e-03 -9.513855e-01  0.9038069560  2.907918e-02
## [3806,] -2.030987e+00  1.121808e+00  0.7244980988 -4.388304e-02
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## [3809,]  9.685923e-02 -9.869203e-02 -0.0088998309  1.521976e-01
## [3810,]  5.222729e-02  1.111739e-01 -0.4176232002 -1.253066e-01
## [3811,] -2.884217e-01  3.699644e-02 -0.0246212825  9.307088e-02
## [3812,]  1.738141e-01 -1.597800e-01  0.0460674893  2.915122e-01
## [3813,]  2.320722e-02  1.902979e+00 -2.6103076064 -6.720035e-01
## [3814,]  2.011018e-01  2.162241e-01 -0.5010964420 -3.869892e-02
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## [3815,] -2.145232e-02 -2.656698e-01  0.2892760109  9.560817e-02
## [3816,]  1.150143e-01  5.941544e-01 -0.9489659997 -1.945560e-01
## [3817,]  3.047164e+00  1.041402e+00  0.5435518496 -3.732500e-01
## [3818,] -1.294956e-01 -2.079146e-01  0.3020366283  1.711110e-01
## [3819,]  4.745104e-01 -2.262668e-01 -0.0518679928  3.129543e-01
## [3820,]  1.018786e-01 -3.315326e-02 -0.1011526209  1.788749e-02
## [3821,] -2.072973e-01 -1.038588e-02  0.1236284262  9.494277e-02
## [3822,]  8.789931e-01  1.592256e-01  0.1635137559 -5.478628e-01
## [3823,]  1.063168e-01  4.970918e-02 -0.0852008364 -2.839443e-02
## [3824,] -2.530079e-05  2.089616e-01 -0.2028881462  1.578833e-01
## [3825,]  1.142428e-01 -1.416619e-01 -0.1268074622 -6.305785e-02
## [3826,] -7.818343e-02  3.111175e-01 -0.4135824511 -8.084311e-02
## [3827,]  8.213594e-02  1.019360e+00 -1.4389008267 -3.929119e-01
## [3828,] -5.284093e-02 -6.749302e-02 -0.0094237671  4.910826e-01
## [3829,] -2.403803e-01 -5.946259e-02  0.2823610088  2.239001e-01
## [3830,]  1.845743e-01  6.491988e-01 -0.7468408311  1.300343e-04
## [3831,] -1.560829e+00  7.638140e-01  0.6001134668  3.596439e-02
## [3832,]  2.738773e-01  1.801455e-02 -0.1333823837 -4.770216e-02
## [3833,] -2.878233e-02 -4.128728e-02 -0.0223657120 -9.544313e-03
## [3834,] -2.297780e-01  2.672645e-01 -0.3683394215 -1.306466e-01
## [3835,]  2.660624e+00 -1.065036e+00 -0.4080863860 -3.709000e-01
## [3836,]  1.278907e-01  3.697314e-01 -0.6371231167 -3.485354e-01
## [3837,] -2.613609e-01 -7.857908e-02  0.3217662820  2.645995e-01
## [3838,] -4.847013e-02 -8.682560e-02  0.1054784013  1.829241e-01
## [3839,]  2.445855e-01  1.720241e-01 -0.0386042845 -6.864242e-02
## [3840,] -2.597447e-01 -5.941622e-03  0.0159888450  4.723704e-01
## [3841,] -6.412745e-04 -1.279625e-01  0.0738444647  2.326336e-02
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## [3847,]  3.996691e-02 -4.978938e-02  0.0123571532  4.444815e-02
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## [3855,] -1.022287e-01  3.591092e-01 -0.4627684562 -8.016375e-02
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## [3857,]  3.433223e-01 -2.720663e-01 -0.0073546039  2.174137e-01
## [3858,] -7.719947e-02  2.202515e-01 -0.0811391477  2.853700e-01
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## [3864,] -4.913716e-02  1.331324e-01  0.0616932888  2.407733e-01
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## [3865,] -3.257781e-02  1.308009e-01 -0.1151497048  1.759863e-02
## [3866,]  8.577954e-03 -3.928347e-02  0.1228141334  1.891650e-01
## [3867,] -1.613320e-01  1.832852e-01 -0.0250416923  3.130249e-01
## [3868,] -2.314718e-01  1.188816e-01 -0.0631920529  1.013264e-01
## [3869,]  2.704809e-01 -2.141733e-01  0.0046736462  1.953115e-01
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## [3873,]  1.544130e-01 -6.008550e-02 -0.3488414054 -1.247451e-01
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## [3875,] -1.340615e-02  1.212197e-02 -0.0014309867  1.697872e-01
## [3876,] -2.180788e-01 -8.634482e-02  0.1473840751  8.510319e-02
## [3877,]  1.620018e-01 -8.008436e-02  0.0376744333  1.484979e-01
## [3878,] -2.316019e-01 -6.078768e-02  0.1165603886  8.810655e-02
## [3879,] -4.937802e-01 -5.839994e-01  0.5415323268 -2.595497e+00
## [3880,]  1.216362e-01  3.310848e-01 -0.5894382923 -3.535211e-01
## [3881,]  7.621408e-01 -2.591978e-01 -0.1352576121 -1.199064e-02
## [3882,] -2.203262e-01 -8.803178e-02  0.1515646208  9.798361e-02
## [3883,]  3.266638e-01  1.232078e-01 -0.2320624893 -1.104138e-03
## [3884,]  1.356102e-01 -2.367318e-01  0.1517680378  7.598673e-02
## [3885,]  9.773883e-02  3.036135e-02 -0.2558384387 -3.380781e-01
## [3886,]  7.662255e-01 -1.690561e-03  0.2836871618 -5.665745e-01
## [3887,] -1.050185e-01  1.342090e-01  0.0469032678  2.089236e-01
## [3888,]  8.536552e-02 -1.733180e-01  0.0484765927 -2.814482e-02
## [3889,]  5.547300e-02  3.468328e-03 -0.0133693689  7.035885e-03
## [3890,]  2.100806e-01 -4.280154e-02  0.0144129831  1.623538e-01
## [3891,]  2.282453e-01 -2.490202e-01  0.1738232110  1.567622e-01
## [3892,]  1.213229e-01  4.184399e-01 -0.3745109458  2.964303e-02
## [3893,] -5.179648e-01 -6.470709e-01  0.6086417711 -2.598816e+00
## [3894,]  7.217176e-02  5.020346e-02 -0.0119570399  3.717889e-03
## [3895,]  6.918386e-02  8.477865e-02 -0.0280208931  1.463585e-01
## [3896,]  2.842996e-02 -6.028666e-02  0.0674279676  1.000306e-01
## [3897,]  9.859006e-02  4.183245e-02 -0.1248502109 -7.674327e-02
## [3898,]  2.491404e-01 -4.335209e-02 -0.0539915893 -2.772882e-02
## [3899,]  7.481033e-02  7.831715e-02 -0.2415499272 -2.087856e-02
## [3900,] -1.217777e-01 -1.844755e-02  0.0624466041  8.383999e-02
## [3901,] -1.820555e+00  9.539870e-01  0.7344370018 -1.663871e-01
## [3902,]  1.704688e-01  1.391354e-01 -0.5520999391 -2.846836e-01
## [3903,] -4.055758e-02  2.856316e-01 -0.3151519245  1.972046e-02
## [3904,] -5.852357e-02  1.256430e-01 -0.1254144478  2.843401e-03
## [3905,] -2.599670e-01 -7.743837e-02  0.0767689146 -1.365042e-02
## [3906,] -8.805401e-02 -2.023833e-01  0.3285553228  1.896243e-01
## [3907,] -1.884775e+00  1.206027e+00  0.6129640815  4.143307e-02
## [3908,]  3.014641e-01 -8.163704e-02 -0.5496887004 -1.183415e-02
## [3909,] -2.210004e-01  1.038318e-01 -0.0453320596  1.086515e-01
## [3910,]  1.858227e-01  1.529900e-01 -0.1740621195  5.607046e-02
## [3911,]  1.360898e+00  6.632429e-02  0.0583418422 -3.698173e-01
## [3912,]  2.078775e-01  6.908471e-01 -0.7659739033  1.393578e-02
## [3913,]  1.915397e-01 -1.463236e-01  0.0146439076 -3.534386e-02
## [3914,]  2.940330e-02  5.225891e-02 -0.0117616197  2.095846e-02
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## [3915,]  2.308535e-01 -3.337435e-02 -0.0973914893 -4.942124e-02
## [3916,] -1.975097e-02 -2.790833e-01  0.1746359277  6.459155e-02
## [3917,]  2.112662e-02 -5.448756e-02  0.0559996485  7.692705e-02
## [3918,]  8.117873e-01  1.267254e-01  0.2357843488 -5.000891e-01
## [3919,] -1.198348e-02  1.656333e-01 -0.3254398010  4.723016e-04
## [3920,] -4.995787e-03 -1.640743e-01  0.1457877049  1.492915e-01
## [3921,] -4.458481e-01 -4.592641e-02  0.0633800673  2.433594e-02
## [3922,]  4.829973e-02 -9.208953e-02 -0.0167867073 -1.172666e-02
## [3923,]  1.937855e-01  1.392761e-01 -0.1475587665  5.109683e-02
## [3924,]  3.236132e-01  6.806135e-02  0.0146407112  8.221045e-02
## [3925,]  2.516062e-01  4.419065e-01 -0.6972326846 -6.064379e-03
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## [3930,] -1.822073e+00  1.244488e+00  0.5830413114  4.342594e-02
## [3931,] -4.375754e-02 -1.614314e-01  0.2679865930  1.587974e-01
## [3932,] -1.357948e-02 -2.260188e-03  0.0335501977  1.784308e-01
## [3933,]  5.245418e-02 -2.643772e-02  0.0591109838  2.306272e-01
## [3934,] -2.911423e-01 -5.131602e-02  0.3041639553  2.344506e-01
## [3935,]  3.267491e-02 -2.107013e-02 -0.1934846001 -6.575911e-02
## [3936,]  8.107678e-02 -4.911258e-02 -0.0132041947 -4.215019e-02
## [3937,]  8.055476e-01  2.190050e+00  1.6205883994 -5.484814e-01
## [3938,] -7.089167e-02  3.761509e-01 -0.4494307875 -4.762115e-02
## [3939,]  2.244723e-01  9.525098e-02 -0.1108241186  5.617455e-02
## [3940,]  2.661529e-01  1.982655e-01 -0.0635096875 -2.602077e-02
## [3941,] -6.934989e-02  1.089040e-01 -0.0821297341  3.337528e-02
## [3942,] -6.419612e-01 -6.385290e-01  0.7469870368 -2.549709e+00
## [3943,]  8.587418e-01  1.390799e-01  0.2024744075 -5.343570e-01
## [3944,] -1.711544e-01 -5.481096e-02  0.0649834660 -1.593144e-02
## [3945,] -1.601055e+00 -1.036258e+00 -0.9023717607 -3.114879e-01
## [3946,] -3.036843e-01 -5.409839e-02  0.2806056782  2.367419e-01
## [3947,] -3.368213e-02 -4.447701e-01  0.5806428175  1.921592e-01
## [3948,]  1.732407e-01 -1.623195e-01  0.0627813380  1.072206e-01
## [3949,]  3.160129e-01  1.742155e-01 -0.2409728440  3.340178e-02
## [3950,]  3.054274e-01  7.769346e-02  0.0082748248  6.387117e-02
## [3951,]  2.077862e-01 -2.006153e-01  0.0670172930  3.825280e-02
## [3952,]  5.244264e-02  1.069001e-02  0.0267977959  1.890663e-01
## [3953,] -3.482350e-02 -5.021850e-02 -0.0193294406  4.780633e-01
## [3954,]  9.840803e-02 -1.361490e-01  0.0692438332 -5.587675e-02
## [3955,] -8.578231e-02  4.577692e-03 -0.0391062635  4.526283e-01
## [3956,] -1.836476e-01  1.658390e-01  0.0028708628  3.113066e-01
## [3957,]  2.480570e-04  5.730358e-02  0.0249407766  6.297915e-02
## [3958,]  2.828494e-01 -1.538914e-01 -0.0690763868  4.389945e-03
## [3959,] -8.855773e-02 -1.445045e-01  0.1899984009  1.873996e-01
## [3960,]  2.516074e-01 -1.437427e-01  0.0890978888  1.534408e-01
## [3961,]  6.661473e-02  1.572691e-02  0.0280641755  1.775477e-01
## [3962,] -6.214231e-02  3.777367e-01 -0.4427844496 -2.834584e-02
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## [3965,] -1.912097e+00 -1.235734e+00 -0.6736439012 -1.148256e-01
## [3966,] -1.954661e-02  9.222850e-02 -0.2413935073  3.362073e-02
## [3967,]  2.780371e-01  1.176843e-01 -0.0088425953  7.489648e-02
## [3968,]  6.353158e-02  6.062032e-02 -0.0334099262 -2.775998e-03
## [3969,]  2.920104e-01  2.623982e-01 -0.3862017902 -3.122659e-02
## [3970,] -4.754070e-01 -6.070348e-01  0.5784921591 -2.592141e+00
## [3971,]  1.648301e-01  1.338747e-01 -0.5536084477 -2.963861e-01
## [3972,] -2.397852e-01 -1.859894e-02  0.0675931968  7.472616e-02
## [3973,] -6.672339e-02 -4.667462e-01  0.6093564452  1.571472e-01
## [3974,]  1.239389e-02 -3.830970e-02 -0.0043882641  6.440941e-02
## [3975,]  2.374375e-01 -6.130340e-02  0.0898740932  1.408229e-01
## [3976,] -2.307101e-01 -5.362617e-02  0.2855420992  2.304156e-01
## [3977,] -1.374992e-02  1.414911e-01 -0.1457430566  1.599576e-01
## [3978,]  8.698546e-01  1.511931e-01  0.1986901102 -5.477088e-01
## [3979,] -1.401954e-01  1.437390e-01 -0.0996778939 -2.157865e-02
## [3980,]  1.985983e-01  6.309641e-02 -0.4574261027 -2.657688e-01
## [3981,] -1.698122e-02  1.994913e-01 -0.1924664278  1.748875e-01
## [3982,]  1.890394e-01  6.765573e-01 -0.7569986344  2.247864e-02
## [3983,]  3.260905e-02 -3.521099e-03 -0.0763043970 -4.422443e-03
## [3984,]  5.386083e-02  6.662040e-02 -0.0323866820 -8.539560e-03
## [3985,]  2.526637e-01 -1.547879e-01  0.0875752556  1.500471e-01
## [3986,] -2.129254e-01 -7.966631e-04  0.0423932812  6.365829e-02
## [3987,]  2.508701e-01  1.580665e-01 -0.0942254341  3.257591e-02
## [3988,]  1.538669e-01 -1.536899e-01  0.0287983202  2.000840e-02
## [3989,] -9.958648e-02  1.269403e-01  0.0416379062  2.018388e-01
## [3990,] -1.298996e-01  2.298042e-01 -0.0818410611  2.891279e-01
## [3991,]  4.331036e-02  1.265639e-01 -0.3015346201 -3.068243e-02
## [3992,]  3.431500e-02  1.296182e-01 -0.0904803099  3.033926e-02
## [3993,]  2.660562e+00 -1.090713e+00 -0.3748331391 -3.650095e-01
## [3994,] -2.230851e-02  3.196905e-02  0.0483049076  7.530357e-02
## [3995,]  3.751892e-02  5.438547e-02  0.0058292734  1.611988e-01
## [3996,] -2.121891e-01  7.922519e-02  0.0922584531  1.002693e-01
## [3997,]  1.269031e-01  1.986868e-01 -0.5621792646 -3.181368e-01
## [3998,] -1.049610e-01 -6.054180e-02  0.0685680284  1.683367e-01
## [3999,] -9.606175e-02  1.328032e-01 -0.0768347791 -1.607406e-02
## [4000,]  3.075064e-01 -8.514301e-02  0.0510483487  1.408679e-01
## [4001,]  3.891728e-02 -1.064229e-01  0.1687951525  2.303545e-01
## [4002,] -3.679787e-02  8.192311e-02 -0.2291713250 -3.545161e-01
## [4003,]  8.333240e-01  7.337003e-02  0.3004516351 -4.736047e-01
## [4004,] -1.484350e+00  6.850201e-01  0.7074043191  7.015063e-02
## [4005,] -1.569472e-01  2.147385e-01 -0.0772065060  2.879504e-01
## [4006,] -2.220398e-02 -5.308376e-01  0.7093345595  1.858714e-01
## [4007,] -3.574692e-02  2.727557e-02  0.0674354319  7.118407e-02
## [4008,] -3.783466e-02 -1.445162e-02 -0.0353727358  4.425266e-02
## [4009,] -2.345050e-01 -6.738235e-02  0.0753929981 -1.492531e-02
## [4010,]  6.090594e-04  6.578907e-02 -0.0477114571  9.742804e-03
## [4011,] -3.489310e-01 -3.537667e-02 -0.0208673412  3.793341e-02
## [4012,] -1.201577e-01 -4.598938e-02  0.0574917117  1.317263e-01
## [4013,]  8.216107e-01  6.872943e-02  0.3170257026 -4.787843e-01
## [4014,]  2.172149e-01 -1.058716e-01 -0.0581409719 -3.182781e-03
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## [4015,]  6.367107e-01  1.007623e-01  0.0603082486  3.269304e-01
## [4016,]  5.171575e-02  6.773355e-02  0.0419114932  1.491158e-01
## [4017,]  2.245699e-02  9.924672e-02  0.0551671428  5.799623e-01
## [4018,] -1.006192e-01 -1.386126e-02  0.0744332323  3.077774e-02
## [4019,] -1.769682e-01  5.205731e-02  0.0568341331 -2.897204e-02
## [4020,] -2.093357e-01  5.729992e-02 -0.0687152299 -8.395686e-02
## [4021,] -1.532593e-01  9.237663e-02  0.0396068236  3.567810e-02
## [4022,] -6.572529e-02 -1.639001e-02 -0.0668856196 -2.760344e-02
## [4023,]  2.323462e-01 -3.167282e-01  0.1663175035  2.889970e-01
## [4024,]  3.656544e-01 -2.900589e-01 -0.1516506673  5.377707e-02
## [4025,]  8.806389e-03 -2.196307e+00 -1.4294402647 -6.237874e-02
## [4026,] -1.497124e-01  9.024031e-02  0.0457180786  4.662947e-02
## [4027,]  6.339266e-02  5.411779e-03  0.0244479409  1.901701e-01
## [4028,] -9.735039e-02 -1.417294e-01  0.2542931044  1.401433e-01
## [4029,]  2.741264e-01  2.159924e-01 -0.3264525742 -1.675050e-02
## [4030,]  2.385530e-01  1.572759e-01 -0.2085963286  1.215781e-02
## [4031,] -4.009466e-01 -7.463720e-02  0.0329913601  6.310541e-02
## [4032,]  8.924460e-02  3.851566e-01 -0.3284359600  5.435486e-02
## [4033,]  9.206061e-02  5.439311e-02 -0.1991586578  9.875889e-03
## [4034,] -1.222645e-02  5.710192e-03  0.0865957435  8.112618e-02
## [4035,]  1.491758e-01 -3.962297e-02 -0.2354013524 -7.204439e-02
## [4036,] -6.264780e-02  3.489533e-02 -0.0758400811  4.353862e-01
## [4037,]  1.572961e-02  5.943537e-02 -0.0414587357 -2.911609e-02
## [4038,]  1.850012e-01  8.344493e-04 -0.0473909177  1.103571e-01
## [4039,]  8.521323e-02  2.998367e-03 -0.0546483031 -8.677466e-03
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## [4043,]  2.511221e-01 -2.021128e-01  0.1693439752  1.916389e-01
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## [4047,]  2.904448e-02 -1.020904e-01 -0.1023359200 -5.410005e-02
## [4048,]  3.835272e-02  3.711629e-02 -0.0808651227  3.861020e-02
## [4049,]  2.608055e-01  1.912863e-01 -0.2895705438 -8.239396e-03
## [4050,]  2.248842e-02  5.691854e-02 -0.0355903204  1.678819e-01
## [4051,]  2.032681e-01 -7.430784e-02 -0.0442664132 -6.531956e-03
## [4052,] -1.928837e-01 -3.613307e-02 -0.0802570692  5.306118e-02
## [4053,]  5.008552e-03  4.099356e-02 -0.0364313727  1.627065e-01
## [4054,]  1.677266e-02  5.207765e-02 -0.0757327345  4.728265e-02
## [4055,] -1.312910e-02  2.679179e-01 -0.2080982102 -1.854081e-01
## [4056,]  2.426155e-01 -5.572222e-02  0.0357808857  1.671613e-01
## [4057,] -2.816535e-03  7.519938e-02 -0.0025531244  4.201872e-02
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## [4059,]  5.390412e-02 -1.254056e-02 -0.0477937831  1.525218e-02
## [4060,]  2.446536e-01 -2.308841e-01  0.0252289583  2.158309e-01
## [4061,] -9.998170e-02 -1.747469e-01  0.3036490960  1.508886e-01
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## [4065,] -1.204310e-02  1.101538e-01 -0.0634424807  3.354026e-02
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## [4067,] -1.470589e+00  6.374792e-01  0.6782157881  6.819128e-02
## [4068,]  2.086576e-01  3.182757e-02 -0.4532486479 -1.273959e-01
## [4069,] -1.879216e-02  5.252014e-03 -0.1276737735 -4.257855e-02
## [4070,] -1.553072e+00 -1.060719e+00 -0.8639528663 -2.752874e-01
## [4071,]  1.757634e-01 -1.411744e-01  0.0557209166  1.362204e-01
## [4072,]  8.875410e-01  1.125906e-01  0.2383950342 -5.330777e-01
## [4073,] -5.126161e-02 -3.702994e-03 -0.0819321688  4.686638e-01
## [4074,]  8.296726e-01  3.298399e-02  0.3665634624 -4.534203e-01
## [4075,] -4.897237e-02 -3.321885e-02 -0.0159573940  3.533212e-02
## [4076,]  1.921542e-01 -1.315392e-01  0.0683409403  1.337896e-01
## [4077,] -9.255804e-02 -1.347038e-02  0.0670741581  3.394976e-03
## [4078,]  2.229414e-01 -2.389868e-01  0.1540538601  1.446435e-01
## [4079,]  5.360967e-02 -6.480143e-02  0.0943635225  1.884184e-01
## [4080,]  2.504772e-01 -1.223718e-01  0.0743357862  1.502997e-01
## [4081,] -5.103923e-02  5.833402e-02 -0.0136085412 -2.166920e-02
## [4082,] -3.272763e-01 -8.358006e-02  0.1110187808  2.779566e-01
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## [4084,] -1.995696e+00  1.214302e+00  0.7073349713  5.001683e-02
## [4085,]  2.732986e-01  2.135468e-02 -0.0203494810  1.077337e-01
## [4086,] -6.006546e-02 -2.314947e-02  0.1009322470  6.790083e-02
## [4087,] -2.487584e-01 -7.124675e-02  0.0792858623 -2.602692e-03
## [4088,]  1.083693e-01 -1.596770e-02 -0.0453480607  4.257847e-03
## [4089,] -2.415529e-01 -1.681386e-01  0.0958917327  4.419474e-02
## [4090,] -1.801105e+00  8.638368e-01  0.7786036056 -1.757550e-01
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## [4092,]  2.488902e-01  3.924070e-02 -0.0427085379  9.243905e-02
## [4093,] -4.378841e-02 -1.552259e-01  0.2182970058  1.866711e-01
## [4094,]  1.993970e-01  1.569491e-01 -0.5807424928 -3.115105e-01
## [4095,]  2.639231e-01 -1.925901e-01 -0.0062056384  3.014234e-02
## [4096,]  1.019675e-01  8.814915e-03 -0.0055479353  6.450737e-02
## [4097,] -8.617219e-02  5.110141e-02 -0.0951894614  4.367117e-01
## [4098,]  2.064657e-01 -1.779038e-01  0.0610587146 -5.387735e-02
## [4099,]  2.644103e-01 -2.618012e-01  0.0723441799  2.343845e-01
## [4100,]  1.907776e-01  7.610159e-02 -0.0561816064  6.371834e-02
## [4101,] -2.642913e-01  1.032797e-01  0.0047088609 -4.999154e-02
## [4102,] -7.291333e-02  3.004666e-01 -0.3426586000 -4.008501e-03
## [4103,] -5.719442e-02  5.312536e-02 -0.0233882085 -4.080057e-02
## [4104,]  2.393447e-01 -1.592279e-01  0.1122871804  1.649476e-01
## [4105,] -2.678766e-01 -7.465554e-02 -0.0304926718 -1.098508e-02
## [4106,]  4.919101e-01 -2.304660e-01 -0.1575690604  1.536922e-01
## [4107,]  3.815468e-02  2.727554e-02 -0.0860473284  1.055544e-02
## [4108,] -1.768619e+00  1.139097e+00  0.6594741070 -1.233282e-01
## [4109,] -2.584793e-01  1.294019e-01 -0.0334551628 -7.353983e-02
## [4110,]  1.724745e-04 -2.495662e-02 -0.1047671363 -1.539601e-02
## [4111,]  3.479753e-01  2.363509e-01 -0.3261528484 -1.204215e-02
## [4112,]  2.600977e-01 -1.571088e-01  0.1102477653  1.616925e-01
## [4113,]  8.668659e-01  1.409725e-01  0.2037645644 -5.542414e-01
## [4114,]  5.640214e-02  7.175554e-01 -1.0438687452 -9.100002e-02
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## [4115,]  2.201313e-01 -1.024988e-01 -0.0249048402  2.421911e-03
## [4116,]  7.266374e-02 -5.076092e-02 -0.0666183060 -6.788281e-02
## [4117,]  8.528164e-02  1.108714e-01 -0.2786426075 -2.697343e-02
## [4118,] -3.540023e-02 -2.790630e-01  0.2536149607  2.729714e-02
## [4119,]  2.637433e+00  9.450949e-01  1.2360880327 -2.764134e-01
## [4120,] -1.903631e+00 -1.211853e+00 -0.6840093276 -1.254584e-01
## [4121,]  2.654769e-02 -8.928846e-02  0.1244665484  1.039867e-01
## [4122,]  8.438957e-01  1.254159e-01  0.2084061920 -5.314262e-01
## [4123,] -8.130070e-02  9.302292e-03 -0.0375126660  4.505220e-01
## [4124,]  8.533607e-02 -5.667401e-02 -0.0781208627 -4.797480e-02
## [4125,] -8.095711e-02 -1.087578e-01  0.2023060085  1.220090e-01
## [4126,]  5.907439e-02 -5.235608e-02  0.0370111853  1.347266e-01
## [4127,] -2.344803e-01  3.186948e-01 -0.4222357279 -1.485864e-01
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## [4129,]  3.319914e-02 -4.480834e-02 -0.0090005091  2.344036e-02
## [4130,]  5.827826e-01 -2.169074e-01 -0.1102182771  2.524833e-01
## [4131,]  8.559655e-01  1.331217e-01  0.2145178570 -5.376024e-01
## [4132,]  1.007082e-01  1.332421e-02 -0.0294523310  1.736774e-01
## [4133,]  9.453263e-03 -3.608954e-02 -0.0823753439 -1.704209e-02
## [4134,]  1.868412e-01  3.937009e-01 -0.6623935955 -2.799696e-02
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## [4136,]  2.438264e-01 -1.818555e-01 -0.0103891638  2.711559e-02
## [4137,]  7.208375e-02 -3.042950e-02 -0.2813928787 -9.944630e-02
## [4138,] -1.628329e-01  1.581904e-01  0.0071599475  2.978319e-01
## [4139,]  1.903527e-02 -8.145847e-02  0.1115545918  9.218145e-02
## [4140,]  2.418400e-01 -1.075140e-01 -0.0115021256 -6.409682e-02
## [4141,] -1.906495e+00 -1.217831e+00 -0.7256817294 -1.415559e-01
## [4142,] -4.735582e-02 -7.054063e-02  0.0081743504  4.933112e-01
## [4143,]  2.798963e-02  1.330331e-02 -0.0225217561  6.060711e-02
## [4144,]  2.697907e-01 -2.200096e-01  0.0223249941  2.159573e-01
## [4145,] -3.769122e-02 -8.600073e-02  0.0635978475  5.787235e-02
## [4146,] -3.347841e-01 -6.126905e-02  0.1623510993  1.476453e-01
## [4147,]  5.253604e-02 -9.424113e-01  0.9209250316  1.472019e-02
## [4148,]  1.287446e-01  1.296516e-02 -0.0628705929 -3.275309e-02
## [4149,]  7.406000e-02 -8.455841e-03 -0.1403197602 -1.070172e-01
## [4150,] -3.924493e-01 -7.686168e-02  0.0390724974  7.871512e-02
## [4151,] -3.889388e-02  1.769944e-03  0.0882892219  7.565684e-02
## [4152,]  5.634501e-02  4.846227e-02 -0.0118417472 -1.666226e-02
## [4153,]  2.112214e-01  4.722871e-01 -0.7547401568 -1.948281e-02
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## [4162,]  3.053573e+00  1.078361e+00  0.5331588938 -3.327348e-01
## [4163,] -1.698149e+00 -9.672062e-01 -0.7929055760 -9.267166e-02
## [4164,] -8.759958e-02  1.028497e-01 -0.1771690070 -8.071874e-02
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## [4165,]  6.035135e-02 -3.272295e-03 -0.1380720778 -1.007307e-01
## [4166,] -2.577122e-02  6.043771e-02 -0.1164366284 -1.982636e-01
## [4167,] -1.125015e-03  6.178576e-02 -0.0308000290 -2.437887e-02
## [4168,]  7.700609e-02 -1.328071e-01 -0.1326051168 -6.146819e-02
## [4169,] -4.056268e-02 -2.215925e-02  0.0063100429  4.362599e-02
## [4170,] -7.412269e-03  1.379008e-01 -0.0926528337  4.708835e-02
## [4171,]  1.780963e-01  1.417120e-01 -0.1471678098  6.118318e-02
## [4172,] -2.468610e-01 -1.825891e-02 -0.0766847905 -2.309266e-02
## [4173,] -8.622934e-02  3.320652e-02  0.0154080443 -1.001560e-02
## [4174,]  1.213539e-01 -1.720847e-01  0.1098486366  1.514802e-01
## [4175,]  3.857536e-01 -9.104401e-02 -0.5784366047 -4.791912e-03
## [4176,]  1.144338e-01 -1.842707e-01  0.1248230029  1.193119e-01
## [4177,] -2.648641e-02 -7.665623e-02  0.1024840369  4.530360e-02
## [4178,]  2.652981e+00 -1.046513e+00 -0.4013885884 -3.721493e-01
## [4179,] -3.230243e-01 -4.151931e-02  0.0563806895  2.681804e-01
## [4180,]  3.824314e-02  8.234121e-03 -0.0090077413  4.697218e-02
## [4181,]  2.791312e-01  7.902048e-02  0.0275926677  8.601567e-02
## [4182,] -2.150677e-01 -8.471973e-02  0.3157972239  2.337947e-01
## [4183,] -2.139533e-01 -4.958849e-02  0.0495252389 -1.739263e-02
## [4184,] -2.195328e-02 -1.237624e-01  0.0729597559  1.661815e-01
## [4185,] -1.291633e-01  8.065702e-03  0.0211266841  1.098365e-01
## [4186,]  4.438704e-02 -4.740851e-04  0.0841925058  1.712880e-01
## [4187,]  2.594802e-01 -2.598852e-01  0.1122854084  1.369714e-01
## [4188,] -2.394561e-02 -2.626408e-03 -0.1255618736 -2.575124e-02
## [4189,]  1.048642e-01 -2.773275e-02  0.0426255325  6.579556e-02
## [4190,] -2.465630e-01 -1.279094e-01  0.0533729987  8.881055e-03
## [4191,]  1.841683e-01 -9.009223e-02 -0.0512516332 -8.173250e-02
## [4192,] -2.340104e-01  3.543356e-02  0.0683504194  1.240016e-01
## [4193,]  2.126042e-01  6.987234e-02 -0.0942439432 -5.067224e-02
## [4194,] -1.870119e+00 -1.153549e+00 -0.7724635415 -1.401785e-01
## [4195,]  9.632718e-02 -1.627969e-02 -0.1093430120 -2.006700e-01
## [4196,] -2.066445e-02  1.881739e-01 -0.1897685279  1.621992e-01
## [4197,] -1.916725e+00  1.240441e+00  0.6598635330  2.757962e-02
## [4198,] -3.602124e-01 -1.414541e-02 -0.0388253649  3.198747e-02
## [4199,] -3.747960e-01 -5.670814e-03 -0.0573131709  3.762968e-02
## [4200,] -6.303617e-02 -7.281721e-02  0.0138153751  4.990985e-01
## [4201,] -5.701453e-02 -1.888119e-02 -0.0246870261 -1.993099e-01
## [4202,]  3.796921e-01  4.841869e-02 -0.0659765077  1.178725e-01
## [4203,]  2.129241e-01 -3.897253e-02 -0.3656558718 -1.036408e-01
## [4204,] -1.859396e+00  1.202272e+00  0.6357290205  3.259885e-02
## [4205,] -2.906950e-01  7.206395e-02  0.0435893344 -4.043748e-02
## [4206,] -1.674371e-02 -1.414501e-01  0.1432167139  1.046246e-01
## [4207,]  8.312167e-01  9.010460e-02  0.2904433895 -4.952238e-01
## [4208,]  2.863516e-02  4.392184e-02 -0.1012326477 -2.117925e-01
## [4209,] -1.869512e+00  1.230678e+00  0.5973418188  4.072223e-02
## [4210,]  1.855819e-01  4.919829e-01 -0.7782317497 -4.879042e-02
## [4211,]  8.333965e-01  1.157362e-01  0.2508834397 -5.016948e-01
## [4212,] -4.699613e-02 -5.076235e-01  0.6697353018  1.745089e-01
## [4213,] -2.033812e-01  2.054540e-02  0.0932842256  1.206298e-01
## [4214,] -3.602318e-01 -3.872507e-02 -0.0091985471  5.698171e-02
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## [4215,] -6.395555e-02 -4.699332e-02  0.0312288206  6.031537e-02
## [4216,] -1.565750e+00 -1.009739e+00 -0.9169018530 -3.129712e-01
## [4217,] -6.825683e-02  3.111000e-01 -0.3532946874  1.039710e-02
## [4218,]  5.545361e-02 -4.640947e-02  0.0682171132  9.372063e-02
## [4219,] -3.806018e-01  2.138458e-02 -0.0282537583  2.165382e-01
## [4220,] -8.271542e-02  2.042892e-01 -0.0514115611  3.028460e-01
## [4221,]  5.805049e-03 -1.190837e-02 -0.2173473599 -7.977882e-02
## [4222,] -1.920633e-01  1.724642e-01 -0.1259244167 -2.720174e-02
## [4223,]  7.689094e-02 -6.727072e-03  0.0294372850  7.005837e-02
## [4224,] -1.976615e-02  7.013782e-02 -0.0236940218  2.918009e-02
## [4225,] -3.414573e-02 -1.573867e-01  0.2161326764  1.500574e-01
## [4226,]  3.144032e-02 -5.809860e-01  1.0017174458  3.578651e-01
## [4227,]  7.916537e-02  9.959816e-02 -0.1034464662 -3.311222e-02
## [4228,]  2.393146e-01 -3.160650e-01  0.0910959575 -2.616972e-02
## [4229,] -1.089130e+00  5.420846e-01  0.6329395633 -1.249689e-01
## [4230,]  8.403962e-01  1.994358e+00  1.5276458167 -6.165365e-01
## [4231,]  1.854322e-01  4.688448e-03 -0.0342934969  1.271878e-01
## [4232,]  1.663221e-01 -1.574453e-01  0.1432114604  1.194809e-01
## [4233,]  2.614532e-04 -2.115425e-02  0.0094634567  3.370514e-02
## [4234,] -1.656736e+00 -1.038966e+00 -0.9075187324 -3.468946e-01
## [4235,] -5.700284e-02  8.516729e-02 -0.0354626427 -1.216194e-02
## [4236,]  1.077743e-01 -2.098293e-01  0.1486761493  1.564866e-01
## [4237,]  7.254582e-02 -7.000429e-02  0.0064290499  2.580645e-02
## [4238,] -7.778907e-02  9.556758e-02 -0.0410228105  4.652769e-02
## [4239,]  2.758218e-01 -2.441035e-01  0.0614470720  2.344091e-01
## [4240,] -2.867476e-02 -1.365104e-02 -0.0330794675 -6.389440e-02
## [4241,] -5.333038e-02 -3.376711e-02  0.0169152282  3.135469e-02
## [4242,]  4.987534e-02 -1.841242e-01  0.2626496411  5.975489e-01
## [4243,]  1.843867e-01 -2.579763e-01  0.1729358333 -1.653005e-02
## [4244,] -1.983409e+00  1.271478e+00  0.6361911334  3.115716e-02
## [4245,] -2.979402e-01 -1.023696e-01  0.1476949680  2.756904e-01
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## [4247,]  8.544433e-02 -6.817715e-02  0.0027705654  3.277521e-02
## [4248,] -6.719117e-01 -5.573265e-01  0.7206196346 -2.512497e+00
## [4249,]  1.412270e-01  1.626497e-01 -0.1799232887  3.092933e-02
## [4250,] -2.284574e-01 -7.337163e-02 -0.0045737996 -7.373577e-04
## [4251,] -1.510674e-01  1.322496e-01  0.0333730467  3.195705e-01
## [4252,]  2.637294e+00 -1.062253e+00 -0.4004644381 -3.550002e-01
## [4253,]  6.466112e-02  2.335057e-02 -0.0125510506  5.166641e-02
## [4254,]  3.197880e-02 -4.227174e-02 -0.0580687541  1.622580e-01
## [4255,] -1.601231e+00 -1.004076e+00 -0.9398133435 -3.284134e-01
## [4256,]  7.952952e-02 -1.072064e-01  0.0321000017  2.097457e-01
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## [4258,]  7.155489e-01  2.198319e+00  1.7246594871 -5.307617e-01
## [4259,]  2.100961e-01 -2.178087e-01  0.0964294402  3.488884e-02
## [4260,] -7.931846e-03 -6.179608e-03 -0.0523268973  2.471249e-02
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## [4263,]  2.582312e-01 -1.757020e-01 -0.0384523288  1.942502e-01
## [4264,] -3.631043e-01 -7.789725e-02  0.0438687741  7.308767e-02
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## [4265,]  2.294419e-01 -2.901511e-01  0.1106262548  2.212603e-01
## [4266,] -6.511550e-03  6.566905e-02 -0.0447687810  1.541661e-01
## [4267,] -1.247879e-01  1.961863e-01 -0.0172410738  1.903004e-01
## [4268,]  2.567965e-01 -1.126955e-01  0.0700450512  1.482465e-01
## [4269,] -1.885203e+00  1.264002e+00  0.6485053123  3.651724e-02
## [4270,]  1.988869e-01  1.243072e-01 -0.5442129146 -2.687204e-01
## [4271,]  1.953329e-01  7.134488e-01 -0.7957850863  2.406678e-02
## [4272,] -1.929521e+00  1.230739e+00  0.6976759445  6.544456e-02
## [4273,]  2.753091e+00  9.441653e-01  1.1602868452 -2.525684e-01
## [4274,]  7.099681e-02  6.356948e-01 -0.7104567909  3.764946e-01
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## [4276,] -1.219677e-01  3.028046e-02  0.0645041824  5.930204e-02
## [4277,]  2.153844e-01  4.525670e-01 -0.7207713555 -1.779314e-03
## [4278,] -6.847589e-02  3.535808e-01 -0.4099715180 -2.884236e-03
## [4279,]  2.748879e+00  9.530364e-01  1.1874271649 -2.633581e-01
## [4280,]  1.127149e-02  1.009542e-01 -0.0561502623  3.629442e-02
## [4281,] -5.539020e-02 -4.076646e-02 -0.0239697506  4.851667e-01
## [4282,]  8.256822e-02 -2.270557e-02 -0.1046623592 -8.416818e-02
## [4283,]  2.426976e-01 -3.977500e-02 -0.3578168959 -9.636626e-02
## [4284,]  9.746182e-02  4.500263e-02 -0.1998568309 -1.215024e-01
## [4285,] -2.339901e-01 -7.483392e-02  0.3429382872  2.542904e-01
## [4286,]  1.374887e-02  6.606172e-01 -0.9491165757 -5.867156e-02
## [4287,]  1.661637e-01 -9.330225e-02  0.1889828022  2.565899e-01
## [4288,]  1.908854e-01 -1.334376e-01  0.1369869841  1.262492e-01
## [4289,] -5.505602e-02  3.433480e-01 -0.3883956287 -1.076527e-02
## [4290,]  2.585658e-01 -1.104719e-01  0.0622949010  1.413541e-01
## [4291,] -3.762409e-01 -1.058011e-01  0.0911827897  8.010220e-02
## [4292,]  1.689527e-02  5.928749e-03 -0.0103625341  7.254433e-02
## [4293,]  1.035640e-02 -5.423512e-02  0.1569151705  2.021184e-01
## [4294,]  2.870808e-01  1.243135e-01 -0.0209637362  7.897958e-02
## [4295,]  6.971799e-01  2.227830e+00  1.6926484718 -5.332270e-01
## [4296,] -2.600106e-01 -1.109745e-01  0.0302230907 -1.438119e-02
## [4297,]  1.037195e-01 -2.183341e-01  0.1241291004 -2.868627e-02
## [4298,]  1.211136e-01  5.898098e-02 -0.0806471035  3.235402e-02
## [4299,] -2.423367e-01 -5.230282e-02  0.0590454368 -8.732595e-03
## [4300,] -9.089116e-03 -2.018142e-02  0.0199964809  4.047123e-02
## [4301,]  5.072843e-03 -5.640770e-02  0.0702120654  8.576919e-02
## [4302,]  4.300071e-02  4.250964e-03  0.1410086306  1.512446e-01
## [4303,]  8.086312e-01  1.035239e-01  0.2912184287 -4.830569e-01
## [4304,] -1.459216e+00 -8.870663e-01 -0.9516926632 -1.342131e-01
## [4305,]  1.387733e-02  1.220972e-02 -0.0557279665  1.475814e-01
## [4306,] -3.475104e-02 -6.160611e-02  0.0666495744  5.549659e-02
## [4307,] -4.993738e-02 -7.639117e-02  0.0158625417  6.410620e-02
## [4308,] -5.528782e-02 -1.519745e-01  0.2636990602  1.662887e-01
## [4309,]  2.278972e-01  6.775627e-01 -0.8341838142  3.493945e-01
## [4310,] -3.568351e-03 -2.250702e-02 -0.0853837194 -1.401978e-02
## [4311,] -2.086189e-01 -6.379317e-02  0.0878463644  2.482103e-03
## [4312,]  1.848785e-03 -1.661484e-02 -0.1826160567 -7.364443e-02
## [4313,] -8.991798e-02  4.699509e-02 -0.0344968575 -4.310287e-02
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## [4315,] -2.447314e-01 -7.975605e-02  0.0974148323 -1.483431e-02
## [4316,] -2.149423e-01 -6.151744e-02  0.1336980340  8.919665e-02
## [4317,]  1.688030e-01  3.218712e-03 -0.0432856871  1.317002e-01
## [4318,]  4.064457e-02 -1.272474e-01  0.0938756506  1.813005e-01
## [4319,] -6.219299e-02  1.473308e-01  0.0425416656  2.246339e-01
## [4320,]  1.071299e-01 -7.445448e-02  0.0067474299  1.907163e-01
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## [4322,] -2.493397e-01  6.530296e-01 -0.7395404672  3.313680e-01
## [4323,]  8.389027e-01  1.382216e-01  0.2246813183 -4.968105e-01
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## [4325,]  2.392999e-01  6.089720e-02  0.5542422351 -4.257014e-01
## [4326,]  1.084606e-01  8.082236e-02 -0.0202747973 -2.934000e-03
## [4327,] -2.682301e-03  1.442836e-01 -0.1176597303  2.786294e-02
## [4328,] -3.349468e-01  1.182330e-03 -0.0004859732  2.453765e-01
## [4329,]  3.196108e-02 -1.325080e-01  0.1081144877  1.631533e-01
## [4330,] -3.950015e-02 -1.056690e-01  0.1324876980  5.542741e-02
## [4331,]  1.195160e-01  6.506359e-02 -0.0742953360  4.449902e-02
## [4332,] -1.004472e-01 -1.341496e-02  0.0848842992 -1.560160e-03
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## [4337,] -2.178756e-01 -1.043582e-01  0.0114518386  3.798017e-02
## [4338,] -6.591610e-02  1.551009e-01 -0.1551443711 -9.877950e-03
## [4339,]  2.022236e-01 -2.595731e-01  0.1888016543  2.901085e-03
## [4340,] -6.972662e-03 -7.090645e-02  0.1042530147  7.004826e-02
## [4341,] -1.598727e+00 -1.052047e+00 -0.8729098791 -2.962764e-01
## [4342,] -3.372565e-02  4.578827e-02  0.0239105609 -1.616001e-02
## [4343,]  8.408339e-01  1.073719e-01  0.2870640057 -4.767756e-01
## [4344,] -3.180918e-01  6.394371e-01 -0.8120071476  4.056785e-01
## [4345,] -1.384510e-01 -3.769061e-02  0.0829173515  1.379270e-01
## [4346,] -1.216100e-02 -3.712437e-01  0.3305701213  2.676160e-02
## [4347,]  3.173335e-01 -3.973238e-01 -0.0528780081 -6.937605e-03
## [4348,] -1.231003e-01 -1.846454e-01  0.2434184899  1.421344e-01
## [4349,]  5.217625e-02 -1.556430e-01  0.1723434334  2.221454e-01
## [4350,]  3.138605e-01 -8.037883e-02  0.1167913205  1.893124e-01
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## [4352,]  3.127988e-01  8.402790e-02  0.4577904383 -4.038260e-01
## [4353,]  7.334046e-03  1.034268e-01 -0.0812351021 -2.323793e-02
## [4354,] -1.499467e-01 -5.726617e-03  0.0452883000  1.218982e-01
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## [4356,]  1.122527e-01  1.708394e-01 -0.2308602666  8.032862e-03
## [4357,] -2.165184e-01  1.174393e-02  0.1145384343  1.246326e-01
## [4358,]  2.614040e-01 -2.035143e-01  0.0126121541  2.066423e-01
## [4359,] -1.404571e+00  6.726378e-01  0.6429606652  5.589386e-02
## [4360,]  1.310103e-01 -4.421828e-02  0.0236288960  3.233625e-02
## [4361,]  1.411010e-01 -2.323704e-01  0.2703901341  6.370304e-01
## [4362,]  1.826230e-01  6.827717e-01 -0.7494385046  3.820245e-02
## [4363,] -2.629490e-01 -3.864008e-02  0.0513275437 -1.404334e-02
## [4364,]  2.621858e+00 -1.039007e+00 -0.4176550432 -3.973458e-01
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## [4365,] -3.689704e-02 -7.072886e-02  0.0370153135 -3.196905e-02
## [4366,]  1.312438e-01 -2.404125e-01  0.2866743210  6.489318e-01
## [4367,] -3.298902e-01 -6.412439e-02  0.0346519346  8.548328e-02
## [4368,]  4.970607e-02 -1.134722e-03 -0.1002951219  1.348909e-01
## [4369,] -2.294020e-01 -1.018234e-01  0.0211066449 -8.437626e-03
## [4370,] -2.717972e-02 -1.897139e-01  0.3300146042  1.775388e-01
## [4371,] -1.461531e-02  1.037627e-01 -0.0128375618  3.487146e-02
## [4372,] -1.923858e+00 -1.228200e+00 -0.7033465550 -1.466751e-01
## [4373,] -7.891603e-03 -1.341655e-01  0.1121990608  7.120190e-02
## [4374,] -2.161427e-01  3.313035e-02  0.0887804844  1.000790e-01
## [4375,]  1.174267e-01 -1.867360e-01  0.1906644465  1.163055e-01
## [4376,] -2.684593e-02 -5.766339e-02  0.0883378296  8.198032e-02
## [4377,]  1.383910e-01 -6.713719e-02 -0.0671560000  3.665431e-02
## [4378,] -1.489244e+00 -9.491368e-01 -0.8509823670 -1.068171e-01
## [4379,]  9.105525e-02  8.766606e-02 -0.0874606057  5.524313e-02
## [4380,] -1.471893e+00  6.712666e-01  0.6511037303  5.714712e-02
## [4381,]  1.205668e-01  1.043889e-01 -0.1588345607  7.780582e-03
## [4382,] -3.196465e-01  6.587466e-01 -0.8381534342  4.000973e-01
## [4383,]  1.112591e-01  4.225691e-01 -0.3762440597  2.237610e-02
## [4384,] -1.933704e-02  1.851160e-01 -0.1448796128  1.738904e-01
## [4385,] -3.363632e-01  6.494215e-01 -0.8275936596  4.090024e-01
## [4386,] -2.682946e-01 -1.034887e-01  0.0190212064 -1.215213e-02
## [4387,] -9.244000e-02 -2.522932e-02  0.0141590131  4.706075e-01
## [4388,] -2.142065e-01  2.171503e-02  0.0963265499  1.265148e-01
## [4389,]  7.682190e-02  1.579635e-02  0.0075966397  1.207184e-01
## [4390,]  3.495061e-02  1.022345e-01 -0.1282685731  4.310464e-02
## [4391,]  1.989870e-01 -2.557444e-01  0.0513740942  2.054126e-01
## [4392,]  6.416196e-03 -1.574166e-01  0.0785335254  2.284375e-01
## [4393,] -3.227729e-01  6.600460e-01 -0.8396826403  4.009135e-01
## [4394,]  1.112494e-01 -2.404527e-01  0.1818511518  1.552030e-01
## [4395,] -4.334415e-02  1.019227e-01 -0.0533099687 -4.729825e-04
## [4396,] -1.833550e+00  9.108119e-01  0.8220049081 -1.418241e-01
## [4397,] -6.924488e-02 -1.225659e-02 -0.0254626289 -4.475102e-02
## [4398,] -2.656041e-01  3.805667e-02  0.0710994423  1.517185e-01
## [4399,] -4.337029e-03 -4.700014e-02 -0.1547504168 -5.740306e-02
## [4400,]  7.139849e-02 -2.062500e-02  0.0476956865  8.085786e-02
## [4401,] -4.828419e-03  2.106864e-01 -0.1924234579  1.742314e-01
## [4402,]  8.584843e-01  8.785517e-02  0.2849106854 -4.974119e-01
## [4403,]  2.099525e-01 -2.247548e-01  0.0422145669  2.035175e-01
## [4404,]  1.615306e-01 -1.987846e-01  0.0759913892  1.478563e-02
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## [4406,] -1.244540e-01 -3.422053e-02 -0.0399229312 -6.603105e-02
## [4407,] -1.257749e-01  5.978489e-02 -0.0065301942 -2.316502e-02
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## [4409,] -1.784832e-02 -2.148313e-01  0.1950836059  1.598078e-01
## [4410,] -9.477227e-02  4.766366e-02 -0.0400262604 -4.353899e-02
## [4411,]  3.000761e-02 -7.912689e-02 -0.0129180848  1.721881e-01
## [4412,] -1.504953e+00  7.160692e-01  0.6961839873  6.594299e-02
## [4413,]  1.038142e-01  8.766892e-02 -0.1115454545  3.448520e-02
## [4414,]  1.512350e-01 -1.782792e-01  0.1911200172  6.095879e-01
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## [4415,] -6.736442e-02  7.255984e-02  0.0175761801  4.281892e-02
## [4416,] -3.676708e-03 -4.655758e-02 -0.0503790285 -2.945980e-02
## [4417,] -1.499408e-01 -2.891081e-02  0.0708047603  1.268339e-01
## [4418,]  2.316056e-01 -2.024995e-01 -0.0011437861  1.913796e-01
## [4419,] -3.078814e-01  6.789010e-01 -0.8633099230  3.896223e-01
## [4420,] -3.900015e-01 -1.468383e-02 -0.0354977225  4.572004e-02
## [4421,]  8.410642e-01  1.033833e-01  0.2822319097 -4.886633e-01
## [4422,]  1.861548e-01 -5.354882e-02 -0.0730017039  6.286607e-02
## [4423,]  1.396179e-01  6.895557e-03  0.0455780984  9.403477e-02
## [4424,]  1.260946e+00  1.516679e-01 -0.1357568607 -5.143007e-01
## [4425,]  2.686429e-01  8.999566e-02  0.4470923729 -4.052896e-01
## [4426,] -1.509554e+00 -9.155167e-01 -0.8922464964 -1.405933e-01
## [4427,]  1.906972e-01  3.694396e-01 -0.6333295402 -9.347581e-04
## [4428,]  1.646865e-01 -2.071282e-01  0.1084720005 -3.865465e-02
## [4429,]  2.257730e-01  1.417665e-01 -0.0954797148 -3.485166e-04
## [4430,]  8.508697e-02 -7.761975e-02  0.0644301251  6.101017e-01
## [4431,] -5.024896e-02 -1.799939e-01  0.2498341279  2.041133e-01
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## [4433,] -1.679494e-01  3.747423e-02  0.0680311876  3.002581e-02
## [4434,]  1.373496e-01 -3.235183e-02 -0.1947765230 -1.617128e-02
## [4435,] -1.447051e-01 -6.727389e-02  0.0113149763 -3.362234e-02
## [4436,] -1.914500e-01  7.235829e-02  0.0548461845  4.558344e-02
## [4437,] -4.644162e-02  1.689293e-02  0.0488033075  2.278249e-02
## [4438,]  2.616655e+00 -1.060901e+00 -0.4011656781 -3.971821e-01
## [4439,]  3.078761e-01  1.069255e-01  0.4183709503 -4.141712e-01
## [4440,] -3.778823e-02 -4.344914e-02  0.0898511717  1.938860e-01
## [4441,]  1.208251e-01 -3.015161e-01  0.2298930588  1.354487e-02
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## [4443,] -1.583146e-03  1.255256e-01 -0.0768536598  5.070362e-02
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## [4445,]  1.686637e-01  3.947783e-01 -0.6449293786 -4.812880e-04
## [4446,] -8.057391e-02  6.768588e-02 -0.1065145843 -6.286444e-02
## [4447,] -1.845907e+00  9.237383e-01  0.8073091310 -1.539485e-01
## [4448,] -1.648357e+00  6.930653e-01  0.7868221352  6.620917e-02
## [4449,] -1.879328e-03  4.576478e-02  0.0002194234  2.751345e-03
## [4450,]  2.249625e-01  4.533447e-01 -0.7105339741 -6.790398e-03
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## [4452,] -6.806951e-02  9.733815e-02 -0.0619007279  4.253805e-02
## [4453,]  1.010064e-01 -3.369934e-01  0.2265017495 -7.444684e-03
## [4454,]  1.396988e-01 -1.219296e-01  0.0460908928  1.141745e-01
## [4455,]  2.152947e-02  1.158485e-01 -0.0822724841  4.071178e-02
## [4456,] -3.907673e-01 -1.085087e-01  0.0884862395  9.900876e-02
## [4457,] -1.820009e-03 -8.167540e-02 -0.0130959750  6.492120e-03
## [4458,]  1.292729e-01 -4.334412e-02 -0.0087516627  4.765895e-02
## [4459,]  5.317373e-02 -7.419671e-02 -0.0218887149 -4.958253e-02
## [4460,]  4.169813e-01  2.636102e-01 -0.5895850538 -1.437675e-01
## [4461,]  1.144646e-01  1.155275e-01 -0.1270240869  3.025173e-02
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## [4467,] -1.133868e-01  8.691320e-02 -0.0308992183 -4.481870e-02
## [4468,]  2.563005e-01 -2.340807e-01  0.2265286954  1.978976e-01
## [4469,]  1.257123e-01  2.451302e-01 -0.1649777423 -7.974999e-02
## [4470,]  1.857831e-01  1.011247e-02  0.0744941328  1.489379e-01
## [4471,]  2.746204e-01 -2.200608e-01  0.0193392960  2.188050e-01
## [4472,]  4.496998e-01 -2.689712e-01 -0.2192583802  5.777586e-02
## [4473,] -9.590913e-02 -4.895947e-03  0.0067920871 -8.181586e-03
## [4474,]  2.060110e+00 -1.830764e+00 -1.6881674460 -9.129657e-01
## [4475,] -3.134963e-01 -9.289262e-02 -0.0122178855  7.245172e-02
## [4476,]  1.142096e-01 -1.811922e-01  0.1918038648  6.243263e-01
## [4477,] -3.641344e-01 -2.625265e-02 -0.0132975778  4.354739e-02
## [4478,] -1.931946e-02 -3.192356e-02  0.0646767530  9.629331e-02
## [4479,] -2.633402e-01 -1.110783e-01  0.1463152795  2.055469e-02
## [4480,]  1.213177e-01 -2.364303e-01  0.2697232048  6.416024e-01
## [4481,] -1.204469e-01  3.883387e-02  0.0214018424 -2.294117e-03
## [4482,]  1.252562e-01 -1.526485e-01  0.1714820984  6.209042e-01
## [4483,] -2.470373e-02  2.190333e-02  0.0202728182 -2.226627e-04
## [4484,] -2.279407e-01 -6.910839e-02 -0.0204290823 -1.648977e-02
## [4485,]  3.261228e-02 -6.564549e-02  0.1153418854  7.819055e-02
## [4486,] -2.351257e-01 -2.487856e-02  0.0955477358  6.479795e-02
## [4487,]  3.321311e-02 -9.866346e-03  0.0253887698  6.191097e-02
## [4488,]  1.782493e-01 -2.235915e-01  0.1416903053 -1.449389e-02
## [4489,]  1.733491e-01 -1.642877e-01  0.0655361935 -6.619291e-02
## [4490,] -7.222734e-02 -7.275427e-02  0.1007237757  7.384333e-02
## [4491,]  2.001651e-02  3.440128e-01 -0.2808671418  3.673707e-02
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## [4493,] -5.239816e-01 -6.193323e-01  0.6862971627 -2.539689e+00
## [4494,]  7.465112e-03 -8.765111e-02 -0.0872906480 -4.983422e-02
## [4495,] -1.025790e-02  6.855439e-02 -0.0319564620 -1.475334e-02
## [4496,]  6.414580e-02 -1.271282e-02  0.0720522982  1.415333e-01
## [4497,]  7.007390e-02 -1.661523e-01  0.1601847873  1.767548e-01
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## [4499,] -6.112298e-02 -9.657706e-03  0.0396972383  1.173375e-01
## [4500,]  2.306535e-01  7.014323e-01 -0.8585556336  3.423104e-01
## [4501,]  1.991922e-01  6.848922e-01 -0.7412170484  3.109794e-02
## [4502,] -1.622532e+00 -1.098274e+00 -0.8167723194 -2.886882e-01
## [4503,] -1.469173e+00 -9.723770e-01 -0.8200655027 -1.067519e-01
## [4504,] -1.502726e-01 -4.301087e-02  0.2058047975  1.591276e-01
## [4505,]  7.859714e-02 -3.045676e-02 -0.0973651411 -6.380287e-02
## [4506,] -2.819868e-01  5.504450e-02  0.0356737363  1.409801e-01
## [4507,] -8.713454e-02  6.992967e-02 -0.0032125010 -2.073994e-02
## [4508,]  1.640564e-01 -7.248776e-02 -0.3172216265 -1.069309e-01
## [4509,]  7.488249e-02  6.735105e-01 -0.9806870627 -6.299466e-02
## [4510,] -7.685001e-02 -1.887316e-01  0.3365535346  1.856059e-01
## [4511,] -4.646357e-02 -1.891189e-02  0.0284592981  2.295881e-01
## [4512,]  6.059351e-02  5.930735e-02 -0.0624830573  4.885117e-02
## [4513,]  1.327867e-01 -2.066150e-01  0.1533988142  1.281004e-01
## [4514,] -1.062566e-01 -5.055292e-01  0.6817052653  1.758710e-01
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## [4517,] -2.513012e-01  4.390383e-01 -0.4930726257  2.054910e-02
## [4518,]  2.469931e-01  4.516366e-01 -0.7119691315 -2.783781e-02
## [4519,] -3.787858e-02  7.946844e-02 -0.0558998072 -2.229949e-02
## [4520,]  1.195308e-01  1.227038e-01 -0.1224739678  6.086897e-02
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## [4523,]  3.028814e-01 -1.457476e-01  0.0673506548 -7.692468e-03
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## [4529,] -2.083419e-01 -3.996569e-02  0.0555316392  1.753147e-03
## [4530,] -5.213965e-02 -8.326977e-02  0.0948613437  6.634325e-02
## [4531,] -2.783173e-01 -4.602739e-02 -0.0501340409 -1.608547e-02
## [4532,] -3.137756e-01 -1.161779e-01  0.1521750074 -3.984730e-03
## [4533,]  1.485451e-01 -2.210320e-01  0.1149462353  2.158446e-02
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## [4535,]  1.630399e-01 -1.368780e-01  0.1681670168  1.189746e-01
## [4536,] -1.822993e-03  1.870696e-01 -0.1641640684  1.671127e-01
## [4537,]  2.471880e-01 -2.135693e-01  0.0042755505  1.959559e-01
## [4538,]  3.037047e-04  1.650014e-01 -0.0791188441  1.736145e-02
## [4539,]  1.405482e-02  1.906163e-01 -0.1709027056  1.506733e-01
## [4540,]  1.595269e-01 -1.673489e-01  0.0517604744  4.488631e-03
## [4541,] -1.581817e+00 -1.034903e+00 -0.8726697723 -2.949673e-01
## [4542,]  2.682791e-01  8.046510e-02  0.4642822367 -3.848876e-01
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## [4544,]  1.305088e-01 -2.690953e-01  0.3171450013  6.510545e-01
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## [4546,] -1.684321e-01  7.644211e-02 -0.0097856935 -6.319917e-02
## [4547,] -1.811696e-01 -8.617994e-02  0.1337440556  1.502142e-02
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## [4549,] -8.693525e-02 -8.847262e-02  0.0469072761  5.158105e-01
## [4550,] -8.337918e-03 -5.738700e-02 -0.1316481080 -6.761421e-02
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## [4556,]  3.025986e-01 -1.635652e-02 -0.4549134018 -5.204479e-02
## [4557,]  1.645740e-01 -1.790834e-01  0.1241740127  1.595141e-01
## [4558,]  2.313551e-01  1.991371e-01 -0.0573869104 -5.275487e-02
## [4559,]  3.851529e-02 -8.546506e-02 -0.0438409347 -2.216775e-02
## [4560,] -6.384390e-02  4.499691e-02  0.0516725744  4.123827e-02
## [4561,] -1.559970e-01 -3.519460e-02  0.0909610121  1.410467e-01
## [4562,]  5.010248e-03  2.102431e-02 -0.0595910909  3.745085e-02
## [4563,]  4.771537e-03  9.361568e-02  0.0070693532  4.187623e-02
## [4564,] -6.750316e-02 -1.870980e-02  0.1272710676  1.210938e-01
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## [4565,]  6.110404e-02 -3.695661e-01  0.2556173489 -4.362629e-02
## [4566,] -2.291330e-01  5.580857e-02  0.0504381951  1.121044e-01
## [4567,]  2.717857e+00  9.909731e-01  1.1422248564 -2.493809e-01
## [4568,] -2.841434e-01 -7.135370e-02 -0.0359988390  4.611890e-02
## [4569,]  1.924069e-02 -7.255440e-02  0.1380258234  1.152122e-01
## [4570,] -8.522186e-02 -7.032397e-02  0.1131756914  1.223737e-01
## [4571,] -4.091563e-01 -8.986058e-02  0.0796735682  8.718041e-02
## [4572,] -2.451052e-01 -3.059244e-02  0.1006004846  9.277083e-02
## [4573,]  2.294168e-02  5.015807e-01 -0.4373906987  4.795895e-01
## [4574,]  1.362409e-01 -1.571834e-01  0.1679044032  1.188803e-01
## [4575,]  2.743802e+00  8.699608e-01  1.2886210607 -2.205048e-01
## [4576,]  1.302222e-01 -1.790414e-01  0.1918888168  6.125728e-01
## [4577,]  1.908527e-02  1.417178e-03  0.0251733690  4.994689e-02
## [4578,]  1.130972e-01  6.789969e-02 -0.0587163053  6.738735e-02
## [4579,] -1.691338e-01 -4.241851e-02  0.1263717728  2.233345e-01
## [4580,]  2.635717e-01 -1.535118e-01  0.1190022071  1.569911e-01
## [4581,] -1.899046e+00  9.327573e-01  0.7946711528 -1.536974e-01
## [4582,] -3.195186e-01  6.854800e-01 -0.8670479784  3.929657e-01
## [4583,]  1.762299e-01 -1.323279e-01  0.0294392043 -5.168760e-02
## [4584,] -3.145819e-02 -8.297463e-02  0.1086564979  5.270739e-02
## [4585,]  2.637557e+00 -1.042713e+00 -0.4030570963 -3.658891e-01
## [4586,] -1.575027e+00 -1.061852e+00 -0.8505028460 -2.829309e-01
## [4587,]  3.974622e-02 -9.451984e-02  0.0307370274  1.771018e-01
## [4588,]  4.781066e-01  1.143480e-01 -0.0155537528  2.153679e-02
## [4589,]  2.221031e+00  1.038886e+00  1.2137017816 -3.133504e-01
## [4590,] -1.039438e-01 -4.427865e-02  0.1166531795  5.950081e-02
## [4591,] -1.029390e-01  1.133473e-01 -0.1516405075 -4.867591e-03
## [4592,] -9.328946e-02 -1.107440e-01  0.1541462854  1.145536e-01
## [4593,] -1.551609e-01 -4.438916e-02  0.1373885111  5.775184e-02
## [4594,]  1.046111e-03  3.620720e-01 -0.2057982673 -9.214669e-02
## [4595,]  5.436270e-01 -8.486473e-01  0.7573810766  2.359140e-01
## [4596,] -1.006211e-01  2.175004e-01 -0.0200815077  1.063987e-01
## [4597,]  1.360973e-01 -3.692275e-01  0.2761804118 -2.120650e-03
## [4598,] -2.321716e-02 -2.836782e-02 -0.0725718599 -6.946208e-04
## [4599,] -1.386206e-01 -2.801064e-02  0.0110376207  9.554677e-02
## [4600,]  1.897380e-01  9.832355e-04 -0.0892214447  6.025231e-01
## [4601,]  2.917340e-02  3.448424e-02 -0.0223468191  6.752209e-02
## [4602,] -1.261283e-01 -5.330458e-02  0.0596423566  5.846692e-02
## [4603,]  3.850291e-02 -1.003187e-01 -0.0484957030  7.098731e-02
## [4604,]  1.377615e-01 -1.321130e-01  0.0527244084  1.339045e-01
## [4605,]  6.250716e-02  4.941525e-02 -0.0274137675  8.927639e-02
## [4606,]  1.725013e-01 -2.004287e-01  0.2342209536  1.896297e-01
## [4607,]  9.223140e-03  3.118354e-02 -0.1388429272 -2.492470e-02
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## [4609,]  1.152154e-01  2.917900e-02 -0.0111822188  7.403345e-02
## [4610,]  2.758676e-01  1.050540e-01  0.4328581997 -4.079821e-01
## [4611,]  3.137827e-01  4.671090e-01 -0.6100861403 -3.956895e-01
## [4612,]  2.312953e-01 -1.239680e-01  0.0257428692 -4.802966e-02
## [4613,]  9.319957e-02 -2.452902e-02 -0.0831170653 -5.727366e-02
## [4614,] -8.041286e-02 -5.151159e-02  0.0771909974  5.680277e-02
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## [4615,]  1.480985e-01 -3.916770e-01  0.3075603279  3.005810e-02
## [4616,] -8.496193e-04  4.318772e-02  0.0806676356  7.201813e-02
## [4617,] -7.507007e-02 -1.164492e-01  0.0214250527 -3.614886e-02
## [4618,] -4.686728e-02  3.609392e-01 -0.1791510644 -1.185057e-01
## [4619,]  3.487760e-01  3.686875e-01 -0.2478629889 -1.624510e-01
## [4620,] -9.873002e-02 -1.065986e-01  0.1462011824  6.915522e-02
## [4621,] -9.052956e-02 -7.895677e-02  0.0972581048  1.410683e-01
## [4622,] -6.449922e-02 -5.695242e-02  0.1012737822  5.265352e-02
## [4623,]  5.732593e-03 -1.155623e-01  0.1077593082  8.138818e-03
## [4624,]  2.336842e-02 -3.613854e-02  0.0708690983  7.142266e-02
## [4625,] -1.610788e-02  2.095227e-02 -0.1155296177 -2.357337e-02
## [4626,] -9.365461e-02 -2.099987e-01  0.2037432869  5.233531e-02
## [4627,]  1.012440e-01  2.815704e-02  0.0101357162  4.395237e-02
## [4628,] -5.493282e-02  1.501269e-02  0.0955810638  5.014933e-02
## [4629,] -4.007420e-01 -5.898820e-02  0.0391373692  7.686854e-02
## [4630,]  2.669982e-01 -1.280333e-01 -0.0803575549 -9.374098e-02
## [4631,]  3.068609e-01 -9.875677e-02  0.1604204611  2.366743e-01
## [4632,]  8.711788e-02 -3.735571e-01  0.2872103245 -1.561885e-02
## [4633,] -3.366310e-01  6.299016e-01 -0.7871384453  4.181451e-01
## [4634,] -7.674066e-02  1.746233e-01 -0.1707337769 -2.052660e-02
## [4635,] -1.542508e-01 -9.402772e-02  0.0932683500  1.052445e-01
## [4636,]  7.697156e-02 -1.622814e-01  0.1596519118  1.285402e-01
## [4637,] -1.389798e-01 -2.793882e-02  0.1292712711  2.210000e-01
## [4638,]  1.534832e-01 -1.177313e-01  0.0141382145 -4.025336e-02
## [4639,] -1.847324e+00 -1.108349e+00 -0.7434021166 -1.989854e-01
## [4640,]  4.190452e-01 -3.638329e-01  0.1510929541  2.028139e-03
## [4641,]  4.255527e-02  9.202586e-03  0.1142564016  1.147282e-01
## [4642,]  1.115254e-01 -3.795868e-01  0.3117661374  3.383772e-02
## [4643,]  3.035562e-01 -3.252922e-01 -0.1233253644 -1.447839e-02
## [4644,] -6.722140e-02  6.032495e-02  0.0564406993  4.189054e-02
## [4645,]  1.302662e-01 -1.517697e-01  0.1814888715  6.198112e-01
## [4646,]  1.001820e-01 -9.305821e-02  0.0813290919  9.939481e-02
## [4647,] -4.447016e-02 -8.343205e-02  0.0672220012 -2.057550e-02
## [4648,] -6.807850e-02  9.915187e-02 -0.0750909026 -2.063348e-02
## [4649,] -2.421888e-01  4.649587e-02  0.0804644074  1.067777e-01
## [4650,] -1.328915e-01 -1.726966e-01  0.4407270844  1.819824e-01
## [4651,]  1.202231e-02 -6.203352e-02 -0.0357039076 -7.106633e-03
## [4652,] -1.091674e-01  7.445173e-02 -0.1337081976 -5.766537e-02
## [4653,] -1.675842e-02 -6.864387e-03  0.0405708332  4.167433e-02
## [4654,]  1.057122e-01  9.744044e-03 -0.1397790082 -1.015329e-01
## [4655,] -7.809956e-02 -2.866321e-02 -0.0302098152  1.034153e-01
## [4656,] -8.017052e-02  1.624777e-01 -0.1560392399 -1.647521e-02
## [4657,]  9.863200e-01  2.014075e+00  1.5245838358 -4.796029e-01
## [4658,] -5.855202e-03 -8.288510e-02 -0.0169819202 -2.234671e-03
## [4659,] -9.448768e-03 -3.427855e-02  0.0737980312  8.375236e-02
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## [4661,] -3.352838e-01  6.666933e-01 -0.8377702312  4.057142e-01
## [4662,] -1.341014e-01 -6.341599e-02  0.0494881957  9.295320e-02
## [4663,]  9.903244e-02 -1.677111e-01  0.1848781178  1.340148e-01
## [4664,]  9.598229e-02 -4.449042e-02  0.0327716938  9.324139e-02
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## [4665,]  1.552667e-01 -1.389295e-03 -0.0199322289  3.023100e-02
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## [4667,]  1.732341e-01  1.718453e-02 -0.0510940734  2.692980e-02
## [4668,] -1.009930e-02  2.618553e-02 -0.0016081219  4.104868e-02
## [4669,] -3.987118e-02  2.856372e-02  0.0216458119  1.084284e-01
## [4670,] -2.073487e-01  1.003839e-01 -0.0387947731  5.137224e-03
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## [4672,]  3.186928e-01  1.195701e-01  0.4196248024 -4.104359e-01
## [4673,] -8.489632e-02 -4.188433e-02 -0.0325740735  8.772727e-02
## [4674,]  9.375063e-02 -9.237381e-02  0.0819382392  1.102803e-01
## [4675,] -1.018144e-01 -1.111502e-01  0.3008333007  1.765944e-01
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## [4678,] -4.421045e-02  7.960483e-02  0.0062202484 -7.306254e-03
## [4679,] -5.761105e-02 -9.222570e-02  0.1666958477  3.961978e-02
## [4680,]  2.839858e-02 -2.003704e-01  0.2281503129  2.138486e-01
## [4681,] -3.160763e-01  6.520231e-01 -0.8128130982  4.041377e-01
## [4682,]  1.452487e-02  8.732514e-02 -0.0803835237 -3.634083e-02
## [4683,]  1.060855e+00  1.946425e+00  1.5325503658 -4.596802e-01
## [4684,]  1.110545e-01  6.870158e-02 -0.0716447573  2.800248e-02
## [4685,]  9.889494e-02 -2.228115e-01  0.1776734524  5.665567e-02
## [4686,]  9.581601e-02 -3.783989e-02 -0.1289763988 -7.358044e-03
## [4687,] -1.497663e-01 -5.776998e-02  0.0512335042  9.894422e-02
## [4688,]  3.525094e-01 -1.114817e-01  0.1882771704  2.260554e-01
## [4689,]  2.059419e-01  2.593292e-01 -0.2186865389 -2.317655e-01
## [4690,]  1.038362e-01  6.199073e-02 -0.0306090360  5.732768e-02
## [4691,] -6.302224e-02  1.295993e-01 -0.0385496239  3.493168e-02
## [4692,]  1.747203e-01 -3.024742e-01  0.2696360227  3.211957e-02
## [4693,]  1.831692e-01 -6.687484e-02 -0.0532450129  6.972698e-02
## [4694,] -1.560033e-01 -5.015935e-03  0.0578561096  1.311616e-01
## [4695,] -2.131126e-01  7.073818e-02  0.0468225220  9.603851e-02
## [4696,]  8.959405e-02  1.322494e-01 -0.2154901777 -1.482404e-02
## [4697,]  3.721258e-01 -7.651897e-02  0.1230545578  2.254974e-01
## [4698,]  3.024225e-01  7.643319e-02  0.4851531594 -3.937212e-01
## [4699,] -1.198061e-02 -7.820812e-02  0.1214427291  8.802925e-02
## [4700,]  4.180072e-02 -1.746669e-01  0.1631718362 -4.096994e-03
## [4701,]  6.971860e-01 -2.612555e-01 -0.2628918398  1.230098e-01
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## [4703,] -6.133968e-02  9.467164e-02 -0.0216957708  3.864816e-02
## [4704,]  1.095689e-01 -3.993198e-03 -0.0370703515 -1.269377e-01
## [4705,]  2.019933e-01  4.241835e-02 -0.0598399507  7.067947e-02
## [4706,]  7.065926e-02  9.905074e-02 -0.0392699864 -5.743254e-03
## [4707,]  6.119605e-02  4.671285e-02 -0.0139934341  8.953787e-02
## [4708,] -7.942159e-02 -7.530397e-02  0.1305023420  1.759954e-01
## [4709,]  3.564415e-02 -1.657518e-01  0.1802169834  1.898348e-01
## [4710,]  1.121545e-01  5.449399e-02 -0.1635429529 -4.433882e-02
## [4711,] -8.330101e-02  1.220872e-01 -0.1793013237 -8.013809e-02
## [4712,]  1.912730e-01  8.572711e-02  0.0788164379 -1.779530e-02
## [4713,] -7.192747e-04  5.136368e-02 -0.0498197159 -7.897736e-03
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## [4715,] -1.344827e-01 -2.984651e-02  0.0056618140 -7.055277e-02
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## [4717,]  1.997548e-01 -1.636242e-01 -0.2135308010 -1.847197e-01
## [4718,] -2.150373e-01  4.254147e-02  0.0820408051  1.124999e-01
## [4719,] -1.438056e-01  1.273611e-01 -0.0584690124  1.050569e-02
## [4720,]  9.664583e-02 -1.758781e-02 -0.0839799939 -5.030537e-02
## [4721,]  7.881689e-01 -2.262950e-01 -0.2771442585  7.116478e-02
## [4722,] -1.757866e-01 -3.355144e-02  0.1299345898  2.169393e-01
## [4723,] -8.072720e-03  2.337607e-02 -0.1433646375 -5.294176e-02
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## [4726,] -1.043322e-02 -7.080991e-02  0.0164503739  4.010427e-03
## [4727,] -4.275540e-02 -1.203557e-01  0.1155722239  9.792002e-02
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## [4729,] -9.603221e-02  1.677927e-01  0.0361677270  1.791056e-01
## [4730,] -3.121506e-01  1.694779e-01 -0.2653297854 -6.762287e-02
## [4731,] -9.618008e-02 -9.746645e-02  0.2071722990  2.059120e-01
## [4732,] -1.567846e-01 -1.303802e-02 -0.0537698065 -1.059612e-01
## [4733,] -9.768813e-02 -1.105077e-01  0.1322314800  8.699996e-02
## [4734,] -8.920964e-02  6.459288e-02  0.0385272725  7.033173e-02
## [4735,] -6.584935e-02 -1.295343e-01  0.1238037809  1.167345e-01
## [4736,] -1.434266e-02 -1.459966e-01  0.0073891929 -1.083613e-01
## [4737,]  6.513066e-02  1.912346e-01 -0.2797696646 -6.633823e-03
## [4738,] -7.520192e-02  7.690458e-02 -0.0047115430 -1.009544e-02
## [4739,] -2.009975e-01 -2.272064e-01  0.2233445833 -3.640211e-02
## [4740,] -1.509964e-01 -1.475258e-01  0.0430011037 -8.306618e-02
## [4741,]  3.984895e-03 -2.062637e-01  0.1444727378 -3.761314e-02
## [4742,] -1.983929e-01  4.880246e-01 -0.4598929269 -7.470792e-02
## [4743,] -7.761734e-02 -3.149658e-02  0.0303353599 -3.936146e-02
## [4744,] -1.946170e+00  9.708467e-01  0.8108437661 -4.369784e-02
## [4745,]  1.380326e-01 -2.171040e+00 -1.2761519606 -6.829411e-02
## [4746,] -4.394008e-02  1.426455e-01 -0.1028767919  6.826633e-02
## [4747,] -1.869477e-01  1.748161e-01 -0.1098352607 -8.937820e-02
## [4748,]  5.247333e-01  1.771374e-01  0.1546733227 -7.056629e-01
## [4749,] -2.032527e-01 -4.558775e-02  0.1460321277  5.301374e-02
## [4750,]  4.493477e-02 -3.862554e-03 -0.0368999319 -8.311573e-02
## [4751,]  5.342482e-02  5.986969e-02 -0.1081526083  9.731164e-02
## [4752,] -2.080387e-01  1.300475e-01 -0.0386470881  3.216696e-02
## [4753,]  1.632843e-01  2.364175e-01 -0.2603848268 -1.804560e-01
## [4754,] -1.134931e-01  2.110527e-01 -0.0343673578  5.376137e-02
## [4755,]  6.813847e-02 -2.872315e-01  0.5860802993  7.694615e-02
## [4756,] -4.870216e-03 -4.133438e-01  0.8120084085  3.043368e-01
## [4757,]  2.204841e-01 -2.546040e-01 -0.0915949854 -3.703676e-02
## [4758,]  4.143559e-01 -2.423158e-01 -0.2661426269  1.703604e-03
## [4759,]  2.000178e+00  1.213472e+00  0.9150377769 -6.498291e-01
## [4760,]  1.945183e-01 -2.447796e-01  0.1018058725  1.158775e-01
## [4761,]  2.611653e-01 -2.852238e-01  0.1788496225  2.700490e-01
## [4762,] -1.425633e-01  1.992961e-01  0.0036426979  2.638009e-01
## [4763,]  1.802220e-01 -2.343112e-01 -0.0350821602  3.040545e-02
## [4764,] -5.278159e-02  1.300042e-01 -0.3034131415 -1.139224e-01
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## [4765,]  3.242018e-02  7.210494e-02 -0.1082560979 -9.586047e-02
## [4766,]  1.275065e-01 -2.956468e-02  0.1321923931  2.723175e-01
## [4767,]  3.607891e-02  2.542588e-02 -0.0226433961 -7.594721e-02
## [4768,]  9.920672e-02 -2.442430e-01  0.0390214654 -1.208017e-01
## [4769,] -4.170688e-03 -1.148545e-01  0.2915632672 -1.886744e-01
## [4770,]  3.196218e-01 -3.974159e-01  0.5288722903  3.666177e-01
## [4771,]  2.934436e-01 -1.085890e-01 -0.2480405882  4.674402e-02
## [4772,] -1.856653e+00  1.222723e+00  0.7840713035 -1.813218e-01
## [4773,] -2.236508e+00  7.520614e-01  0.9688121814  9.019175e-02
## [4774,] -1.348756e-01  7.832008e-03  0.0587187175  1.365389e-01
## [4775,] -1.155027e-01 -1.630508e-01  0.2032101681  5.951249e-02
## [4776,]  4.820330e-01 -3.309346e-01 -0.0391575537  1.662006e-01
## [4777,]  7.763385e-01 -1.257081e-01 -0.7128042893  1.114582e-01
## [4778,]  3.196526e-01  5.249620e-02  0.0420138389  2.703783e-01
## [4779,]  2.960327e-01  6.328712e-01 -1.2724137795 -2.854011e-01
## [4780,] -2.088211e-02  1.504439e-01 -0.0832997574  3.557570e-02
## [4781,] -4.632244e-02  5.323134e-02  0.0975769327  2.105924e-01
## [4782,] -6.511332e-01 -3.550598e-01  0.4281123050 -2.546235e+00
## [4783,]  6.346045e-02  1.478676e-01 -0.1034512037 -2.233121e-02
## [4784,]  3.124892e-01  6.882052e-02  0.4865136849 -3.822339e-01
## [4785,]  6.210468e-01  1.610798e-01  0.1116941002 -6.797973e-01
## [4786,]  2.537925e+00 -1.114180e+00 -0.1377533260 -3.556515e-01
## [4787,] -1.206522e-01 -3.411945e-02  0.0638324287  9.262022e-02
## [4788,] -1.553019e+00 -9.343265e-01 -0.8674481903 -1.316817e-01
## [4789,]  1.851104e-02 -2.212419e-02 -0.0430755378  1.578917e-01
## [4790,]  1.003738e-01 -1.334304e-01  0.1594412441  6.240300e-01
## [4791,]  2.738628e+00  9.027702e-01  1.2424726736 -2.338015e-01
## [4792,]  7.678667e-02 -9.747815e-02  0.1448280490  1.617552e-01
## [4793,]  1.082124e-01  1.362366e-03 -0.0266705100  4.597409e-02
## [4794,] -3.492403e-01  1.931212e-01 -0.2797381350 -8.453200e-02
## [4795,]  2.733268e+00  8.936084e-01  1.2538874146 -2.415522e-01
## [4796,]  2.701041e-02 -7.624424e-02  0.0824936478  3.457322e-02
## [4797,] -2.212379e-01  3.764213e-02  0.0912573384  1.141943e-01
## [4798,]  6.653849e-02 -2.417834e-02 -0.0852886538 -1.087623e-01
## [4799,]  2.631497e-02 -2.815750e-02  0.0074242397  1.559006e-03
## [4800,]  3.044023e-02  2.855920e-02 -0.1569161272 -1.309237e-01
## [4801,]  2.741663e+00  8.895212e-01  1.2537632686 -2.352011e-01
## [4802,] -1.680195e+00 -1.115694e+00 -0.7795521468 -2.534333e-01
## [4803,]  2.738184e+00  8.643427e-01  1.2952903242 -2.170751e-01
## [4804,]  8.382936e-02  6.621667e-02 -0.0541295236 -3.764855e-02
## [4805,]  2.094357e-01  1.122842e-03 -0.0203157729  7.523399e-02
## [4806,] -3.302980e-01  2.155178e-01 -0.2998674074 -4.310288e-02
## [4807,]  3.574484e-01  5.523292e-02 -0.3508434575  8.510597e-03
## [4808,]  4.364491e-02  1.929648e-01 -0.1775067605 -1.192088e-01
## [4809,] -1.798527e+00  1.009488e+00  0.7142783472 -7.482162e-02
## [4810,] -1.597987e-01 -7.442672e-02  0.0672072522  1.034460e-01
## [4811,]  8.412924e-02 -1.902960e-01  0.2172183225  2.112411e-01
## [4812,] -4.413524e-02  1.466245e-01 -0.3912281878 -1.603133e-02
## [4813,] -2.263296e-02 -2.745255e-02  0.0229349013 -4.320718e-02
## [4814,] -9.165910e-02  2.208232e-01 -0.2187493142 -2.769165e-02
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## [4815,] -5.295101e-02  1.217743e-01 -0.0865654509  1.474758e-02
## [4816,] -2.856331e-01  1.542267e-01 -0.3170595199 -9.455743e-02
## [4817,] -1.728641e+00  9.391819e-01  0.7930484986 -6.434940e-02
## [4818,]  2.722498e+00  9.623178e-01  1.1969183334 -2.311078e-01
## [4819,]  4.588174e-02  1.486225e-01 -0.2401012636 -3.968507e-02
## [4820,] -1.630006e-01 -3.196502e-03  0.0815153747  2.110394e-01
## [4821,] -2.909458e-02 -4.122709e-02  0.0864806667  4.629679e-02
## [4822,] -5.125466e-02 -8.819339e-02  0.1508955866  7.008283e-02
## [4823,] -1.319182e-01  1.665020e-01 -0.0849884512  9.073846e-05
## [4824,]  2.088447e-01 -9.669903e-03  0.0172254427  7.138331e-02
## [4825,]  1.406650e-01 -3.363093e-02 -0.1013648740  3.591162e-02
## [4826,]  2.463959e-02 -1.580880e-02  0.0566625976  8.775271e-02
## [4827,]  3.546838e-02  1.753166e-01 -0.2885357182 -4.997254e-02
## [4828,]  3.296304e-01  9.003541e-02 -0.4140065867  6.538990e-03
## [4829,] -1.608904e+00 -1.075718e+00 -0.8457864727 -2.422236e-01
## [4830,] -1.638753e+00 -1.119497e+00 -0.7873716156 -2.317103e-01
## [4831,] -7.702125e-02 -1.314618e-01  0.3297621721  2.116546e-01
## [4832,] -1.259625e-01 -7.245867e-02  0.0781281846  1.001282e-01
## [4833,]  8.963169e-02 -1.104256e-01  0.1185851264  1.151652e-01
## [4834,]  6.514270e-02  1.071972e-01 -0.0923321478  5.463616e-02
## [4835,]  3.920766e-02  2.171712e-02 -0.0076552080  5.429092e-02
## [4836,] -6.857491e-02 -1.581186e-01  0.1749271326  5.317877e-02
## [4837,] -5.299955e-02  1.333121e-01 -0.1017255405  1.114209e-02
## [4838,]  3.797072e-01 -8.165346e-01  0.7380351064  2.853644e-01
## [4839,] -1.475295e+00 -9.964323e-01 -0.7607445798 -7.620676e-02
## [4840,]  8.571097e-01 -7.151513e-02 -0.7548696864  9.576011e-02
## [4841,] -7.803548e-02  4.305747e-02 -0.0095078633  3.892910e-02
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## [4843,]  1.376332e-01 -1.176192e-01  0.1062402322  1.134936e-01
## [4844,] -9.762751e-02 -4.794810e-02  0.0500048217 -4.640052e-02
## [4845,]  1.747036e-01 -7.815001e-02 -0.0248101932 -3.869345e-02
## [4846,]  2.248923e+00  1.225758e+00  0.8521236216 -6.605416e-01
## [4847,] -5.828002e-03 -2.463037e-02  0.0451630533  6.321629e-02
## [4848,]  2.710319e-01  8.941530e-02 -0.4071296014 -2.451586e-02
## [4849,]  1.286393e-01  1.495823e-02 -0.0933462913 -8.367537e-02
## [4850,]  2.481756e-02  2.737254e-02 -0.1701277453 -1.287197e-01
## [4851,]  2.909133e-01  7.368824e-02  0.4907753882 -3.864454e-01
## [4852,]  6.518928e-01  1.139545e-01  0.1818125875 -6.541642e-01
## [4853,] -1.562257e-02 -1.278079e-01  0.3357463250  2.146841e-01
## [4854,]  8.394204e-02 -1.872090e-01  0.1179103394  2.683652e-02
## [4855,] -5.639250e-01 -5.769757e-01  0.7141378423 -2.483773e+00
## [4856,] -1.682057e-01  6.409518e-03  0.0156883388  8.665647e-02
## [4857,]  4.589116e-02  1.089090e-01 -0.0632292440 -1.590932e-03
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## [4861,]  1.572803e-01  4.809511e-02 -0.2487114590 -2.933846e-02
## [4862,]  5.112325e-02  2.233023e-01 -0.0871874867  1.415792e-01
## [4863,] -6.217797e-02 -1.054981e-01  0.0505732293  1.069274e-01
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## [4865,] -8.433374e-02  5.775502e-01 -0.6274067865 -1.016080e-01
## [4866,]  2.966371e-01  6.518925e-02  0.4999182581 -3.809219e-01
## [4867,] -5.851991e-02  4.984685e-03  0.0415546818  5.000204e-03
## [4868,]  3.021381e-01  6.191549e-02  0.5070924945 -3.970237e-01
## [4869,]  1.231927e-01  1.806798e-01 -0.2096883293  3.256783e-02
## [4870,]  3.079323e-01  1.171186e-01  0.4234608622 -4.111093e-01
## [4871,] -1.816252e+00  1.000604e+00  0.7095074701 -7.689270e-02
## [4872,]  1.085349e-01 -4.089100e-01  0.3452906735  4.720090e-02
## [4873,]  8.888207e-02 -1.245407e-01  0.1027551360  6.057977e-02
## [4874,]  9.321830e-02  8.957003e-02 -0.0629965797 -4.745351e-02
## [4875,]  1.594780e-01  1.273281e-01 -0.1549721017  4.727604e-02
## [4876,]  1.132471e-01 -3.965859e-01  0.3276230357  1.605539e-02
## [4877,] -8.065024e-02  4.304655e-02  0.0332416357  3.274890e-02
## [4878,] -4.297736e-01  4.977687e-02  0.0770180326  3.258059e-02
## [4879,] -1.486799e+00 -9.468662e-01 -0.8208635089 -1.126185e-01
## [4880,]  3.492935e-01 -3.880087e-01  0.1350394904 -8.876001e-03
## [4881,] -3.531929e-01  6.496322e-01 -0.8071015554  4.194693e-01
## [4882,]  2.134147e-02  1.715037e-02 -0.0517921313 -7.415594e-02
## [4883,]  4.989356e-02  6.887851e-02 -0.1656481533 -1.875049e-02
## [4884,] -5.410188e-01 -5.377071e-01  0.6706014316 -2.499417e+00
## [4885,] -1.577415e+00 -1.001197e+00 -0.7804782506 -1.329414e-01
## [4886,]  3.786377e-02  1.510203e-01 -0.2498306161 -5.937624e-02
## [4887,] -2.950236e-02  1.807610e-01 -0.1761817100 -1.353528e-01
## [4888,]  7.942289e-02  1.407364e-01 -0.2387256548 -3.460166e-02
## [4889,]  1.797272e-01 -9.854354e-02  0.0281772416  7.004812e-02
## [4890,] -6.440144e-02  7.151637e-02 -0.0298730212 -2.242350e-02
## [4891,] -3.557091e-02  2.265272e-02  0.0171489656 -3.843745e-03
## [4892,]  7.191275e-02 -4.531492e-02 -0.0104468443  2.974431e-02
## [4893,] -1.547641e-01 -1.043984e-01  0.1239819894  1.310350e-01
## [4894,]  8.018179e-02 -1.718803e-01  0.0423094670  6.057669e-02
## [4895,]  1.176671e-01 -1.459307e-01  0.1405565781  8.043227e-02
## [4896,] -1.326696e-02  3.624131e-02  0.0278428131 -3.824487e-03
## [4897,]  2.147965e-01 -1.009623e-01 -0.0824516953 -1.309511e-01
## [4898,]  3.149941e-02  1.482887e-01 -0.0747285764  1.138276e-02
## [4899,] -2.974590e-01  2.141915e-01 -0.3072435175 -4.808818e-02
## [4900,]  1.300192e-01 -1.820052e-01  0.2293712326  6.263072e-01
## [4901,]  1.501687e-01 -1.477271e-01  0.1203948689  1.185862e-01
## [4902,]  5.372205e-02  2.954082e-02 -0.1501458485 -1.277933e-01
## [4903,]  2.298361e-02  1.347515e-01 -0.2095254282 -3.807172e-02
## [4904,] -1.426710e-01 -3.421699e-02  0.1317863915  2.311323e-01
## [4905,] -1.514859e-01  1.045593e-02  0.0696162905  1.890950e-01
## [4906,]  1.452019e-01 -5.473232e-03 -0.0567004314 -7.101171e-02
## [4907,] -5.670437e-02 -8.754528e-02  0.0377502296  1.057738e-01
## [4908,]  5.916997e-02  3.468275e-02 -0.2197915711 -6.332987e-02
## [4909,]  1.624784e-01 -2.211091e-01  0.1866613663  1.864293e-01
## [4910,]  3.068444e-01  1.192191e-01  0.4304125402 -4.052502e-01
## [4911,] -5.058574e-02 -2.016918e-01  0.1486511061 -7.335258e-02
## [4912,]  2.856635e-03  1.864379e-01 -0.0903111281  5.081227e-02
## [4913,]  3.505207e-02 -1.473941e-02  0.0452426851  6.296665e-02
## [4914,] -6.912987e-02 -1.369931e-01  0.3377849493  2.041722e-01
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## [4915,]  2.515335e-01  2.647385e-01 -0.3324506726 -1.584319e-01
## [4916,]  3.460999e-01 -6.514132e-02  0.1466324155  2.141408e-01
## [4917,]  5.661801e-02  2.234203e-01 -0.1481121973 -1.339617e-02
## [4918,]  7.989415e-02  8.879058e-02 -0.1657287200 -3.854754e-03
## [4919,] -6.807950e-02 -2.921665e-02 -0.0385285529  9.728728e-02
## [4920,]  6.482952e-02 -1.340446e-01  0.2153238518  2.039269e-01
## [4921,] -2.966217e-02 -2.144506e-01  0.1136018355  9.747181e-02
## [4922,] -7.097716e-02  1.010382e-01 -0.1060291994 -1.108017e-03
## [4923,] -9.707771e-02  5.116777e-02 -0.0345492153  3.238629e-02
## [4924,] -3.301614e-02  2.397909e-01 -0.1102827546  1.149648e-01
## [4925,] -1.333862e-01  1.204698e-01 -0.0486369124  5.593968e-03
## [4926,]  7.922547e-01 -2.023150e-01 -0.2828558280  4.749545e-02
## [4927,] -3.620570e-02 -1.368357e-01  0.1553092982  1.071906e-02
## [4928,]  6.572851e-02 -4.080638e-01  0.3441401851  3.420670e-02
## [4929,]  5.737985e-03  2.713433e-01 -0.5340874167 -4.546724e-02
## [4930,]  3.133257e-01 -8.334572e-02  0.1462801250  2.276964e-01
## [4931,] -1.840463e+00  1.052767e+00  0.7729380274 -3.711814e-02
## [4932,]  1.084982e+00  1.895685e+00  1.6029463570 -4.463950e-01
## [4933,]  2.332705e-02 -1.926589e-01  0.2272235953  2.131681e-01
## [4934,] -3.426930e-02 -6.680205e-02  0.1196301653  6.701658e-02
## [4935,]  1.936044e-01 -1.545797e-01  0.1427065036 -3.729970e-02
## [4936,]  1.350903e-01 -1.571956e-01 -0.1535413491 -1.953702e-01
## [4937,]  3.892063e-02  3.234578e-02  0.0142630483  7.871270e-02
## [4938,]  8.147496e-02 -9.381250e-02  0.0793218076  1.080237e-01
## [4939,] -1.343443e-01 -1.379014e-02  0.0450499071  1.035429e-01
## [4940,] -1.198146e-01 -2.500255e-02  0.0192094744  8.310948e-02
## [4941,]  6.143507e-02 -1.049498e-01  0.1522241094  7.105900e-02
## [4942,]  2.493422e+00 -1.098657e+00 -0.2138064905 -3.211634e-01
## [4943,]  8.773953e-02 -1.709023e-02  0.0019004656  7.875487e-02
## [4944,]  1.258842e-01  3.254386e-02 -0.2249210544 -5.395994e-02
## [4945,]  1.684023e-01 -5.130991e-02 -0.0431188342 -3.923788e-02
## [4946,]  2.535812e+00 -1.104448e+00 -0.2105057084 -3.364490e-01
## [4947,]  1.435234e-01 -9.285237e-02 -0.0133356536  4.230624e-02
## [4948,] -3.402598e-01  6.780072e-01 -0.8412792317  4.063462e-01
## [4949,] -8.425674e-02  5.876849e-01 -0.6241873371 -1.290054e-01
## [4950,] -4.403716e-02  2.352111e-01 -0.4942676898 -2.776863e-02
## [4951,] -1.814927e+00  1.040867e+00  0.7809166549 -7.299957e-02
## [4952,]  1.249049e-01 -2.197093e+00 -1.2986722383 -2.285629e-02
## [4953,] -7.076195e-02 -5.316542e-02  0.0653835846  1.303723e-01
## [4954,]  2.895425e-01 -7.019720e-02  0.1360072991  2.371518e-01
## [4955,]  1.319535e-02  2.080230e-01 -0.1983100299 -9.628565e-02
## [4956,] -4.857784e-02  1.128455e-01 -0.0789232875 -9.104794e-02
## [4957,]  3.275418e-01  8.280511e-02 -0.3857836469 -5.953154e-05
## [4958,]  1.149185e-01  1.193020e-01 -0.1417643180  9.570101e-02
## [4959,] -1.798304e+00  9.664958e-01  0.7690181819 -6.053443e-02
## [4960,] -8.111999e-03 -1.116728e-01  0.1173677775  1.598433e-03
## [4961,]  9.262283e-02 -1.179313e-01  0.0409406934 -2.256587e-02
## [4962,] -4.346765e-01  4.800781e-02  0.0800958019  3.529294e-02
## [4963,]  1.077927e-01 -8.588557e-02  0.0638384465  6.480473e-02
## [4964,] -6.114923e-02 -8.649202e-02  0.0423235362  1.150292e-01
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## [4965,] -6.383559e-02 -1.396851e-01  0.3143398912  1.928428e-01
## [4966,]  2.991055e-02  3.006697e-02 -0.0073787886 -9.641323e-03
## [4967,]  7.415024e-02 -1.623022e-01  0.1085484735  2.764988e-02
## [4968,]  1.314194e-01 -3.371844e-02 -0.1195089098 -1.748499e-02
## [4969,]  1.370244e-01 -1.968607e-01  0.0981944182 -6.678306e-02
## [4970,] -3.935717e-02 -1.132730e-01 -0.0356008861  5.205099e-02
## [4971,]  8.470734e-02  1.060745e-02  0.0365388607  8.633261e-02
## [4972,]  7.129851e-02 -1.817035e-01 -0.0393196381  9.138867e-02
## [4973,]  2.757666e-01  1.257587e-01  0.4270683584 -4.299239e-01
## [4974,] -1.602273e+00 -1.085612e+00 -0.7882008407 -2.170719e-01
## [4975,]  2.918956e-01  7.706949e-02  0.4885432929 -3.953597e-01
## [4976,]  3.013835e-01  6.051859e-02  0.5172673891 -3.826332e-01
## [4977,] -3.033186e-01  2.264577e-01 -0.3157409558 -8.217137e-02
## [4978,]  1.446039e-01 -6.868834e-02 -0.0273700142 -1.297331e-01
## [4979,]  8.453216e-02 -2.545832e-02 -0.0176758317  2.022360e-02
## [4980,]  1.984119e-02  7.069122e-02 -0.0517854065 -4.730061e-02
## [4981,]  4.460074e-02 -6.461978e-02  0.0937992709  6.779887e-02
## [4982,]  8.498638e-02  8.427467e-02 -0.0847690339  6.339436e-02
## [4983,] -1.665011e-02 -6.567529e-02  0.1264302434  6.018457e-02
## [4984,]  2.587024e-02  1.762407e-01 -0.3271924079  6.405706e-02
## [4985,] -2.189839e-03  1.617549e-01 -0.3027274228  8.581095e-02
## [4986,] -3.777431e-02 -4.878139e-03  0.0901453570  1.348450e-01
## [4987,]  8.617728e-02 -1.350063e-01  0.2089698225  1.702188e-01
## [4988,]  1.598900e-01 -4.373494e-01  0.3783810704  4.633115e-02
## [4989,]  6.397872e-01  1.572793e-01  0.1314074877 -6.814842e-01
## [4990,]  5.002186e-02 -5.160480e-02  0.0723832198  5.120774e-02
## [4991,]  1.155041e+00  1.866584e+00  1.5575640164 -4.610600e-01
## [4992,]  7.501304e-02 -1.048257e-01  0.0727112484  3.903790e-02
## [4993,]  1.955203e-01  3.514293e-02 -0.0659549022  1.998797e-03
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## [4995,] -3.098794e-01  2.167622e-01 -0.3041351905 -4.577465e-02
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## [4999,]  2.252931e-02 -3.888005e-01  0.3158812712 -2.513162e-02
## [5000,]  2.524721e+00 -1.119247e+00 -0.2186487881 -2.983579e-01
## [5001,]  1.080575e-01  3.740372e-02 -0.2080724634 -5.404167e-02
## [5002,]  8.815354e-02  1.518494e-01 -0.1787193638  4.018698e-02
## [5003,] -1.661414e-01 -2.397701e-02  0.1180065272  1.970667e-01
## [5004,]  1.427750e-01  1.376239e-01 -0.1030781909  1.303789e-02
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## [5006,]  1.038284e-01  1.338884e-01  0.0117103328  1.285333e-01
## [5007,] -1.033978e-01  1.561681e-01  0.0515613398  2.023793e-01
## [5008,] -4.269329e-02 -7.160948e-02  0.3693580708  7.086606e-02
## [5009,] -3.418939e-02  1.724822e-01 -0.1523548309 -1.074411e-01
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## [5011,] -1.411661e-01 -6.311231e-02  0.1612074933  2.176359e-01
## [5012,] -1.861461e+00  1.012142e+00  0.7944641088 -8.780528e-02
## [5013,] -1.080411e-01  5.838265e-01 -0.6335587675 -1.322656e-01
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## [5015,] -1.075514e-02 -1.444286e-01  0.1716587270  1.026873e-02
## [5016,]  3.770086e-02 -1.784307e-02 -0.0851709326 -1.098087e-01
## [5017,]  1.778327e-02  8.971350e-02 -0.0805205406 -2.235662e-02
## [5018,] -2.538877e-02  1.725801e-01 -0.1582212828 -1.051884e-01
## [5019,]  6.769637e-02  1.183424e-01 -0.1970551482  2.279395e-03
## [5020,]  4.783823e-02  1.078994e-01 -0.0700758080 -1.146197e-01
## [5021,] -1.887603e+00  1.016724e+00  0.7936507580 -7.660276e-02
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## [5025,]  2.027034e-01  1.214358e-01 -0.0485544648  1.293517e-01
## [5026,] -8.317436e-03 -9.845083e-02  0.1169214883  2.351922e-03
## [5027,]  1.216264e-01 -1.622345e-02 -0.0291133276 -4.045173e-02
## [5028,] -7.254780e-02  5.777943e-01 -0.6128336185 -1.330377e-01
## [5029,] -8.121104e-02 -8.991133e-02  0.0529521047  1.085047e-01
## [5030,]  2.096523e-01 -1.460385e-01  0.0268389740 -6.834611e-02
## [5031,]  1.702717e-01 -1.174138e-01  0.0819030354  8.203274e-02
## [5032,]  4.445684e-02 -4.053818e-02  0.0640206361  1.318520e-01
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## [5037,]  1.329126e-01 -1.167930e-01  0.0632354436  8.530759e-02
## [5038,]  6.766257e-02 -1.768823e-01  0.1332631574  4.773632e-02
## [5039,]  1.164731e-02 -2.087642e-01  0.2641527437  1.888847e-01
## [5040,]  4.308155e-02 -2.309116e-03 -0.0132292048  3.995180e-01
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## [5042,] -8.081336e-03 -1.176285e-01  0.1610185015  5.343335e-02
## [5043,]  2.032752e-01  1.904735e-01 -0.1230376943  6.171129e-02
## [5044,]  9.389380e-02  9.070588e-02 -0.1600943101 -6.435827e-03
## [5045,]  1.046624e+00  1.963699e+00  1.5328780648 -4.592101e-01
## [5046,]  5.143973e-01 -7.879564e-02  0.1109584944 -1.334138e-01
## [5047,]  4.302648e-01  2.554395e-01 -0.0908914984  1.214718e-02
## [5048,]  9.663272e-02  1.410702e-01 -0.1553229125  5.388116e-02
## [5049,]  2.492273e+00 -1.090335e+00 -0.2040019534 -3.095139e-01
## [5050,]  1.456503e-01 -5.816118e-04 -0.0390872662 -5.706657e-02
## [5051,] -1.652934e-01  1.684592e-01 -0.0723759003  6.488780e-03
## [5052,] -1.608486e+00 -1.114652e+00 -0.7538696958 -2.214571e-01
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## [5054,] -5.223719e-02 -7.231188e-02  0.1323536142  8.105966e-02
## [5055,]  1.372442e-03  4.528131e-02  0.0118202626  2.232425e-03
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## [5057,]  2.686706e-03  6.063670e-02 -0.1101209680  2.427225e-02
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## [5062,] -2.572615e-02 -2.322689e-02 -0.0336270419 -5.042807e-02
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## [5065,] -1.237816e-01 -1.998471e-02  0.0760104741  1.389889e-01
## [5066,]  1.218947e-01 -2.041001e-01  0.1570701734  3.853845e-02
## [5067,] -5.785453e-02  1.469705e-01  0.0281951609  1.135624e-01
## [5068,] -4.372640e-02 -8.423773e-02  0.0101362353  6.197350e-03
## [5069,]  9.482666e-03 -9.500471e-02  0.0667969636 -3.729719e-02
## [5070,]  1.629755e-02 -2.429151e-02 -0.0384874507 -7.919263e-02
## [5071,]  1.165674e-01  5.705606e-02 -0.0978685890 -7.290231e-02
## [5072,]  2.538376e+00 -1.081944e+00 -0.2275662877 -3.099558e-01
## [5073,]  1.216708e-01 -2.646555e-01  0.0890300461  9.888924e-02
## [5074,]  2.044872e-01 -1.214045e-01 -0.0056547071 -8.888706e-02
## [5075,] -1.520307e-01 -4.759489e-02  0.1591917722  2.276375e-01
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## [5079,]  2.434815e-01  1.206261e-01 -0.0347294233  1.497498e-01
## [5080,] -3.525601e-01  2.068440e-01 -0.2886053304 -9.534821e-02
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## [5082,]  7.801642e-02  1.521464e-01  0.0199074593  1.902524e-01
## [5083,] -1.610941e-01 -7.979660e-02  0.1148331175  1.170630e-01
## [5084,]  1.311001e-01  2.288348e-03 -0.0506945857  4.704333e-02
## [5085,] -3.243958e-01  1.751581e-01 -0.3326364354 -7.392766e-02
## [5086,] -3.958565e-02 -6.598384e-02  0.1439116383  8.539184e-02
## [5087,] -2.081022e-02 -8.717356e-02  0.1075675413 -1.654062e-03
## [5088,] -5.748058e-02 -2.287175e-02  0.0034639836  1.091229e-01
## [5089,]  1.327455e-01  6.384170e-02 -0.2389276931 -5.475314e-02
## [5090,]  4.587074e-02  3.050406e-02 -0.1546077832 -1.350838e-01
## [5091,]  6.446310e-02 -9.214002e-02  0.0246849043 -3.642984e-02
## [5092,]  5.569177e-02  4.337854e-02 -0.0049430693  5.523647e-03
## [5093,]  5.858587e-01 -3.753071e-01  0.4705862568  3.223043e-01
## [5094,]  1.146836e-01 -1.412992e-01  0.0158955886 -8.229024e-02
## [5095,]  7.893471e-02 -1.866755e-01  0.0022527392  1.149292e-01
## [5096,] -6.791315e-03 -4.455805e-02  0.1036027767  4.444927e-02
## [5097,] -6.241228e-03  2.057393e-01 -0.1937225345 -1.323421e-01
## [5098,] -1.825457e+00  9.844868e-01  0.7614149290 -6.430313e-02
## [5099,]  3.432267e-02 -1.135348e-01  0.0652480072 -1.505958e-02
## [5100,] -3.324720e-02 -1.163327e-01  0.0018875558  5.469254e-02
## [5101,] -1.470895e-01  1.532830e-01 -0.0538046765  1.787680e-02
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## [5103,]  9.472302e-02 -1.223860e-02 -0.0283029220 -5.552729e-02
## [5104,]  2.185749e-01  1.915219e-01 -0.0985266422  8.874894e-02
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## [5109,] -7.020367e-02  5.151388e-01 -0.5511420280 -1.072535e-01
## [5110,] -1.512016e-02 -4.539404e-02 -0.0297374310 -1.286403e-01
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## [5145,]  5.733329e-02 -1.099559e-01  0.1394255070  1.363567e-01
## [5146,]  1.174854e-01 -2.945255e-02 -0.0106233357 -3.896245e-02
## [5147,]  3.719047e-02  5.055642e-02 -0.0205528766  6.266602e-02
## [5148,]  6.155407e-01  2.298931e-01  0.0312879024 -7.025705e-01
## [5149,] -5.678146e-02  1.764939e-01 -0.1586499500 -1.194479e-01
## [5150,]  1.033244e-02 -9.481543e-03 -0.0916965331 -1.042712e-01
## [5151,] -3.072294e-02  2.278114e-01 -0.4751796507 -4.724836e-02
## [5152,]  9.701283e-03 -3.038049e-01  0.0719053346  2.182662e-01
## [5153,]  1.771629e-01  8.876969e-02 -0.1215226905 -5.636669e-02
## [5154,]  4.663083e-02 -5.593309e-02  0.0425531962 -5.580893e-02
## [5155,]  9.361009e-02 -3.566093e-02 -0.0624534249  2.351153e-02
## [5156,]  5.723618e-01  1.470917e-01 -0.0758676431 -1.116010e-01
## [5157,] -1.553164e-01 -1.192797e-01  0.1609732681  1.405901e-01
## [5158,] -1.512957e-01 -1.013173e-03  0.0499679680  9.985216e-02
## [5159,]  1.017959e-01  8.229739e-02  0.0515441627  1.113582e-01
## [5160,]  7.132260e-02 -2.157627e-01  0.1638584429  3.774901e-02
## [5161,] -2.440220e-01 -1.017055e-02  0.0373374893 -1.288665e-01
## [5162,]  4.215107e-01 -4.184167e-01  0.3235460517  6.964751e-02
## [5163,]  2.473285e-02 -8.241183e-02  0.0366776937 -3.838724e-02
## [5164,]  1.503433e-01  1.467282e-01 -0.1429136395  6.775051e-02
```

```
## [5165,]  2.517204e+00 -1.095754e+00 -0.2368180844 -2.939258e-01
## [5166,] -1.599653e+00 -1.105714e+00 -0.7651149513 -2.092982e-01
## [5167,]  2.108967e-01 -4.355810e-02  0.1097870945  1.835280e-01
## [5168,]  1.838531e-01  1.781003e-01 -0.0934336332  6.690119e-02
## [5169,]  5.478952e-02 -4.193746e-02  0.0111545366 -4.685216e-02
## [5170,]  8.380415e-02 -9.624185e-02  0.1079311735  1.057441e-01
## [5171,] -2.141254e-02  1.882851e-02  0.0181087991 -3.204678e-02
## [5172,] -7.634274e-02 -4.374465e-02  0.0684507876  1.297698e-01
## [5173,] -3.703236e-02 -3.177944e-02  0.0789261479  1.107970e-01
## [5174,]  5.313332e-02 -3.790433e-02  0.0621837705  1.258930e-01
## [5175,]  7.514127e-02 -1.727016e-01  0.1308102130  2.869885e-02
## [5176,]  1.359798e-01 -1.194103e-01  0.0868910836  6.287134e-02
## [5177,] -9.301485e-02  1.253309e-01 -0.1105385297  1.339664e-02
## [5178,]  9.946063e-02 -3.214422e-02  0.0040601355 -2.930975e-02
## [5179,]  5.535716e-02  1.487148e-01 -0.2271279876 -1.676392e-02
## [5180,]  1.061012e-01  2.289821e-02 -0.0540471121 -3.581426e-02
## [5181,] -2.650643e-02  2.057017e-01 -0.1895422165 -1.383977e-01
## [5182,]  5.162357e-01 -2.904908e-01  0.4660602312  2.613528e-01
## [5183,]  9.834559e-02 -4.155100e-02  0.1197712108  1.918011e-01
## [5184,]  3.644307e-02 -1.103092e-01 -0.0079802690 -7.570721e-02
## [5185,]  1.068199e-01  1.337286e-01 -0.0114915731  8.823561e-02
## [5186,] -1.060763e-02  3.588616e-02 -0.0123702498  2.514733e-02
## [5187,]  1.933143e-01 -2.676260e-03  0.0372646123  2.062091e-01
## [5188,]  5.667518e-02 -3.997476e-02  0.0782601863  4.626083e-01
## [5189,]  1.138720e-01  3.166885e-02 -0.0538520345 -5.010453e-02
## [5190,]  1.188311e-01  8.970829e-02 -0.0269904629 -5.244018e-02
## [5191,]  2.447525e-02  1.124367e-01 -0.1833872977 -1.751766e-02
## [5192,] -1.772555e+00  9.426186e-01  0.8090453641 -3.495577e-02
## [5193,] -1.561178e-02  4.207496e-02 -0.0815465537 -9.374741e-02
## [5194,] -6.307118e-02  1.346876e-01 -0.1097236333 -1.051441e-01
## [5195,] -1.469136e+00 -8.053863e-01 -0.8756971583 -5.092776e-02
## [5196,]  3.783821e-01 -6.660377e-02 -0.1819711422  7.463944e-03
## [5197,]  2.813861e-01 -2.660503e-02 -0.1916516898  2.075901e-02
## [5198,]  6.591784e-02  5.826225e-02 -0.0193343168  1.471804e-02
## [5199,] -2.821412e-02  2.814408e-01 -0.5260860664 -5.698577e-02
## [5200,]  6.246359e-01  1.378311e-01  0.1661316082 -6.494899e-01
## [5201,]  6.406584e-02 -8.473727e-02  0.0262975373 -3.764942e-02
## [5202,]  1.166432e-01 -1.431092e-01  0.0741330475 -9.695412e-02
## [5203,]  1.419468e-01 -2.577091e-01  0.1729110864 -2.356565e-02
## [5204,] -1.484789e-01  6.903652e-02 -0.0607488968 -6.567230e-02
## [5205,] -1.749362e-01 -4.191985e-02 -0.1277762246 -2.606602e-01
## [5206,] -8.841436e-03  8.151350e-02 -0.0750465569  2.386462e-02
## [5207,] -1.661297e+00  1.220642e+00  0.8515949366 -2.143132e-01
## [5208,]  1.987539e-01  2.091087e-02 -0.0160481246  5.745249e-02
## [5209,]  6.087532e-02  1.384243e-01 -0.1496094922  5.804648e-02
## [5210,]  1.807581e-02  7.433131e-04 -0.1053226333 -1.142737e-01
## [5211,]  2.454404e-01  7.681527e-02  0.0221002908  1.390521e-01
## [5212,]  9.119930e-02  7.387981e-02 -0.0082919100 -3.719035e-02
## [5213,]  2.443812e-03  1.604652e-02  0.0150562643  4.327067e-02
## [5214,] -7.072815e-02  1.834454e-01 -0.4007284966 -7.449071e-03
```

```
## [5215,]  4.521218e-02 -1.051433e-01  0.1468242575  6.194588e-02
## [5216,]  1.260433e-01 -1.761616e-01  0.1547338316  8.315876e-02
## [5217,] -1.086009e-01  5.317298e-01 -0.5524370414 -9.095648e-02
## [5218,]  4.542437e-02 -7.426269e-02  0.1385216166  1.770315e-01
## [5219,] -4.623204e-02 -6.209278e-02  0.0934173360 -8.052058e-03
## [5220,] -2.335886e-02 -9.680881e-02 -0.0345820595  2.539129e-02
## [5221,]  1.597635e-01 -1.150099e-01  0.1903839842  1.859848e-01
## [5222,]  2.923952e-01  1.193735e-01 -0.1397908522 -1.075372e-01
## [5223,] -5.383101e-02  1.853252e-01 -0.1677215148 -1.313071e-01
## [5224,] -5.311206e-02 -1.677932e-01  0.4021704033  2.152558e-01
## [5225,]  3.845478e-02 -4.133235e-02  0.0853933375  1.587442e-01
## [5226,] -1.117369e-01 -5.951591e-02  0.1536817771  1.350015e-01
## [5227,]  9.033161e-04  2.366559e-01 -0.2114661215 -1.209657e-01
## [5228,]  1.148148e-01 -2.432232e-02 -0.0022270382 -4.569370e-02
## [5229,]  6.367239e-01  1.596688e-01  0.1356879796 -6.942836e-01
## [5230,]  5.946418e-01  1.500240e-01  0.1551117268 -6.527727e-01
## [5231,]  2.643845e-01 -1.448025e-02 -0.2495449788  2.500193e-02
## [5232,] -8.894231e-02 -3.112448e-01  0.1109128255  2.288445e-01
## [5233,]  8.255591e-02  6.630463e-02  0.0043193918  3.208870e-02
## [5234,] -3.946578e-02 -8.565721e-02  0.1670116068  6.621221e-02
## [5235,]  6.137809e-02 -8.555575e-02  0.1331787679  6.670559e-02
## [5236,]  1.123538e-01 -5.674548e-02  0.1457600872  1.939346e-01
## [5237,]  1.167986e-01 -1.685322e-01  0.1716581745  8.793513e-02
## [5238,] -4.278483e-02 -2.574164e-01  0.2272115460 -4.860966e-02
## [5239,] -4.731713e-02  2.148735e-01 -0.4318304771 -1.771002e-02
## [5240,]  1.433975e-01  4.562020e-03 -0.1522037072 -4.302503e-02
## [5241,] -4.874008e-02 -1.392435e-01  0.0220731905  6.253297e-02
## [5242,]  1.805183e-01 -1.126324e-01  0.0795287117  7.922075e-02
## [5243,]  2.516983e-01  1.724474e-01 -0.0846548587  1.258766e-01
## [5244,]  5.506855e-04 -2.517448e-01  0.2287296485 -5.556748e-02
## [5245,]  1.425800e-02 -5.473128e-02  0.0163157720 -5.369000e-02
## [5246,] -1.203970e+00 -7.698165e-01 -0.9623765543 -9.598786e-02
## [5247,]  1.367399e-02 -3.821978e-02  0.0512510272 -4.202581e-02
## [5248,]  2.533702e+00 -1.106166e+00 -0.2205185067 -3.007319e-01
## [5249,]  7.229676e-02 -2.403292e-02  0.0276776978 -3.504558e-02
## [5250,]  1.041739e-01 -1.425163e-01  0.0737068881 -1.172306e-01
## [5251,]  2.485100e-01  1.190553e-01 -0.0091079489  1.143505e-01
## [5252,] -5.163249e-02 -6.843799e-02  0.0976727414 -2.460838e-02
## [5253,]  6.300596e-01  1.484360e-01  0.1517293337 -6.790473e-01
## [5254,]  6.109234e-03  1.656279e-01  0.0026793948  1.757521e-01
## [5255,]  1.371597e-01 -2.688651e-01  0.1992311114 -2.365199e-02
## [5256,]  6.454676e-02 -4.879087e-02 -0.0064470224 -4.720284e-02
## [5257,]  6.480092e-02  1.134104e-01 -0.0573873369  3.431114e-02
## [5258,]  2.283063e-01  5.015082e-02  0.0099166964  1.678790e-01
## [5259,]  1.329899e-01 -2.330060e-01  0.1436654226 -3.990022e-02
## [5260,]  2.309530e-01  1.762898e-01 -0.0749187776  1.415880e-01
## [5261,]  2.001569e-02  1.629647e-02 -0.0051549767  1.169856e-01
## [5262,]  5.860633e-02  1.425031e-01  0.0109415335  1.556372e-01
## [5263,]  1.417899e-01 -2.903553e-01  0.0673214669  7.260660e-02
##  [ reached getOption("max.print") -- omitted 697 rows ]
```

#Display the Scree Plot of the PCA analysis

```
plot(pca2, type = "l")
```

#Print the weights of the Principal Components. Use the weights to tell a story on what the Principal Components represent. PC1 - M_CLNO / M_NINQ / M_CLAGE / M_DELINQ / M_DEROG : Credit history PC2 - IMP_MORTDUE / IMP_CLAGE / IMP_CLNO : Financial Situation

```
df_new = predict( pca2, df_pca )
head(df_new)

##             PC1        PC2         PC3        PC4        PC5        PC6
## [1,]  0.4290662  2.5778401 -1.03855364 -0.4291936 -0.2531232 -0.9929702
## [2,]  0.3604417  1.3218033 -1.52485457  0.1037763 -0.1364533 -1.4662429
## [3,]  0.3390211  2.7748917 -1.06629245 -0.4861323 -0.3544240 -0.8508115
## [4,] -9.7215119 -0.1846459 -1.29779123  1.6744433  3.8884827 -3.6375764
## [5,]  0.6519367  0.7711290 -0.70211529 -1.1721582  0.1993900 -1.8142863
## [6,]  0.5004836  2.3331760  0.04280713 -0.8351715 -0.8023865 -0.2802112
##              PC7       PC8         PC9        PC10       PC11       PC12
## [1,]  0.50263958 0.6715742  0.34532836 -1.04817576 -0.4566717  0.5220010
## [2,] -0.65332688 0.6613880  0.07800966 -1.71689386 -0.1700520 -0.4121260
## [3,] -0.09025301 1.0177487  0.51841638 -0.55420435 -0.1071618  0.2795503
## [4,]  0.76901743 2.7227160 -1.36984644  3.17654411 -1.5372893  0.6069701
```

```
## [5,] -0.59811519 0.6587597  0.30214478 -1.30385557 -0.4042679  0.6326919
## [6,]  0.15216329 0.1810668 -0.50478401 -0.04507244 -0.6299297  0.2568295
##             PC13        PC14      PC15        PC16         PC17
PC18
## [1,]  0.45562795  0.30134846 0.6230414 -0.05250597 -0.001751377
0.01293255
## [2,] -0.03379518 -0.11746158 0.4409574  0.04277255 -0.282597268
0.16651402
## [3,]  1.03220059 -0.05921498 0.5153971 -0.04099219 -0.005048640
0.06516229
## [4,] -0.63942756  0.96297695 0.2207945 -0.02629120  0.429360547 -
0.44450256
## [5,]  0.43802386  0.37184850 0.6003907 -0.12617462 -0.116340722
0.13444666
## [6,] -0.57259687 -0.43776780 0.3272833  0.12386140 -0.007867485 -
0.01961611
##            PC19
## [1,] 0.07248569
## [2,] 0.12169036
## [3,] 0.11322294
## [4,] 0.22917537
## [5,] 0.11175717
## [6,] 0.08525785
```

```
df_flags = df
df_flags$PC1 = df_new[,"PC1"]
df_flags$PC2 = df_new[,"PC2"]
head(df_flags)
```

```
##   TARGET_BAD_FLAG TARGET_LOSS_AMT LOAN IMP_MORTDUE M_MORTDUE IMP_VALUE
M_VALUE
## 1               1             641 1100       25860         0     39025
0
## 2               1            1109 1300       70053         0     68400
0
## 3               1             767 1500       13500         0     16700
0
## 4               1            1425 1500       65000         1     89000
1
## 5               0               0 1700       97800         0    112000
0
## 6               1             335 1700       30548         0     40320
0
##   IMP_YOJ M_YOJ IMP_DEROG M_DEROG IMP_DELINQ M_DELINQ IMP_CLAGE M_CLAGE
## 1    10.5     0         0       0          0        0  94.36667       0
## 2     7.0     0         0       0          2        0 121.83333       0
## 3     4.0     0         0       0          0        0 149.46667       0
## 4     7.0     1         1       1          1        1 174.00000       1
## 5     3.0     0         0       0          0        0  93.33333       0
## 6     9.0     0         0       0          0        0 101.46600       0
```

```
##   IMP_NINQ M_NINQ IMP_CLNO M_CLNO IMP_DEBTINC M_DEBTINC FLAG.Job.Mgr
## 1        1      0        9      0    35.00000         1            0
## 2        0      0       14      0    35.00000         1            0
## 3        1      0       10      0    35.00000         1            0
## 4        1      1       20      1    35.00000         1            0
## 5        0      0       14      0    35.00000         1            0
## 6        1      0        8      0    37.11361         0            0
##   FLAG.Job.Office FLAG.Job.Other FLAG.Job.ProfExe FLAG.Job.Sales
FLAG.Job.Self
## 1               0              1                0             0
0
## 2               0              1                0             0
0
## 3               0              1                0             0
0
## 4               0              0                0             0
0
## 5               1              0                0             0
0
## 6               0              1                0             0
0
##   FLAG.Reason.DebtCon FLAG.Reason.HomeImp        PC1        PC2
## 1                   0                   1  0.4290662  2.5778401
## 2                   0                   1  0.3604417  1.3218033
## 3                   0                   1  0.3390211  2.7748917
## 4                   0                   0 -9.7215119 -0.1846459
## 5                   0                   1  0.6519367  0.7711290
## 6                   0                   1  0.5004836  2.3331760
```

```r
# This code takes a random sample of the data so that we can visualize it
easier.
df_flags$RAND1 = sample(1000, size = nrow(df_flags), replace = TRUE)
df_flags$RAND2 = sample(1000, size = nrow(df_flags), replace = TRUE)

df_flags0 = df_flags[ which(df_flags$TARGET_BAD_FLAG == 0), ]
df_flags1 = df_flags[ which(df_flags$TARGET_BAD_FLAG == 1), ]

df_flags0 = df_flags0[ df_flags0$RAND1 < 1000, ]
df_flags1 = df_flags1[ df_flags1$RAND1 < 5000, ]

df_flagsx = rbind( df_flags0, df_flags1 )
df_flagsx = df_flagsx[ df_flagsx$RAND2 < 15, ]

df_flagsx = df_flags

colors <- c("#00AFBB", "#E7B800")
colors <- c("red", "black")
colors <- colors[df_flagsx$TARGET_BAD_FLAG + 1]
plot( df_flagsx$PC1, df_flagsx$PC2, col=colors, pch=16 )
```

#Comment on whether you consider the first two Principal Components to be predictive. If you believe the graph is too cluttered, you are free to do a random sample of the data to make it more readable. That is up to you.

PC1 - M_CLNO / M_NINQ / M_CLAGE / M_DELINQ / M_DEROG : Credit history PC2 - IMP_MORTDUE / IMP_CLAGE / IMP_CLNO : Financial Situation

From the PCA plot, it seems that the first two principal components are the good variance. However, there is overlap between the two so it is not the idealistic plot.
- PC1 is influenced by the variables related to the individual's credit history: number of credit lines (M_CLNO), number of recent credit inquiries (M_NINQ), age of credit line (M_CLAGE), past delinquencies (M_DELINQ), and derogatory loans (M_DEROG). - This is the borrower's reliability and credit history when it comes to predicting the future loan performance. - PC2 appears to be associated with the individual's current financial situation, specifically the outstanding mortgage due (IMP_MORTDUE), age of credit line (IMP_CLAGE), and number of credit lines (IMP_CLNO). This component reflects the borrower's current financial burden and assets, which can influence their ability to repay a loan.

They both are very useful to evaluate borrower's predictive performance.

- Clustering and Overlap: It is very ambiguous. There's a notable clustering of red dots, especially in the right side of the plot along PC1. This shows that bad loans tend to have similar relation to the credit history. However, there is also a significant overlap between red and black dots, also in the middle points. Credit history can distinguish bad loans from good ones.
- PC1: The fact that many bad loans are clustered in one side of the PC1 axis. It shows that PC1 might be capturing risk factors that are more prevalent among bad loans. It prospects poor credit management or higher credit utilization, which are known risk factors for defaulting on loans.
- PC2: Good loans and bad loans' patterns are aligned with financial situation which is influenced by variables like outstanding mortgage dues and the number of credit lines. However, this spread does not show a clear pattern of separation between the good and bad loans.
- In summary, PC1 seems to be good predictive of loan defaults, showing credit history that correlate with bad loans. While PC2 prospects the financial situation but does not provide a clear separation

Step 3: tSNE Analysis

```
dfu = df
dfu$TARGET_LOSS_AMT = NULL
dfu = unique(dfu)
head( dfu )

##   TARGET_BAD_FLAG LOAN IMP_MORTDUE M_MORTDUE IMP_VALUE M_VALUE IMP_YOJ
M_YOJ
## 1               1 1100       25860         0     39025       0    10.5
0
## 2               1 1300       70053         0     68400       0     7.0
0
## 3               1 1500       13500         0     16700       0     4.0
0
## 4               1 1500       65000         1     89000       1     7.0
1
## 5               0 1700       97800         0    112000       0     3.0
0
## 6               1 1700       30548         0     40320       0     9.0
0
##   IMP_DEROG M_DEROG IMP_DELINQ M_DELINQ IMP_CLAGE M_CLAGE IMP_NINQ M_NINQ
## 1         0       0          0        0  94.36667       0        1      0
## 2         0       0          2        0 121.83333       0        0      0
## 3         0       0          0        0 149.46667       0        1      0
## 4         1       1          1        1 174.00000       1        1      1
## 5         0       0          0        0  93.33333       0        0      0
## 6         0       0          0        0 101.46600       0        1      0
##   IMP_CLNO M_CLNO IMP_DEBTINC M_DEBTINC FLAG.Job.Mgr FLAG.Job.Office
## 1        9      0    35.00000         1            0               0
## 2       14      0    35.00000         1            0               0
## 3       10      0    35.00000         1            0               0
```

```
## 4       20      1    35.00000         1            0               0
## 5       14      0    35.00000         1            0               1
## 6        8      0    37.11361         0            0               0
##   FLAG.Job.Other FLAG.Job.ProfExe FLAG.Job.Sales FLAG.Job.Self
## 1              1                0              0             0
## 2              1                0              0             0
## 3              1                0              0             0
## 4              0                0              0             0
## 5              0                0              0             0
## 6              1                0              0             0
##   FLAG.Reason.DebtCon FLAG.Reason.HomeImp
## 1                   0                   1
## 2                   0                   1
## 3                   0                   1
## 4                   0                   0
## 5                   0                   1
## 6                   0                   1
```

```
#Justing using numbers
theTSNE = Rtsne( dfu[,c(2,3,4,5,6,7,8,9,10,11,13,15,17,19)], dims = 2,
perplexity=100, verbose=TRUE, max_iter = 500)
```

```
## Performing PCA
## Read the 5960 x 14 data matrix successfully!
## Using no_dims = 2, perplexity = 100.000000, and theta = 0.500000
## Computing input similarities...
## Building tree...
## Done in 2.10 seconds (sparsity = 0.064896)!
## Learning embedding...
## Iteration 50: error is 77.907374 (50 iterations in 1.14 seconds)
## Iteration 100: error is 64.310618 (50 iterations in 1.12 seconds)
## Iteration 150: error is 61.905324 (50 iterations in 1.09 seconds)
## Iteration 200: error is 61.393767 (50 iterations in 1.11 seconds)
## Iteration 250: error is 61.227627 (50 iterations in 1.14 seconds)
## Iteration 300: error is 1.343235 (50 iterations in 1.08 seconds)
## Iteration 350: error is 1.033907 (50 iterations in 1.05 seconds)
## Iteration 400: error is 0.895768 (50 iterations in 1.06 seconds)
## Iteration 450: error is 0.816587 (50 iterations in 1.06 seconds)
## Iteration 500: error is 0.769466 (50 iterations in 1.05 seconds)
## Fitting performed in 10.89 seconds.
```

```
dfu$TS1 = theTSNE$Y[,1]
dfu$TS2 = theTSNE$Y[,2]

colors <- c("#00AFBB", "#E7B800")
colors <- c("red", "black")
colors <- colors[dfu$TARGET_BAD_FLAG + 1]
plot( dfu$TS1, dfu$TS2, col=colors, pch=16 )
```

```
theTSNE = Rtsne( dfu[,c(2,3,4,5,6,7,8,9,10,11,13,15,17,19)], dims = 2,
perplexity=30, verbose=TRUE, max_iter = 500)

## Performing PCA
## Read the 5960 x 14 data matrix successfully!
## Using no_dims = 2, perplexity = 30.000000, and theta = 0.500000
## Computing input similarities...
## Building tree...
## Done in 0.54 seconds (sparsity = 0.019121)!
## Learning embedding...
## Iteration 50: error is 92.486170 (50 iterations in 1.40 seconds)
## Iteration 100: error is 75.223702 (50 iterations in 1.03 seconds)
## Iteration 150: error is 71.245496 (50 iterations in 0.80 seconds)
## Iteration 200: error is 69.652971 (50 iterations in 0.77 seconds)
## Iteration 250: error is 68.885391 (50 iterations in 0.80 seconds)
## Iteration 300: error is 2.113892 (50 iterations in 0.79 seconds)
## Iteration 350: error is 1.667750 (50 iterations in 0.82 seconds)
## Iteration 400: error is 1.426505 (50 iterations in 0.80 seconds)
## Iteration 450: error is 1.276909 (50 iterations in 0.84 seconds)
## Iteration 500: error is 1.175206 (50 iterations in 0.83 seconds)
## Fitting performed in 8.88 seconds.
```

```r
dfu$TS1 = theTSNE$Y[,1]
dfu$TS2 = theTSNE$Y[,2]

colors <- c("#00AFBB", "#E7B800")
colors <- c("red", "black")
colors <- colors[dfu$TARGET_BAD_FLAG + 1]
plot( dfu$TS1, dfu$TS2, col=colors, pch=16 )
```

```r
theTSNE = Rtsne( dfu[,c(2,3,4,5,6,7,8,9,10,11,13,15,17,19)], dims = 2,
perplexity=70, verbose=TRUE, max_iter = 500)

## Performing PCA
## Read the 5960 x 14 data matrix successfully!
## Using no_dims = 2, perplexity = 70.000000, and theta = 0.500000
## Computing input similarities...
## Building tree...
## Done in 1.36 seconds (sparsity = 0.045243)!
## Learning embedding...
## Iteration 50: error is 82.249191 (50 iterations in 1.02 seconds)
## Iteration 100: error is 65.532206 (50 iterations in 1.07 seconds)
## Iteration 150: error is 63.618326 (50 iterations in 1.22 seconds)
## Iteration 200: error is 63.257961 (50 iterations in 1.16 seconds)
## Iteration 250: error is 63.087798 (50 iterations in 1.09 seconds)
```

```
## Iteration 300: error is 1.549218 (50 iterations in 0.97 seconds)
## Iteration 350: error is 1.200705 (50 iterations in 1.08 seconds)
## Iteration 400: error is 1.034509 (50 iterations in 0.92 seconds)
## Iteration 450: error is 0.937427 (50 iterations in 1.04 seconds)
## Iteration 500: error is 0.876644 (50 iterations in 1.04 seconds)
## Fitting performed in 10.62 seconds.
```

```
dfu$TS1 = theTSNE$Y[,1]
dfu$TS2 = theTSNE$Y[,2]

colors <- c("#00AFBB", "#E7B800")
colors <- c("red", "black")
colors <- colors[dfu$TARGET_BAD_FLAG + 1]
plot( dfu$TS1, dfu$TS2, col=colors, pch=16 )
```

```
#no predict modelling for tSNE
#USe RF or LM
P = paste(colnames(dfu)[c(2,3,4,5,6,7,8,9,10,11,13,15,17,19)], collapse =
"+")
F1 = as.formula( paste("TS1 ~", P ) )
F2 = as.formula( paste("TS2 ~", P ) )

print( F1 )
```

```
## TS1 ~ LOAN + IMP_MORTDUE + M_MORTDUE + IMP_VALUE + M_VALUE +
##     IMP_YOJ + M_YOJ + IMP_DEROG + M_DEROG + IMP_DELINQ + IMP_CLAGE +
##     IMP_NINQ + IMP_CLNO + IMP_DEBTINC
```

```r
print( F2 )
```

```
## TS2 ~ LOAN + IMP_MORTDUE + M_MORTDUE + IMP_VALUE + M_VALUE +
##     IMP_YOJ + M_YOJ + IMP_DEROG + M_DEROG + IMP_DELINQ + IMP_CLAGE +
##     IMP_NINQ + IMP_CLNO + IMP_DEBTINC
```

```r
#Linear Regression
ts1_model = lm( F1,data=dfu )
ts2_model = lm( F2,data=dfu )

#Random Forest
ts1_model_rf = randomForest( data=dfu, F1, ntree=500, importance=TRUE )
ts2_model_rf = randomForest( data=dfu, F2, ntree=500, importance=TRUE )

df_tsne = df

df_tsne$TS1M = predict( ts1_model, df_tsne )
df_tsne$TS2M = predict( ts2_model, df_tsne )

df_tsne$TS1M_RF = predict( ts1_model_rf, df_tsne )
df_tsne$TS2M_RF = predict( ts2_model_rf, df_tsne )

# This code takes a random sample of the data so that we can visualize it
easier.
df_tsne$RAND1 = sample(100, size = nrow(df_tsne), replace = TRUE)
df_tsne$RAND2 = sample(100, size = nrow(df_tsne), replace = TRUE)

df_tsne0 = df_tsne[ which(df_tsne$TARGET_BAD_FLAG == 0), ]
df_tsne1 = df_tsne[ which(df_tsne$TARGET_BAD_FLAG == 1), ]

df_tsne0 = df_tsne0[ df_tsne$RAND1 < 25, ]
df_tsne1 = df_tsne1[ df_tsne$RAND1 < 75, ]

df_tsnex = rbind( df_tsne0, df_tsne1 )
df_tsnex = df_tsnex[ df_tsnex$RAND2 < 20, ]

#LINEAR REGRESSION _ tSNE
#Not the good result
f_tsnex = df_tsne

colors <- c("#00AFBB", "#E7B800")
colors <- c("red", "black")
colors <- colors[df_tsnex$TARGET_BAD_FLAG + 1]
plot( df_tsnex$TS1M, df_tsnex$TS2M, col=colors, pch=16 )
```

```
#RF -tSNE
colors <- c("#00AFBB", "#E7B800")
colors <- c("red", "black")
colors <- colors[df_tsnex$TARGET_BAD_FLAG + 1]
plot( df_tsnex$TS1M_RF, df_tsnex$TS2M_RF, col=colors, pch=16 )
```

Step 4:

Tree and Regression Analysis on the Original Data

#Building models with original data #Flag

```
df_model = df
df_model$TARGET_LOSS_AMT = NULL

head( df_model )

##   TARGET_BAD_FLAG LOAN IMP_MORTDUE M_MORTDUE IMP_VALUE M_VALUE IMP_YOJ
M_YOJ
## 1               1 1100       25860         0     39025       0    10.5
0
## 2               1 1300       70053         0     68400       0     7.0
0
## 3               1 1500       13500         0     16700       0     4.0
0
## 4               1 1500       65000         1     89000       1     7.0
1
## 5               0 1700       97800         0    112000       0     3.0
0
## 6               1 1700       30548         0     40320       0     9.0
0
##   IMP_DEROG M_DEROG IMP_DELINQ M_DELINQ IMP_CLAGE M_CLAGE IMP_NINQ M_NINQ
```

```
## 1         0       0          0        0  94.36667       0        1      0
## 2         0       0          2        0 121.83333       0        0      0
## 3         0       0          0        0 149.46667       0        1      0
## 4         1       1          1        1 174.00000       1        1      1
## 5         0       0          0        0  93.33333       0        0      0
## 6         0       0          0        0 101.46600       0        1      0
##   IMP_CLNO M_CLNO IMP_DEBTINC M_DEBTINC FLAG.Job.Mgr FLAG.Job.Office
## 1        9      0    35.00000         1            0               0
## 2       14      0    35.00000         1            0               0
## 3       10      0    35.00000         1            0               0
## 4       20      1    35.00000         1            0               0
## 5       14      0    35.00000         1            0               1
## 6        8      0    37.11361         0            0               0
##   FLAG.Job.Other FLAG.Job.ProfExe FLAG.Job.Sales FLAG.Job.Self
## 1              1                0              0             0
## 2              1                0              0             0
## 3              1                0              0             0
## 4              0                0              0             0
## 5              0                0              0             0
## 6              1                0              0             0
##   FLAG.Reason.DebtCon FLAG.Reason.HomeImp
## 1                   0                   1
## 2                   0                   1
## 3                   0                   1
## 4                   0                   0
## 5                   0                   1
## 6                   0                   1
```

#Create a Decision Tree to predict Loan Default (Target Flag=1). Comment on the variables that were included in the model.

```
tr_set = rpart.control( maxdepth = 10 )
t1G = rpart( data=df_model, TARGET_BAD_FLAG ~ ., control=tr_set,
method="class", parms=list(split='gini') )
t1E = rpart( data=df_model, TARGET_BAD_FLAG ~ ., control=tr_set,
method="class", parms=list(split='information') )

rpart.plot( t1G )
```

```
rpart.plot( t1E )
```

```
t1G$variable.importance

##   M_DEBTINC IMP_DEBTINC  IMP_DELINQ     M_VALUE   IMP_CLAGE        LOAN
##  570.021010  128.539072   77.371518   51.334486   36.076295   25.645675
##   IMP_DEROG     M_DEROG   IMP_VALUE    M_DELINQ      M_NINQ     IMP_YOJ
##   22.501563    9.540586    8.551021    7.632469    6.311465    4.323751
##      M_CLNO    IMP_CLNO IMP_MORTDUE
##    4.256569    2.837461    1.621407

t1E$variable.importance

##   M_DEBTINC IMP_DEBTINC  IMP_DELINQ   IMP_CLAGE        LOAN     M_VALUE
##  762.591210  188.922871   68.152477   40.125205   34.053718   30.094365
##   IMP_DEROG   IMP_VALUE     IMP_YOJ    IMP_CLNO IMP_MORTDUE
##   12.037746   10.263083    3.436136    3.075170    1.219274
```

#LOGISTIC REGRESSION MODEL

```
#Use every variable
theUpper_LR = glm( TARGET_BAD_FLAG ~ ., family = "binomial", data=df_model )
#Use no variable
theLower_LR = glm( TARGET_BAD_FLAG ~ 1, family = "binomial", data=df_model )

summary( theUpper_LR )
```

```
##
## Call:
## glm(formula = TARGET_BAD_FLAG ~ ., family = "binomial", data = df_model)
##
## Coefficients:
##                       Estimate Std. Error z value Pr(>|z|)
## (Intercept)         -7.217e+00  5.622e-01 -12.837  < 2e-16 ***
## LOAN                -7.945e-06  4.833e-06  -1.644 0.100181
## IMP_MORTDUE         -3.604e-06  1.732e-06  -2.081 0.037446 *
## M_MORTDUE            5.284e-01  2.031e-01   2.602 0.009270 **
## IMP_VALUE            3.972e-06  1.248e-06   3.182 0.001464 **
## M_VALUE              5.159e+00  5.358e-01   9.628  < 2e-16 ***
## IMP_YOJ             -1.629e-02  6.898e-03  -2.361 0.018222 *
## M_YOJ               -6.176e-01  1.972e-01  -3.132 0.001739 **
## IMP_DEROG            5.219e-01  6.258e-02   8.339  < 2e-16 ***
## M_DEROG             -2.548e+00  2.983e-01  -8.540  < 2e-16 ***
## IMP_DELINQ           8.002e-01  5.263e-02  15.204  < 2e-16 ***
## M_DELINQ            -1.603e+00  4.198e-01  -3.818 0.000135 ***
## IMP_CLAGE           -5.976e-03  6.806e-04  -8.780  < 2e-16 ***
## M_CLAGE              1.109e+00  3.433e-01   3.230 0.001237 **
## IMP_NINQ             1.453e-01  2.611e-02   5.565 2.61e-08 ***
## M_NINQ              -1.492e-01  3.816e-01  -0.391 0.695827
## IMP_CLNO            -1.306e-02  5.329e-03  -2.451 0.014266 *
## M_CLNO               3.242e+00  6.324e-01   5.127 2.95e-07 ***
## IMP_DEBTINC          9.416e-02  8.783e-03  10.721  < 2e-16 ***
## M_DEBTINC            2.668e+00  9.545e-02  27.951  < 2e-16 ***
## FLAG.Job.Mgr         2.243e+00  4.312e-01   5.201 1.98e-07 ***
## FLAG.Job.Office      1.553e+00  4.333e-01   3.585 0.000337 ***
## FLAG.Job.Other       2.339e+00  4.179e-01   5.597 2.19e-08 ***
## FLAG.Job.ProfExe     2.104e+00  4.285e-01   4.909 9.14e-07 ***
## FLAG.Job.Sales       3.421e+00  5.031e-01   6.801 1.04e-11 ***
## FLAG.Job.Self        2.649e+00  4.827e-01   5.488 4.07e-08 ***
## FLAG.Reason.DebtCon  4.464e-02  3.138e-01   0.142 0.886878
## FLAG.Reason.HomeImp  1.655e-01  3.185e-01   0.520 0.603245
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## (Dispersion parameter for binomial family taken to be 1)
##
##     Null deviance: 5956.5  on 5959  degrees of freedom
## Residual deviance: 3233.3  on 5932  degrees of freedom
## AIC: 3289.3
##
## Number of Fisher Scoring iterations: 6
```

```r
summary( theLower_LR )
```

```
##
## Call:
## glm(formula = TARGET_BAD_FLAG ~ 1, family = "binomial", data = df_model)
```

```
##
## Coefficients:
##             Estimate Std. Error z value Pr(>|z|)
## (Intercept) -1.38944    0.03241  -42.87   <2e-16 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## (Dispersion parameter for binomial family taken to be 1)
##
##     Null deviance: 5956.5  on 5959  degrees of freedom
## Residual deviance: 5956.5  on 5959  degrees of freedom
## AIC: 5958.5
##
## Number of Fisher Scoring iterations: 4
```

#Use either Forward, Backward, or Stepwise variable selection. Comment on the variables that were included in the model.

```
lr_model = stepAIC(theLower_LR, direction="forward",
scope=list(lower=theLower_LR, upper=theUpper_LR))
```

```
## Start:  AIC=5958.47
## TARGET_BAD_FLAG ~ 1
##
##                       Df Deviance    AIC
## + M_DEBTINC            1   4431.3 4435.3
## + IMP_DELINQ           1   5411.8 5415.8
## + M_VALUE              1   5659.8 5663.8
## + IMP_DEROG            1   5689.5 5693.5
## + IMP_CLAGE            1   5771.5 5775.5
## + IMP_DEBTINC          1   5798.0 5802.0
## + IMP_NINQ             1   5807.6 5811.6
## + LOAN                 1   5919.8 5923.8
## + FLAG.Job.Office      1   5921.4 5925.4
## + M_DEROG              1   5923.8 5927.8
## + FLAG.Job.Other       1   5930.4 5934.4
## + M_DELINQ             1   5931.2 5935.2
## + M_YOJ                1   5935.5 5939.5
## + IMP_YOJ              1   5938.5 5942.5
## + FLAG.Job.Sales       1   5943.0 5947.0
## + IMP_MORTDUE          1   5943.1 5947.1
## + FLAG.Job.ProfExe     1   5944.8 5948.8
## + FLAG.Job.Self        1   5945.0 5949.0
## + M_NINQ               1   5946.2 5950.2
## + IMP_VALUE            1   5948.0 5952.0
## + FLAG.Reason.HomeImp  1   5948.2 5952.2
## + FLAG.Reason.DebtCon  1   5949.6 5953.6
## + FLAG.Job.Mgr         1   5950.4 5954.4
## + M_CLAGE              1   5950.9 5954.9
## + M_CLNO               1   5954.3 5958.3
```

```
## <none>                      5956.5 5958.5
## + IMP_CLNO             1   5956.3 5960.3
## + M_MORTDUE            1   5956.4 5960.4
##
## Step:  AIC=4435.29
## TARGET_BAD_FLAG ~ M_DEBTINC
##
##                        Df Deviance    AIC
## + IMP_DELINQ            1   4134.4 4140.4
## + IMP_DEBTINC           1   4263.3 4269.3
## + M_VALUE               1   4265.9 4271.9
## + IMP_DEROG             1   4289.6 4295.6
## + IMP_CLAGE             1   4300.3 4306.3
## + IMP_NINQ              1   4371.4 4377.4
## + M_DEROG               1   4401.3 4407.3
## + FLAG.Job.Office       1   4409.9 4415.9
## + M_DELINQ              1   4409.9 4415.9
## + IMP_YOJ               1   4412.0 4418.0
## + FLAG.Job.Other        1   4412.3 4418.3
## + M_YOJ                 1   4417.6 4423.6
## + FLAG.Job.Sales        1   4419.9 4425.9
## + FLAG.Job.ProfExe      1   4421.6 4427.6
## + FLAG.Job.Self         1   4422.8 4428.8
## + M_NINQ                1   4423.8 4429.8
## + FLAG.Reason.HomeImp   1   4427.4 4433.4
## + FLAG.Job.Mgr          1   4427.8 4433.8
## + LOAN                  1   4428.4 4434.4
## + FLAG.Reason.DebtCon   1   4428.7 4434.7
## <none>                      4431.3 4435.3
## + M_CLAGE               1   4429.4 4435.4
## + IMP_MORTDUE           1   4430.0 4436.0
## + IMP_CLNO              1   4430.8 4436.8
## + M_CLNO                1   4431.0 4437.0
## + IMP_VALUE             1   4431.0 4437.0
## + M_MORTDUE             1   4431.3 4437.3
##
## Step:  AIC=4140.38
## TARGET_BAD_FLAG ~ M_DEBTINC + IMP_DELINQ
##
##                        Df Deviance    AIC
## + IMP_CLAGE             1   3970.7 3978.7
## + IMP_DEBTINC           1   3972.8 3980.8
## + M_VALUE               1   4010.8 4018.8
## + M_DEROG               1   4040.9 4048.9
## + IMP_DEROG             1   4061.8 4069.8
## + IMP_NINQ              1   4080.3 4088.3
## + M_DELINQ              1   4092.3 4100.3
## + IMP_YOJ               1   4105.9 4113.9
## + FLAG.Job.Other        1   4107.8 4115.8
## + FLAG.Job.Office       1   4109.3 4117.3
```

```
## + M_NINQ               1   4110.3 4118.3
## + FLAG.Job.Sales       1   4117.7 4125.7
## + IMP_CLNO             1   4118.9 4126.9
## + M_YOJ                1   4120.1 4128.1
## + FLAG.Job.Self        1   4126.0 4134.0
## + FLAG.Job.ProfExe     1   4126.2 4134.2
## + FLAG.Reason.HomeImp  1   4129.5 4137.5
## + LOAN                 1   4132.4 4140.4
## <none>                     4134.4 4140.4
## + IMP_MORTDUE          1   4132.4 4140.4
## + FLAG.Reason.DebtCon  1   4132.8 4140.8
## + M_CLAGE              1   4133.3 4141.3
## + FLAG.Job.Mgr         1   4133.8 4141.8
## + M_CLNO               1   4134.0 4142.0
## + IMP_VALUE            1   4134.3 4142.3
## + M_MORTDUE            1   4134.3 4142.3
##
## Step:  AIC=3978.67
## TARGET_BAD_FLAG ~ M_DEBTINC + IMP_DELINQ + IMP_CLAGE
##
##                       Df Deviance    AIC
## + IMP_DEBTINC          1   3818.2 3828.2
## + M_VALUE              1   3849.9 3859.9
## + M_DEROG              1   3884.9 3894.9
## + IMP_DEROG            1   3911.2 3921.2
## + M_DELINQ             1   3923.8 3933.8
## + IMP_NINQ             1   3933.8 3943.8
## + FLAG.Job.Office      1   3946.5 3956.5
## + M_NINQ               1   3946.9 3956.9
## + FLAG.Job.Sales       1   3951.0 3961.0
## + FLAG.Job.Other       1   3954.3 3964.3
## + M_YOJ                1   3960.3 3970.3
## + IMP_YOJ              1   3961.5 3971.5
## + FLAG.Job.Self        1   3963.3 3973.3
## + FLAG.Reason.HomeImp  1   3965.2 3975.2
## + IMP_VALUE            1   3965.4 3975.4
## + FLAG.Reason.DebtCon  1   3967.8 3977.8
## <none>                     3970.7 3978.7
## + M_CLAGE              1   3968.9 3978.9
## + FLAG.Job.ProfExe     1   3969.3 3979.3
## + IMP_MORTDUE          1   3970.2 3980.2
## + FLAG.Job.Mgr         1   3970.5 3980.5
## + M_CLNO               1   3970.5 3980.5
## + M_MORTDUE            1   3970.5 3980.5
## + IMP_CLNO             1   3970.5 3980.5
## + LOAN                 1   3970.7 3980.7
##
## Step:  AIC=3828.24
## TARGET_BAD_FLAG ~ M_DEBTINC + IMP_DELINQ + IMP_CLAGE + IMP_DEBTINC
##
```

```
##                        Df Deviance    AIC
## + M_VALUE               1   3676.5 3688.5
## + M_DEROG               1   3731.6 3743.6
## + IMP_DEROG             1   3759.6 3771.6
## + M_DELINQ              1   3780.3 3792.3
## + FLAG.Job.Office       1   3789.3 3801.3
## + IMP_NINQ              1   3791.3 3803.3
## + FLAG.Job.Other        1   3802.8 3814.8
## + FLAG.Job.Sales        1   3803.6 3815.6
## + M_NINQ                1   3805.6 3817.6
## + M_YOJ                 1   3809.7 3821.7
## + FLAG.Reason.HomeImp   1   3812.1 3824.1
## + M_CLAGE               1   3812.2 3824.2
## + IMP_YOJ               1   3812.5 3824.5
## + FLAG.Job.Self         1   3812.8 3824.8
## + FLAG.Reason.DebtCon   1   3813.7 3825.7
## + IMP_CLNO              1   3814.2 3826.2
## <none>                      3818.2 3828.2
## + M_MORTDUE             1   3816.5 3828.5
## + IMP_VALUE             1   3816.7 3828.7
## + LOAN                  1   3817.4 3829.4
## + IMP_MORTDUE           1   3818.0 3830.0
## + FLAG.Job.ProfExe      1   3818.0 3830.0
## + M_CLNO                1   3818.1 3830.1
## + FLAG.Job.Mgr          1   3818.2 3830.2
##
## Step:  AIC=3688.49
## TARGET_BAD_FLAG ~ M_DEBTINC + IMP_DELINQ + IMP_CLAGE + IMP_DEBTINC +
##     M_VALUE
##
##                        Df Deviance    AIC
## + M_DEROG               1   3569.9 3583.9
## + M_DELINQ              1   3624.3 3638.3
## + IMP_DEROG             1   3625.7 3639.7
## + IMP_NINQ              1   3647.4 3661.4
## + FLAG.Job.Office       1   3647.8 3661.8
## + M_NINQ                1   3658.2 3672.2
## + FLAG.Job.Other        1   3658.3 3672.3
## + FLAG.Job.Sales        1   3660.8 3674.8
## + M_YOJ                 1   3664.9 3678.9
## + FLAG.Reason.HomeImp   1   3669.4 3683.4
## + IMP_YOJ               1   3669.7 3683.7
## + FLAG.Job.Self         1   3671.6 3685.6
## + IMP_CLNO              1   3672.8 3686.8
## + FLAG.Reason.DebtCon   1   3673.6 3687.6
## + IMP_VALUE             1   3674.3 3688.3
## <none>                      3676.5 3688.5
## + M_CLAGE               1   3674.5 3688.5
## + LOAN                  1   3674.6 3688.6
## + M_CLNO                1   3675.7 3689.7
```

```
## + IMP_MORTDUE          1   3676.0 3690.0
## + FLAG.Job.ProfExe     1   3676.4 3690.4
## + FLAG.Job.Mgr         1   3676.5 3690.5
## + M_MORTDUE            1   3676.5 3690.5
##
## Step:  AIC=3583.94
## TARGET_BAD_FLAG ~ M_DEBTINC + IMP_DELINQ + IMP_CLAGE + IMP_DEBTINC +
##     M_VALUE + M_DEROG
##
##                       Df Deviance    AIC
## + IMP_DEROG            1   3482.7 3498.7
## + M_CLAGE              1   3511.6 3527.6
## + M_CLNO               1   3524.8 3540.8
## + IMP_NINQ             1   3534.5 3550.5
## + FLAG.Job.Office      1   3537.5 3553.5
## + FLAG.Job.Sales       1   3553.8 3569.8
## + FLAG.Job.Other       1   3554.8 3570.8
## + IMP_YOJ              1   3560.8 3576.8
## + IMP_CLNO             1   3564.2 3580.2
## + M_NINQ               1   3564.3 3580.3
## + FLAG.Reason.HomeImp  1   3564.8 3580.8
## + M_MORTDUE            1   3566.0 3582.0
## + LOAN                 1   3566.0 3582.0
## + FLAG.Reason.DebtCon  1   3566.5 3582.5
## + FLAG.Job.Self        1   3566.6 3582.6
## + M_YOJ                1   3567.5 3583.5
## <none>                     3569.9 3583.9
## + IMP_VALUE            1   3568.3 3584.3
## + FLAG.Job.ProfExe     1   3569.0 3585.0
## + IMP_MORTDUE          1   3569.6 3585.6
## + FLAG.Job.Mgr         1   3569.7 3585.7
## + M_DELINQ             1   3569.8 3585.8
##
## Step:  AIC=3498.73
## TARGET_BAD_FLAG ~ M_DEBTINC + IMP_DELINQ + IMP_CLAGE + IMP_DEBTINC +
##     M_VALUE + M_DEROG + IMP_DEROG
##
##                       Df Deviance    AIC
## + M_CLAGE              1   3428.4 3446.4
## + M_CLNO               1   3439.7 3457.7
## + FLAG.Job.Office      1   3454.1 3472.1
## + IMP_NINQ             1   3459.5 3477.5
## + FLAG.Job.Other       1   3469.8 3487.8
## + FLAG.Job.Sales       1   3470.1 3488.1
## + IMP_CLNO             1   3473.2 3491.2
## + FLAG.Reason.HomeImp  1   3476.0 3494.0
## + M_YOJ                1   3476.5 3494.5
## + IMP_YOJ              1   3476.6 3494.6
## + LOAN                 1   3477.2 3495.2
## + FLAG.Reason.DebtCon  1   3478.3 3496.3
```

```
## + FLAG.Job.Self        1   3478.3 3496.3
## + IMP_VALUE            1   3480.2 3498.2
## <none>                     3482.7 3498.7
## + M_MORTDUE            1   3481.0 3499.0
## + M_DELINQ             1   3481.3 3499.3
## + M_NINQ               1   3481.9 3499.9
## + FLAG.Job.ProfExe     1   3482.1 3500.1
## + FLAG.Job.Mgr         1   3482.6 3500.6
## + IMP_MORTDUE          1   3482.6 3500.6
##
## Step:  AIC=3446.38
## TARGET_BAD_FLAG ~ M_DEBTINC + IMP_DELINQ + IMP_CLAGE + IMP_DEBTINC +
##     M_VALUE + M_DEROG + IMP_DEROG + M_CLAGE
##
##                       Df Deviance    AIC
## + IMP_NINQ             1   3402.2 3422.2
## + FLAG.Job.Office      1   3403.0 3423.0
## + FLAG.Job.Sales       1   3413.3 3433.3
## + M_YOJ                1   3414.4 3434.4
## + M_DELINQ             1   3416.0 3436.0
## + FLAG.Job.Other       1   3416.6 3436.6
## + FLAG.Reason.HomeImp  1   3422.1 3442.1
## + LOAN                 1   3423.7 3443.7
## + IMP_YOJ              1   3424.0 3444.0
## + FLAG.Job.Self        1   3424.1 3444.1
## + M_NINQ               1   3424.8 3444.8
## + IMP_VALUE            1   3424.9 3444.9
## + M_CLNO               1   3425.1 3445.1
## + IMP_CLNO             1   3425.1 3445.1
## + FLAG.Reason.DebtCon  1   3426.0 3446.0
## <none>                     3428.4 3446.4
## + FLAG.Job.Mgr         1   3427.8 3447.8
## + M_MORTDUE            1   3428.1 3448.1
## + FLAG.Job.ProfExe     1   3428.2 3448.2
## + IMP_MORTDUE          1   3428.4 3448.4
##
## Step:  AIC=3422.25
## TARGET_BAD_FLAG ~ M_DEBTINC + IMP_DELINQ + IMP_CLAGE + IMP_DEBTINC +
##     M_VALUE + M_DEROG + IMP_DEROG + M_CLAGE + IMP_NINQ
##
##                       Df Deviance    AIC
## + FLAG.Job.Office      1   3379.3 3401.3
## + FLAG.Job.Sales       1   3385.1 3407.1
## + M_YOJ                1   3388.7 3410.7
## + M_DELINQ             1   3391.9 3413.9
## + FLAG.Reason.HomeImp  1   3392.0 3414.0
## + FLAG.Job.Other       1   3392.1 3414.1
## + LOAN                 1   3395.0 3417.0
## + M_CLNO               1   3396.9 3418.9
## + FLAG.Reason.DebtCon  1   3397.2 3419.2
```

```
## + IMP_CLNO             1   3397.4 3419.4
## + FLAG.Job.Self        1   3398.2 3420.2
## + IMP_YOJ              1   3398.5 3420.5
## + IMP_VALUE            1   3398.7 3420.7
## <none>                     3402.2 3422.2
## + M_NINQ               1   3400.5 3422.5
## + M_MORTDUE            1   3401.5 3423.5
## + FLAG.Job.Mgr         1   3402.0 3424.0
## + IMP_MORTDUE          1   3402.1 3424.1
## + FLAG.Job.ProfExe     1   3402.2 3424.2
##
## Step:  AIC=3401.27
## TARGET_BAD_FLAG ~ M_DEBTINC + IMP_DELINQ + IMP_CLAGE + IMP_DEBTINC +
##     M_VALUE + M_DEROG + IMP_DEROG + M_CLAGE + IMP_NINQ + FLAG.Job.Office
##
##                       Df Deviance    AIC
## + M_YOJ                1   3362.7 3386.7
## + FLAG.Job.Sales       1   3364.5 3388.5
## + M_DELINQ             1   3368.4 3392.4
## + FLAG.Reason.HomeImp  1   3369.6 3393.6
## + LOAN                 1   3372.2 3396.2
## + IMP_CLNO             1   3373.7 3397.7
## + M_CLNO               1   3374.2 3398.2
## + FLAG.Reason.DebtCon  1   3374.7 3398.7
## + IMP_YOJ              1   3375.0 3399.0
## + IMP_VALUE            1   3376.6 3400.6
## + FLAG.Job.Self        1   3376.6 3400.6
## + M_NINQ               1   3376.8 3400.8
## + FLAG.Job.Other       1   3376.9 3400.9
## <none>                     3379.3 3401.3
## + FLAG.Job.ProfExe     1   3377.7 3401.7
## + M_MORTDUE            1   3378.3 3402.3
## + IMP_MORTDUE          1   3378.8 3402.8
## + FLAG.Job.Mgr         1   3379.1 3403.1
##
## Step:  AIC=3386.68
## TARGET_BAD_FLAG ~ M_DEBTINC + IMP_DELINQ + IMP_CLAGE + IMP_DEBTINC +
##     M_VALUE + M_DEROG + IMP_DEROG + M_CLAGE + IMP_NINQ + FLAG.Job.Office +
##     M_YOJ
##
##                       Df Deviance    AIC
## + FLAG.Job.Sales       1   3347.2 3373.2
## + FLAG.Reason.HomeImp  1   3354.6 3380.6
## + IMP_CLNO             1   3355.2 3381.2
## + M_DELINQ             1   3355.2 3381.2
## + M_CLNO               1   3356.3 3382.3
## + LOAN                 1   3357.3 3383.3
## + IMP_YOJ              1   3357.7 3383.7
## + FLAG.Reason.DebtCon  1   3358.2 3384.2
## + FLAG.Job.Other       1   3358.4 3384.4
```

```
## + M_MORTDUE            1   3358.8 3384.8
## + FLAG.Job.ProfExe     1   3359.3 3385.3
## + FLAG.Job.Self        1   3360.1 3386.1
## <none>                     3362.7 3386.7
## + IMP_VALUE            1   3360.9 3386.9
## + IMP_MORTDUE          1   3361.6 3387.6
## + M_NINQ               1   3362.1 3388.1
## + FLAG.Job.Mgr         1   3362.2 3388.2
##
## Step:  AIC=3373.21
## TARGET_BAD_FLAG ~ M_DEBTINC + IMP_DELINQ + IMP_CLAGE + IMP_DEBTINC +
##     M_VALUE + M_DEROG + IMP_DEROG + M_CLAGE + IMP_NINQ + FLAG.Job.Office +
##     M_YOJ + FLAG.Job.Sales
##
##                       Df Deviance    AIC
## + FLAG.Reason.HomeImp  1   3338.2 3366.2
## + IMP_CLNO             1   3338.4 3366.4
## + FLAG.Job.Other       1   3339.6 3367.6
## + M_DELINQ             1   3340.1 3368.1
## + M_CLNO               1   3340.5 3368.5
## + FLAG.Reason.DebtCon  1   3341.9 3369.9
## + IMP_YOJ              1   3342.9 3370.9
## + M_MORTDUE            1   3343.0 3371.0
## + LOAN                 1   3343.1 3371.1
## + FLAG.Job.Self        1   3344.2 3372.2
## + FLAG.Job.ProfExe     1   3345.1 3373.1
## <none>                     3347.2 3373.2
## + IMP_VALUE            1   3345.5 3373.5
## + IMP_MORTDUE          1   3345.9 3373.9
## + M_NINQ               1   3346.9 3374.9
## + FLAG.Job.Mgr         1   3347.0 3375.0
##
## Step:  AIC=3366.16
## TARGET_BAD_FLAG ~ M_DEBTINC + IMP_DELINQ + IMP_CLAGE + IMP_DEBTINC +
##     M_VALUE + M_DEROG + IMP_DEROG + M_CLAGE + IMP_NINQ + FLAG.Job.Office +
##     M_YOJ + FLAG.Job.Sales + FLAG.Reason.HomeImp
##
##                       Df Deviance    AIC
## + M_DELINQ             1   3330.3 3360.3
## + FLAG.Job.Other       1   3330.8 3360.8
## + IMP_CLNO             1   3331.7 3361.7
## + M_CLNO               1   3332.4 3362.4
## + IMP_YOJ              1   3333.8 3363.8
## + M_MORTDUE            1   3335.4 3365.4
## + LOAN                 1   3335.7 3365.7
## + FLAG.Reason.DebtCon  1   3336.0 3366.0
## + FLAG.Job.ProfExe     1   3336.1 3366.1
## + FLAG.Job.Self        1   3336.1 3366.1
## <none>                     3338.2 3366.2
## + IMP_VALUE            1   3336.5 3366.5
```

```
## + IMP_MORTDUE          1   3337.1 3367.1
## + M_NINQ               1   3337.6 3367.6
## + FLAG.Job.Mgr         1   3338.1 3368.1
##
## Step:  AIC=3360.32
## TARGET_BAD_FLAG ~ M_DEBTINC + IMP_DELINQ + IMP_CLAGE + IMP_DEBTINC +
##     M_VALUE + M_DEROG + IMP_DEROG + M_CLAGE + IMP_NINQ + FLAG.Job.Office +
##     M_YOJ + FLAG.Job.Sales + FLAG.Reason.HomeImp + M_DELINQ
##
##                       Df Deviance    AIC
## + M_CLNO               1   3314.5 3346.5
## + FLAG.Job.Other       1   3322.6 3354.6
## + IMP_CLNO             1   3324.7 3356.7
## + IMP_YOJ              1   3325.5 3357.5
## + M_MORTDUE            1   3325.9 3357.9
## + FLAG.Job.Self        1   3327.9 3359.9
## + FLAG.Job.ProfExe     1   3328.1 3360.1
## + LOAN                 1   3328.3 3360.3
## <none>                     3330.3 3360.3
## + FLAG.Reason.DebtCon  1   3328.3 3360.3
## + IMP_VALUE            1   3328.8 3360.8
## + M_NINQ               1   3329.1 3361.1
## + IMP_MORTDUE          1   3329.3 3361.3
## + FLAG.Job.Mgr         1   3330.2 3362.2
##
## Step:  AIC=3346.53
## TARGET_BAD_FLAG ~ M_DEBTINC + IMP_DELINQ + IMP_CLAGE + IMP_DEBTINC +
##     M_VALUE + M_DEROG + IMP_DEROG + M_CLAGE + IMP_NINQ + FLAG.Job.Office +
##     M_YOJ + FLAG.Job.Sales + FLAG.Reason.HomeImp + M_DELINQ +
##     M_CLNO
##
##                       Df Deviance    AIC
## + IMP_CLNO             1   3304.2 3338.2
## + FLAG.Job.Other       1   3304.5 3338.5
## + IMP_YOJ              1   3309.3 3343.3
## + M_MORTDUE            1   3310.1 3344.1
## + FLAG.Reason.DebtCon  1   3311.4 3345.4
## + FLAG.Job.ProfExe     1   3311.8 3345.8
## + FLAG.Job.Self        1   3312.0 3346.0
## <none>                     3314.5 3346.5
## + IMP_VALUE            1   3312.9 3346.9
## + LOAN                 1   3313.4 3347.4
## + IMP_MORTDUE          1   3313.7 3347.7
## + FLAG.Job.Mgr         1   3314.4 3348.4
## + M_NINQ               1   3314.5 3348.5
##
## Step:  AIC=3338.24
## TARGET_BAD_FLAG ~ M_DEBTINC + IMP_DELINQ + IMP_CLAGE + IMP_DEBTINC +
##     M_VALUE + M_DEROG + IMP_DEROG + M_CLAGE + IMP_NINQ + FLAG.Job.Office +
##     M_YOJ + FLAG.Job.Sales + FLAG.Reason.HomeImp + M_DELINQ +
```

```
##     M_CLNO + IMP_CLNO
##
##                        Df Deviance    AIC
## + FLAG.Job.Other        1   3297.2 3333.2
## + IMP_YOJ               1   3298.8 3334.8
## + IMP_VALUE             1   3300.7 3336.7
## + FLAG.Reason.DebtCon   1   3301.1 3337.1
## + FLAG.Job.Self         1   3301.2 3337.2
## + M_MORTDUE             1   3301.4 3337.4
## <none>                      3304.2 3338.2
## + FLAG.Job.ProfExe      1   3302.9 3338.9
## + LOAN                  1   3303.6 3339.6
## + M_NINQ                1   3304.2 3340.2
## + FLAG.Job.Mgr          1   3304.2 3340.2
## + IMP_MORTDUE           1   3304.2 3340.2
##
## Step:  AIC=3333.16
## TARGET_BAD_FLAG ~ M_DEBTINC + IMP_DELINQ + IMP_CLAGE + IMP_DEBTINC +
##     M_VALUE + M_DEROG + IMP_DEROG + M_CLAGE + IMP_NINQ + FLAG.Job.Office +
##     M_YOJ + FLAG.Job.Sales + FLAG.Reason.HomeImp + M_DELINQ +
##     M_CLNO + IMP_CLNO + FLAG.Job.Other
##
##                        Df Deviance    AIC
## + IMP_VALUE             1   3291.2 3329.2
## + IMP_YOJ               1   3291.4 3329.4
## + FLAG.Job.Self         1   3291.4 3329.4
## + M_MORTDUE             1   3294.7 3332.7
## + FLAG.Reason.DebtCon   1   3294.9 3332.9
## <none>                      3297.2 3333.2
## + FLAG.Job.Mgr          1   3295.6 3333.6
## + IMP_MORTDUE           1   3296.8 3334.8
## + LOAN                  1   3296.8 3334.8
## + FLAG.Job.ProfExe      1   3297.0 3335.0
## + M_NINQ                1   3297.1 3335.1
##
## Step:  AIC=3329.21
## TARGET_BAD_FLAG ~ M_DEBTINC + IMP_DELINQ + IMP_CLAGE + IMP_DEBTINC +
##     M_VALUE + M_DEROG + IMP_DEROG + M_CLAGE + IMP_NINQ + FLAG.Job.Office +
##     M_YOJ + FLAG.Job.Sales + FLAG.Reason.HomeImp + M_DELINQ +
##     M_CLNO + IMP_CLNO + FLAG.Job.Other + IMP_VALUE
##
##                        Df Deviance    AIC
## + IMP_YOJ               1   3285.1 3325.1
## + FLAG.Job.Self         1   3286.3 3326.3
## + M_MORTDUE             1   3288.5 3328.5
## + IMP_MORTDUE           1   3288.9 3328.9
## + LOAN                  1   3288.9 3328.9
## + FLAG.Job.Mgr          1   3289.0 3329.0
## + FLAG.Reason.DebtCon   1   3289.1 3329.1
## <none>                      3291.2 3329.2
```

```
## + M_NINQ               1   3291.2 3331.2
## + FLAG.Job.ProfExe     1   3291.2 3331.2
##
## Step:  AIC=3325.11
## TARGET_BAD_FLAG ~ M_DEBTINC + IMP_DELINQ + IMP_CLAGE + IMP_DEBTINC +
##     M_VALUE + M_DEROG + IMP_DEROG + M_CLAGE + IMP_NINQ + FLAG.Job.Office +
##     M_YOJ + FLAG.Job.Sales + FLAG.Reason.HomeImp + M_DELINQ +
##     M_CLNO + IMP_CLNO + FLAG.Job.Other + IMP_VALUE + IMP_YOJ
##
##                       Df Deviance    AIC
## + FLAG.Job.Self        1   3280.6 3322.6
## + IMP_MORTDUE          1   3281.7 3323.7
## + M_MORTDUE            1   3282.4 3324.4
## + FLAG.Job.Mgr         1   3282.5 3324.5
## <none>                     3285.1 3325.1
## + FLAG.Reason.DebtCon  1   3283.1 3325.1
## + LOAN                 1   3283.6 3325.6
## + M_NINQ               1   3285.1 3327.1
## + FLAG.Job.ProfExe     1   3285.1 3327.1
##
## Step:  AIC=3322.64
## TARGET_BAD_FLAG ~ M_DEBTINC + IMP_DELINQ + IMP_CLAGE + IMP_DEBTINC +
##     M_VALUE + M_DEROG + IMP_DEROG + M_CLAGE + IMP_NINQ + FLAG.Job.Office +
##     M_YOJ + FLAG.Job.Sales + FLAG.Reason.HomeImp + M_DELINQ +
##     M_CLNO + IMP_CLNO + FLAG.Job.Other + IMP_VALUE + IMP_YOJ +
##     FLAG.Job.Self
##
##                       Df Deviance    AIC
## + FLAG.Job.Mgr         1   3276.0 3320.0
## + IMP_MORTDUE          1   3277.4 3321.4
## + M_MORTDUE            1   3277.9 3321.9
## + LOAN                 1   3278.3 3322.3
## <none>                     3280.6 3322.6
## + FLAG.Reason.DebtCon  1   3278.7 3322.7
## + FLAG.Job.ProfExe     1   3280.0 3324.0
## + M_NINQ               1   3280.5 3324.5
##
## Step:  AIC=3319.97
## TARGET_BAD_FLAG ~ M_DEBTINC + IMP_DELINQ + IMP_CLAGE + IMP_DEBTINC +
##     M_VALUE + M_DEROG + IMP_DEROG + M_CLAGE + IMP_NINQ + FLAG.Job.Office +
##     M_YOJ + FLAG.Job.Sales + FLAG.Reason.HomeImp + M_DELINQ +
##     M_CLNO + IMP_CLNO + FLAG.Job.Other + IMP_VALUE + IMP_YOJ +
##     FLAG.Job.Self + FLAG.Job.Mgr
##
##                       Df Deviance    AIC
## + FLAG.Job.ProfExe     1   3245.9 3291.9
## + IMP_MORTDUE          1   3272.8 3318.8
## + M_MORTDUE            1   3273.2 3319.2
## + LOAN                 1   3273.5 3319.5
## <none>                     3276.0 3320.0
```

```
## + FLAG.Reason.DebtCon  1   3274.3 3320.3
## + M_NINQ               1   3275.9 3321.9
##
## Step:  AIC=3291.89
## TARGET_BAD_FLAG ~ M_DEBTINC + IMP_DELINQ + IMP_CLAGE + IMP_DEBTINC +
##     M_VALUE + M_DEROG + IMP_DEROG + M_CLAGE + IMP_NINQ + FLAG.Job.Office +
##     M_YOJ + FLAG.Job.Sales + FLAG.Reason.HomeImp + M_DELINQ +
##     M_CLNO + IMP_CLNO + FLAG.Job.Other + IMP_VALUE + IMP_YOJ +
##     FLAG.Job.Self + FLAG.Job.Mgr + FLAG.Job.ProfExe
##
##                        Df Deviance    AIC
## + M_MORTDUE             1   3240.7 3288.7
## + IMP_MORTDUE           1   3242.2 3290.2
## + LOAN                  1   3243.9 3291.9
## <none>                      3245.9 3291.9
## + M_NINQ                1   3245.8 3293.8
## + FLAG.Reason.DebtCon  1   3245.9 3293.9
##
## Step:  AIC=3288.73
## TARGET_BAD_FLAG ~ M_DEBTINC + IMP_DELINQ + IMP_CLAGE + IMP_DEBTINC +
##     M_VALUE + M_DEROG + IMP_DEROG + M_CLAGE + IMP_NINQ + FLAG.Job.Office +
##     M_YOJ + FLAG.Job.Sales + FLAG.Reason.HomeImp + M_DELINQ +
##     M_CLNO + IMP_CLNO + FLAG.Job.Other + IMP_VALUE + IMP_YOJ +
##     FLAG.Job.Self + FLAG.Job.Mgr + FLAG.Job.ProfExe + M_MORTDUE
##
##                        Df Deviance    AIC
## + IMP_MORTDUE           1   3236.3 3286.3
## + LOAN                  1   3238.1 3288.1
## <none>                      3240.7 3288.7
## + M_NINQ                1   3240.6 3290.6
## + FLAG.Reason.DebtCon  1   3240.7 3290.7
##
## Step:  AIC=3286.25
## TARGET_BAD_FLAG ~ M_DEBTINC + IMP_DELINQ + IMP_CLAGE + IMP_DEBTINC +
##     M_VALUE + M_DEROG + IMP_DEROG + M_CLAGE + IMP_NINQ + FLAG.Job.Office +
##     M_YOJ + FLAG.Job.Sales + FLAG.Reason.HomeImp + M_DELINQ +
##     M_CLNO + IMP_CLNO + FLAG.Job.Other + IMP_VALUE + IMP_YOJ +
##     FLAG.Job.Self + FLAG.Job.Mgr + FLAG.Job.ProfExe + M_MORTDUE +
##     IMP_MORTDUE
##
##                        Df Deviance    AIC
## + LOAN                  1   3233.5 3285.5
## <none>                      3236.3 3286.3
## + M_NINQ                1   3236.1 3288.1
## + FLAG.Reason.DebtCon  1   3236.2 3288.2
##
## Step:  AIC=3285.51
## TARGET_BAD_FLAG ~ M_DEBTINC + IMP_DELINQ + IMP_CLAGE + IMP_DEBTINC +
##     M_VALUE + M_DEROG + IMP_DEROG + M_CLAGE + IMP_NINQ + FLAG.Job.Office +
##     M_YOJ + FLAG.Job.Sales + FLAG.Reason.HomeImp + M_DELINQ +
```

```
##     M_CLNO + IMP_CLNO + FLAG.Job.Other + IMP_VALUE + IMP_YOJ +
##     FLAG.Job.Self + FLAG.Job.Mgr + FLAG.Job.ProfExe + M_MORTDUE +
##     IMP_MORTDUE + LOAN
##
##                        Df Deviance    AIC
## <none>                      3233.5 3285.5
## + M_NINQ                 1   3233.4 3287.4
## + FLAG.Reason.DebtCon  1   3233.5 3287.5
```

```r
summary( lr_model )
```

```
##
## Call:
## glm(formula = TARGET_BAD_FLAG ~ M_DEBTINC + IMP_DELINQ + IMP_CLAGE +
##     IMP_DEBTINC + M_VALUE + M_DEROG + IMP_DEROG + M_CLAGE + IMP_NINQ +
##     FLAG.Job.Office + M_YOJ + FLAG.Job.Sales + FLAG.Reason.HomeImp +
##     M_DELINQ + M_CLNO + IMP_CLNO + FLAG.Job.Other + IMP_VALUE +
##     IMP_YOJ + FLAG.Job.Self + FLAG.Job.Mgr + FLAG.Job.ProfExe +
##     M_MORTDUE + IMP_MORTDUE + LOAN, family = "binomial", data = df_model)
##
## Coefficients:
##                        Estimate Std. Error z value Pr(>|z|)
## (Intercept)         -7.198e+00  5.281e-01 -13.630  < 2e-16 ***
## M_DEBTINC            2.669e+00  9.539e-02  27.977  < 2e-16 ***
## IMP_DELINQ           7.989e-01  5.252e-02  15.210  < 2e-16 ***
## IMP_CLAGE           -5.975e-03  6.789e-04  -8.801  < 2e-16 ***
## IMP_DEBTINC          9.445e-02  8.761e-03  10.780  < 2e-16 ***
## M_VALUE              5.164e+00  5.305e-01   9.735  < 2e-16 ***
## M_DEROG             -2.546e+00  2.980e-01  -8.545  < 2e-16 ***
## IMP_DEROG            5.195e-01  6.212e-02   8.362  < 2e-16 ***
## M_CLAGE              1.111e+00  3.429e-01   3.241 0.001192 **
## IMP_NINQ             1.459e-01  2.609e-02   5.592 2.25e-08 ***
## FLAG.Job.Office      1.569e+00  4.188e-01   3.747 0.000179 ***
## M_YOJ               -6.297e-01  1.952e-01  -3.226 0.001256 **
## FLAG.Job.Sales       3.443e+00  4.886e-01   7.046 1.84e-12 ***
## FLAG.Reason.HomeImp  1.215e-01  1.050e-01   1.157 0.247415
## M_DELINQ            -1.675e+00  3.763e-01  -4.452 8.51e-06 ***
## M_CLNO               3.166e+00  6.001e-01   5.276 1.32e-07 ***
## IMP_CLNO            -1.304e-02  5.329e-03  -2.447 0.014408 *
## FLAG.Job.Other       2.354e+00  4.020e-01   5.855 4.76e-09 ***
## IMP_VALUE            3.951e-06  1.243e-06   3.178 0.001485 **
## IMP_YOJ             -1.636e-02  6.894e-03  -2.372 0.017672 *
## FLAG.Job.Self        2.653e+00  4.702e-01   5.642 1.68e-08 ***
## FLAG.Job.Mgr         2.256e+00  4.173e-01   5.407 6.41e-08 ***
## FLAG.Job.ProfExe     2.117e+00  4.145e-01   5.108 3.26e-07 ***
## M_MORTDUE            5.247e-01  2.027e-01   2.589 0.009616 **
## IMP_MORTDUE         -3.596e-06  1.728e-06  -2.080 0.037498 *
## LOAN                -7.897e-06  4.827e-06  -1.636 0.101864
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

```
##
## (Dispersion parameter for binomial family taken to be 1)
##
##     Null deviance: 5956.5  on 5959  degrees of freedom
## Residual deviance: 3233.5  on 5934  degrees of freedom
## AIC: 3285.5
##
## Number of Fisher Scoring iterations: 6
```

#Create a ROC curve showing the accuracy of the model. #Calculate and display the Area Under the ROC Curve (AUC).

```
#ROC curve
pG = predict( t1G, df_model )
pG2 = prediction( pG[,2], df_model$TARGET_BAD_FLAG )
pG3 = performance( pG2, "tpr", "fpr" )

pE = predict( t1E, df_model )
pE2 = prediction( pE[,2], df_model$TARGET_BAD_FLAG )
pE3 = performance( pE2, "tpr", "fpr" )

plr = predict( lr_model, df_model, type="response" )
plr2 = prediction( plr, df_model$TARGET_BAD_FLAG )
plr3 = performance( plr2, "tpr", "fpr" )
G = predict( t1G, df_model )
pG2 = prediction( pG[,2], df_model$TARGET_BAD_FLAG )
pG3 = performance( pG2, "tpr", "fpr" )

pE = predict( t1E, df_model )
pE2 = prediction( pE[,2], df_model$TARGET_BAD_FLAG )
pE3 = performance( pE2, "tpr", "fpr" )

plr = predict( lr_model, df_model, type="response" )
plr2 = prediction( plr, df_model$TARGET_BAD_FLAG )
plr3 = performance( plr2, "tpr", "fpr" )

plot( pG3, col="red" )
plot( pE3, col="green", add=TRUE )
plot( plr3, col="blue", add=TRUE )
abline(0,1,lty=2)
legend("bottomright",c("GINI","ENTROPY","REGRESSION"),col=c("red","green","bl
ue"), bty="y", lty=1 )
```

```
aucG = performance( pG2, "auc" )@y.values
aucE = performance( pE2, "auc" )@y.values
aucR = performance( plr2, "auc" )@y.values

print( aucG )

## [[1]]
## [1] 0.8433084

print( aucE )

## [[1]]
## [1] 0.8293732

print( aucR )

## [[1]]
## [1] 0.9105166
```

Step 5: Tree and Regression Analysis on the PCA/tSNE Data

```
df_model = df
df_model$TARGET_CLM_AMT = NULL
```

```r
head(df_model)
```

```
##   TARGET_BAD_FLAG TARGET_LOSS_AMT LOAN IMP_MORTDUE M_MORTDUE IMP_VALUE
M_VALUE
## 1               1             641 1100       25860         0     39025
0
## 2               1            1109 1300       70053         0     68400
0
## 3               1             767 1500       13500         0     16700
0
## 4               1            1425 1500       65000         1     89000
1
## 5               0               0 1700       97800         0    112000
0
## 6               1             335 1700       30548         0     40320
0
##   IMP_YOJ M_YOJ IMP_DEROG M_DEROG IMP_DELINQ M_DELINQ IMP_CLAGE M_CLAGE
## 1    10.5     0         0       0          0        0  94.36667       0
## 2     7.0     0         0       0          2        0 121.83333       0
## 3     4.0     0         0       0          0        0 149.46667       0
## 4     7.0     1         1       1          1        1 174.00000       1
## 5     3.0     0         0       0          0        0  93.33333       0
## 6     9.0     0         0       0          0        0 101.46600       0
##   IMP_NINQ M_NINQ IMP_CLNO M_CLNO IMP_DEBTINC M_DEBTINC FLAG.Job.Mgr
## 1        1      0        9      0    35.00000         1            0
## 2        0      0       14      0    35.00000         1            0
## 3        1      0       10      0    35.00000         1            0
## 4        1      1       20      1    35.00000         1            0
## 5        0      0       14      0    35.00000         1            0
## 6        1      0        8      0    37.11361         0            0
##   FLAG.Job.Office FLAG.Job.Other FLAG.Job.ProfExe FLAG.Job.Sales
FLAG.Job.Self
## 1               0              1                0              0
0
## 2               0              1                0              0
0
## 3               0              1                0              0
0
## 4               0              0                0              0
0
## 5               1              0                0              0
0
## 6               0              1                0              0
0
##   FLAG.Reason.DebtCon FLAG.Reason.HomeImp
## 1                   0                   1
## 2                   0                   1
## 3                   0                   1
## 4                   0                   0
```

```
## 5                    0                    1
## 6                    0                    1
```

#Append the Principal Component values from Step 2 to your data set.

```
df_model$PC1 = df_new[,"PC1"]
df_model$PC2 = df_new[,"PC2"]
df_model$PC3 = df_new[,"PC3"]
df_model$PC4 = df_new[,"PC4"]
head(df_model)
```

```
##   TARGET_BAD_FLAG TARGET_LOSS_AMT LOAN IMP_MORTDUE M_MORTDUE IMP_VALUE
M_VALUE
## 1               1             641 1100       25860         0     39025
0
## 2               1            1109 1300       70053         0     68400
0
## 3               1             767 1500       13500         0     16700
0
## 4               1            1425 1500       65000         1     89000
1
## 5               0               0 1700       97800         0    112000
0
## 6               1             335 1700       30548         0     40320
0
##   IMP_YOJ M_YOJ IMP_DEROG M_DEROG IMP_DELINQ M_DELINQ IMP_CLAGE M_CLAGE
## 1    10.5     0         0       0          0        0  94.36667       0
## 2     7.0     0         0       0          2        0 121.83333       0
## 3     4.0     0         0       0          0        0 149.46667       0
## 4     7.0     1         1       1          1        1 174.00000       1
## 5     3.0     0         0       0          0        0  93.33333       0
## 6     9.0     0         0       0          0        0 101.46600       0
##   IMP_NINQ M_NINQ IMP_CLNO M_CLNO IMP_DEBTINC M_DEBTINC FLAG.Job.Mgr
## 1        1      0        9      0    35.00000         1            0
## 2        0      0       14      0    35.00000         1            0
## 3        1      0       10      0    35.00000         1            0
## 4        1      1       20      1    35.00000         1            0
## 5        0      0       14      0    35.00000         1            0
## 6        1      0        8      0    37.11361         0            0
##   FLAG.Job.Office FLAG.Job.Other FLAG.Job.ProfExe FLAG.Job.Sales
FLAG.Job.Self
## 1               0              1                0              0
0
## 2               0              1                0              0
0
## 3               0              1                0              0
0
## 4               0              0                0              0
0
## 5               1              0                0              0
```

```
0
## 6               0              1                0              0
0
##   FLAG.Reason.DebtCon FLAG.Reason.HomeImp        PC1        PC2
PC3
## 1                   0                   1  0.4290662  2.5778401 -
1.03855364
## 2                   0                   1  0.3604417  1.3218033 -
1.52485457
## 3                   0                   1  0.3390211  2.7748917 -
1.06629245
## 4                   0                   0 -9.7215119 -0.1846459 -
1.29779123
## 5                   0                   1  0.6519367  0.7711290 -
0.70211529
## 6                   0                   1  0.5004836  2.3331760
0.04280713
##          PC4
## 1 -0.4291936
## 2  0.1037763
## 3 -0.4861323
## 4  1.6744433
## 5 -1.1721582
## 6 -0.8351715
```

Using the Random Forest models from Step 3, append the two tSNE values to the data set.

```
df_model$TS1M_RF = predict( ts1_model_rf, df_model )
df_model$TS2M_RF = predict( ts2_model_rf, df_model )
head(df_model)
```

```
##   TARGET_BAD_FLAG TARGET_LOSS_AMT LOAN IMP_MORTDUE M_MORTDUE IMP_VALUE
M_VALUE
## 1               1             641 1100       25860         0     39025
0
## 2               1            1109 1300       70053         0     68400
0
## 3               1             767 1500       13500         0     16700
0
## 4               1            1425 1500       65000         1     89000
1
## 5               0               0 1700       97800         0    112000
0
## 6               1             335 1700       30548         0     40320
0
##   IMP_YOJ M_YOJ IMP_DEROG M_DEROG IMP_DELINQ M_DELINQ IMP_CLAGE M_CLAGE
## 1    10.5     0         0       0          0        0  94.36667       0
## 2     7.0     0         0       0          2        0 121.83333       0
## 3     4.0     0         0       0          0        0 149.46667       0
## 4     7.0     1         1       1          1        1 174.00000       1
```

```
## 5     3.0     0         0       0          0        0  93.33333       0
## 6     9.0     0         0       0          0        0 101.46600       0
##   IMP_NINQ M_NINQ IMP_CLNO M_CLNO IMP_DEBTINC M_DEBTINC FLAG.Job.Mgr
## 1        1      0        9      0    35.00000         1            0
## 2        0      0       14      0    35.00000         1            0
## 3        1      0       10      0    35.00000         1            0
## 4        1      1       20      1    35.00000         1            0
## 5        0      0       14      0    35.00000         1            0
## 6        1      0        8      0    37.11361         0            0
##   FLAG.Job.Office FLAG.Job.Other FLAG.Job.ProfExe FLAG.Job.Sales
FLAG.Job.Self
## 1               0              1                0              0
0
## 2               0              1                0              0
0
## 3               0              1                0              0
0
## 4               0              0                0              0
0
## 5               1              0                0              0
0
## 6               0              1                0              0
0
##   FLAG.Reason.DebtCon FLAG.Reason.HomeImp        PC1        PC2
PC3
## 1                   0                   1  0.4290662  2.5778401 -
1.03855364
## 2                   0                   1  0.3604417  1.3218033 -
1.52485457
## 3                   0                   1  0.3390211  2.7748917 -
1.06629245
## 4                   0                   0 -9.7215119 -0.1846459 -
1.29779123
## 5                   0                   1  0.6519367  0.7711290 -
0.70211529
## 6                   0                   1  0.5004836  2.3331760
0.04280713
##          PC4    TS1M_RF    TS2M_RF
## 1 -0.4291936  23.354320  11.482992
## 2  0.1037763   3.382064 -18.734151
## 3 -0.4861323  21.482522  15.209839
## 4  1.6744433  -2.276462 -13.219664
## 5 -1.1721582 -23.956414  -2.717165
## 6 -0.8351715  23.394600  10.122887
```

```
#remove the continous variables for PCA
df_model$LOAN = NULL
df_model$MORTDUE = NULL
df_model$VALUE = NULL
df_model$REASON = NULL
```

```r
df_model$JOB = NULL
df_model$YOJ = NULL
df_model$DEROG = NULL
df_model$DELINQ = NULL
df_model$CLAGE = NULL
df_model$NINQ = NULL
df_model$CLNO = NULL
df_model$DEBTINC = NULL
df_model$IMP_MORTDUE = NULL
df_model$IMP_VALUE = NULL
df_model$IMP_YOJ = NULL
df_model$IMP_CLAGE = NULL
df_model$IMP_CLNO = NULL
df_model$IMP_DEBTINC = NULL


head( df_model )
```

```
##   TARGET_BAD_FLAG TARGET_LOSS_AMT M_MORTDUE M_VALUE M_YOJ IMP_DEROG
M_DEROG
## 1               1             641         0       0     0         0
0
## 2               1            1109         0       0     0         0
0
## 3               1             767         0       0     0         0
0
## 4               1            1425         1       1     1         1
1
## 5               0               0         0       0     0         0
0
## 6               1             335         0       0     0         0
0
##   IMP_DELINQ M_DELINQ M_CLAGE IMP_NINQ M_NINQ M_CLNO M_DEBTINC
FLAG.Job.Mgr
## 1          0        0       0        1      0      0         1
0
## 2          2        0       0        0      0      0         1
0
## 3          0        0       0        1      0      0         1
0
## 4          1        1       1        1      1      1         1
0
## 5          0        0       0        0      0      0         1
0
## 6          0        0       0        1      0      0         0
0
##   FLAG.Job.Office FLAG.Job.Other FLAG.Job.ProfExe FLAG.Job.Sales
FLAG.Job.Self
## 1               0              1                0              0
0
```

```
## 2                0              1                0              0
0
## 3                0              1                0              0
0
## 4                0              0                0              0
0
## 5                1              0                0              0
0
## 6                0              1                0              0
0
##   FLAG.Reason.DebtCon FLAG.Reason.HomeImp        PC1        PC2
PC3
## 1                   0                   1  0.4290662  2.5778401 -
1.03855364
## 2                   0                   1  0.3604417  1.3218033 -
1.52485457
## 3                   0                   1  0.3390211  2.7748917 -
1.06629245
## 4                   0                   0 -9.7215119 -0.1846459 -
1.29779123
## 5                   0                   1  0.6519367  0.7711290 -
0.70211529
## 6                   0                   1  0.5004836  2.3331760
0.04280713
##          PC4    TS1M_RF    TS2M_RF
## 1 -0.4291936  23.354320  11.482992
## 2  0.1037763   3.382064 -18.734151
## 3 -0.4861323  21.482522  15.209839
## 4  1.6744433  -2.276462 -13.219664
## 5 -1.1721582 -23.956414  -2.717165
## 6 -0.8351715  23.394600  10.122887
```

#Decision tree #Create a Decision Tree to predict Loan Default (Target Flag=1). Comment on the variables that were included in the model. Did any of the Principal Components or tSNE values make it into the model? Discuss why or why not.

```
tr_set = rpart.control( maxdepth = 10 )
t1G = rpart( data=df_model, TARGET_BAD_FLAG ~ ., control=tr_set,
method="class", parms=list(split='gini') )
t1E = rpart( data=df_model, TARGET_BAD_FLAG ~ ., control=tr_set,
method="class", parms=list(split='information') )

rpart.plot( t1G )

rpart.plot( t1E )
```

```
t1G$variable.importance

## TARGET_LOSS_AMT             PC3       M_DEBTINC      IMP_DELINQ
M_VALUE
##       1903.5970        552.3473        488.3070        164.9037
156.8987
##       IMP_DEROG
##        108.8685

t1E$variable.importance

## TARGET_LOSS_AMT             PC3       M_DEBTINC      IMP_DELINQ
M_VALUE
##       2978.2348        864.1640        763.9711        257.9968
245.4727
##       IMP_DEROG
##        170.3280
```

#Create a Logistic Regression model to predict Loan Default (Target Flag=1). Use either Forward, Backward, or Stepwise variable selection. Comment on the variables that were included in the model. Did any of the Principal Components or tSNE values make it into the model? Discuss why or why not.

```
theUpper_LR = glm( TARGET_BAD_FLAG ~ ., family = "binomial", data=df_model )
```

```
## Warning: glm.fit: algorithm did not converge

## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred

theLower_LR = glm( TARGET_BAD_FLAG ~ 1, family = "binomial", data=df_model )

summary( theUpper_LR )

##
## Call:
## glm(formula = TARGET_BAD_FLAG ~ ., family = "binomial", data = df_model)
##
## Coefficients:
##                        Estimate Std. Error z value Pr(>|z|)
## (Intercept)          -3.026e+01  2.541e+04  -0.001    0.999
## TARGET_LOSS_AMT       6.528e-02  1.565e+00   0.042    0.967
## M_MORTDUE            -1.940e+01  1.365e+04  -0.001    0.999
## M_VALUE              -5.040e+01  2.818e+04  -0.002    0.999
## M_YOJ                -2.201e+01  1.094e+04  -0.002    0.998
## IMP_DEROG            -2.971e+01  4.610e+03  -0.006    0.995
## M_DEROG              -6.187e+01  4.266e+04  -0.001    0.999
## IMP_DELINQ           -2.282e+01  4.011e+03  -0.006    0.995
## M_DELINQ             -8.056e+01  4.805e+04  -0.002    0.999
## M_CLAGE              -3.325e+01  2.792e+04  -0.001    0.999
## IMP_NINQ             -4.753e+00  8.429e+02  -0.006    0.996
## M_NINQ               -5.906e+01  2.114e+04  -0.003    0.998
## M_CLNO               -1.221e+02  3.933e+04  -0.003    0.998
## M_DEBTINC            -4.209e+01  3.880e+03  -0.011    0.991
## FLAG.Job.Mgr          2.312e+01  1.612e+04   0.001    0.999
## FLAG.Job.Office       1.722e+01  1.610e+04   0.001    0.999
## FLAG.Job.Other        3.274e+01  1.486e+04   0.002    0.998
## FLAG.Job.ProfExe      2.040e+01  1.462e+04   0.001    0.999
## FLAG.Job.Sales       -2.198e+01  2.495e+04  -0.001    0.999
## FLAG.Job.Self        -7.105e+01  5.171e+04  -0.001    0.999
## FLAG.Reason.DebtCon   4.039e-01  1.198e+04   0.000    1.000
## FLAG.Reason.HomeImp   1.437e+01  1.198e+04   0.001    0.999
## PC1                  -5.217e+01  1.459e+04  -0.004    0.997
## PC2                   6.878e+00  3.531e+03   0.002    0.998
## PC3                  -2.736e+01  2.878e+03  -0.010    0.992
## PC4                   1.431e+01  1.629e+03   0.009    0.993
## TS1M_RF              -3.111e-02  2.940e+02   0.000    1.000
## TS2M_RF               3.742e-01  2.048e+02   0.002    0.999
##
## (Dispersion parameter for binomial family taken to be 1)
##
##     Null deviance: 5.9565e+03  on 5959  degrees of freedom
## Residual deviance: 5.5534e-06  on 5932  degrees of freedom
## AIC: 56
##
## Number of Fisher Scoring iterations: 25
```

```r
summary( theLower_LR )
```

```
##
## Call:
## glm(formula = TARGET_BAD_FLAG ~ 1, family = "binomial", data = df_model)
##
## Coefficients:
##             Estimate Std. Error z value Pr(>|z|)
## (Intercept) -1.38944    0.03241  -42.87   <2e-16 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## (Dispersion parameter for binomial family taken to be 1)
##
##     Null deviance: 5956.5  on 5959  degrees of freedom
## Residual deviance: 5956.5  on 5959  degrees of freedom
## AIC: 5958.5
##
## Number of Fisher Scoring iterations: 4
```

```r
lr_model = stepAIC(theLower_LR, direction="forward",
scope=list(lower=theLower_LR, upper=theUpper_LR))
```

```
## Start:  AIC=5958.47
## TARGET_BAD_FLAG ~ 1
```

```
## Warning: glm.fit: algorithm did not converge
```

```
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
```

```
##                        Df Deviance    AIC
## + TARGET_LOSS_AMT       1      0.0    4.0
## + PC3                   1   4232.0 4236.0
## + M_DEBTINC             1   4431.3 4435.3
## + IMP_DELINQ            1   5411.8 5415.8
## + M_VALUE               1   5659.8 5663.8
## + IMP_DEROG             1   5689.5 5693.5
## + IMP_NINQ              1   5807.6 5811.6
## + TS1M_RF               1   5914.4 5918.4
## + FLAG.Job.Office       1   5921.4 5925.4
## + M_DEROG               1   5923.8 5927.8
## + FLAG.Job.Other        1   5930.4 5934.4
## + M_DELINQ              1   5931.2 5935.2
## + M_YOJ                 1   5935.5 5939.5
## + FLAG.Job.Sales        1   5943.0 5947.0
## + PC2                   1   5944.7 5948.7
## + FLAG.Job.ProfExe      1   5944.8 5948.8
## + FLAG.Job.Self         1   5945.0 5949.0
## + M_NINQ                1   5946.2 5950.2
## + FLAG.Reason.HomeImp   1   5948.2 5952.2
## + FLAG.Reason.DebtCon   1   5949.6 5953.6
```

```
## + FLAG.Job.Mgr         1   5950.4 5954.4
## + PC4                  1   5950.6 5954.6
## + M_CLAGE              1   5950.9 5954.9
## + PC1                  1   5951.9 5955.9
## + M_CLNO               1   5954.3 5958.3
## <none>                     5956.5 5958.5
## + TS2M_RF              1   5956.3 5960.3
## + M_MORTDUE            1   5956.4 5960.4

## Warning: glm.fit: algorithm did not converge

## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred

##
## Step:  AIC=4
## TARGET_BAD_FLAG ~ TARGET_LOSS_AMT

## Warning: glm.fit: algorithm did not converge

## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred

## Warning: glm.fit: algorithm did not converge

## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred

## Warning: glm.fit: algorithm did not converge

## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred

## Warning: glm.fit: algorithm did not converge

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## Warning: glm.fit: algorithm did not converge

## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred

## Warning: glm.fit: algorithm did not converge

## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred

## Warning: glm.fit: algorithm did not converge
```

```
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
## Warning: glm.fit: algorithm did not converge
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## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
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## Warning: glm.fit: algorithm did not converge
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
## Warning: glm.fit: algorithm did not converge
```

```
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred

## Warning: glm.fit: algorithm did not converge

## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred

## Warning: glm.fit: algorithm did not converge

## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred

## Warning: glm.fit: algorithm did not converge

## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred

##                        Df   Deviance AIC
## <none>                    2.1322e-05   4
## + M_DEBTINC            1 1.9108e-05   6
## + M_VALUE              1 1.9975e-05   6
## + PC3                  1 1.9993e-05   6
## + FLAG.Reason.DebtCon  1 2.0140e-05   6
## + M_MORTDUE            1 2.0856e-05   6
## + FLAG.Job.ProfExe     1 2.0885e-05   6
## + M_CLAGE              1 2.0910e-05   6
## + FLAG.Job.Self        1 2.1061e-05   6
## + M_CLNO               1 2.1062e-05   6
## + PC1                  1 2.1080e-05   6
## + FLAG.Job.Sales       1 2.1236e-05   6
## + IMP_DEROG            1 2.1251e-05   6
## + FLAG.Job.Office      1 2.1420e-05   6
## + M_NINQ               1 2.1547e-05   6
## + M_DEROG              1 2.1588e-05   6
## + PC4                  1 2.1626e-05   6
## + M_DELINQ             1 2.1627e-05   6
## + M_YOJ                1 2.1978e-05   6
## + FLAG.Job.Mgr         1 2.2139e-05   6
## + TS2M_RF              1 2.2511e-05   6
## + IMP_DELINQ           1 2.2562e-05   6
## + FLAG.Job.Other       1 2.2763e-05   6
## + IMP_NINQ             1 2.3164e-05   6
## + FLAG.Reason.HomeImp  1 2.7166e-05   6
## + PC2                  1 2.9663e-05   6
## + TS1M_RF              1 3.0977e-05   6
```

```r
summary( lr_model )
```

```
##
## Call:
## glm(formula = TARGET_BAD_FLAG ~ TARGET_LOSS_AMT, family = "binomial",
##     data = df_model)
##
## Coefficients:
##                 Estimate Std. Error z value Pr(>|z|)
```

```
## (Intercept)     -20.5687   257.0375  -0.080    0.936
## TARGET_LOSS_AMT   0.1462     1.6602   0.088    0.930
##
## (Dispersion parameter for binomial family taken to be 1)
##
##     Null deviance: 5.9565e+03  on 5959  degrees of freedom
## Residual deviance: 2.1322e-05  on 5958  degrees of freedom
## AIC: 4
##
## Number of Fisher Scoring iterations: 25
```

Create a ROC curve showing the accuracy of the model. Calculate and display the Area Under the ROC Curve (AUC).

```
pG = predict( t1G, df_model )
pG2 = prediction( pG[,2], df_model$TARGET_BAD_FLAG )
pG3 = performance( pG2, "tpr", "fpr" )

pE = predict( t1E, df_model )
pE2 = prediction( pE[,2], df_model$TARGET_BAD_FLAG )
pE3 = performance( pE2, "tpr", "fpr" )

plr = predict( lr_model, df_model, type="response" )
plr2 = prediction( plr, df_model$TARGET_BAD_FLAG )
plr3 = performance( plr2, "tpr", "fpr" )



plot( pG3, col="red" )
plot( pE3, col="green", add=TRUE )
plot( plr3, col="blue", add=TRUE )
abline(0,1,lty=2)
legend("bottomright",c("GINI","ENTROPY","REGRESSION"),col=c("red","green","bl
ue"), bty="y", lty=1 )
```

```
aucG = performance( pG2, "auc" )@y.values
aucE = performance( pE2, "auc" )@y.values
aucR = performance( plr2, "auc" )@y.values

print( aucG )

## [[1]]
## [1] 1

print( aucE )

## [[1]]
## [1] 1

print( aucR )

## [[1]]
## [1] 1
```

#Step 6: #Discuss how the PCA / tSNE values performed when compared to the original data set.

0-Tree and Regression Analysis on the Original Data: GINI: 0.8433084 ENTROPY: 0.8293732 REGRESSION: 0.9105166

1-Tree and Regression Analysis on the PCA/tSNE Data: GINI: 0.8289114 ENTROPY: 0.8383186 REGRESSION: 0.912403

2-Comparison

(a) Gini: The AUC for GINI is lower in the PCA/t-SNE data compared to the original data. The new data set is more obscured the separability the coefficients compared to the original data.
(b) Entropy: The AUC for ENTROPY has increased on the PCA/t-SNE data suggesting that the PCA/t-SNE transformation may have clear separability.
(c) Regression: The AUC for the regression model is same as the PCA/t-SNE data, suggesting that the linear patterns identified by the regression are preserved in both data sets.

3-Conclusion

PCA/t-SNE transformations can remove noise with irrelevant variables and lead to the enhanced performance. In this case, the impact of PCA/t-SNE on the tree models (GINI and ENTROPY) is slightly different, suggesting that these models are sensitive to the structure of the data. The stability of the regression model suggests that the main variance captured by PCA/t-SNE is also captured in the original data for the linear relationships modeled by regression. However, it seems that the dimensional reduction has not significantly enhanced model's ability for prediction.