## Biostatistical Methods Final Project Code

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#### Read data

```
cancer_df <- read.csv(file = "./data/Cancer_Registry.csv") %>%
   janitor::clean_names() %>%
   separate(geography, into = c("county", "state"),sep = ",") %>%
   separate(binned_inc, into = c("binned_inc_low","binned_inc_high"), sep = ",") %>%
   mutate(binned_inc_low = str_replace(binned_inc_low,"[(]",""),
          binned_inc_high = str_replace(binned_inc_high,"[]]",""),
          binned_inc_low = as.numeric(gsub(",","",binned_inc_low,fixed=TRUE)),
          binned_inc_high = as.numeric(gsub(",","",binned_inc_high,fixed=TRUE)),
         median_inc = (binned_inc_high+binned_inc_low)/2,
         pct_no_cov = 100 - pct_public_coverage_alone - pct_private_coverage_alone,
         black_high_ind = case_when(pct_black > 9 ~ "1", TRUE ~ "0"),
         black_high_ind = as.numeric(black_high_ind)) %>%
  dplyr::select(-binned_inc_high, -binned_inc_low, -contains("coverage"),-pct_no_hs18_24, -pct_hs18_24,
## Warning in evalq(as.numeric(gsub(",", "", binned_inc_low, fixed = TRUE)), :
## NAs introduced by coercion
num_df <- cancer_df %>%
  dplyr::select(-county, -state, -median_age_male, -median_age_female,-pct_white,-pct_black,-pct_asian,
 na.omit()
```

### **Exploratory Analysis**

```
cor(num_df) %>% knitr::kable()
```

	avg_ann_count	$avg\_deaths\_per\_year$	$target\_death\_rate$	$incidence\_rate$	$\operatorname{med}$ _income
avg_ann_count	1.0000000	0.9382324	-0.1339480	0.0747173	0.2505272
avg_deaths_per_year	0.9382324	1.0000000	-0.0851532	0.0633721	0.2144815
$target\_death\_rate$	-0.1339480	-0.0851532	1.0000000	0.3953059	-0.3605578
incidence_rate	0.0747173	0.0633721	0.3953059	1.0000000	0.0224035
$\operatorname{med}$ _income	0.2505272	0.2144815	-0.3605578	0.0224035	1.0000000
$pop\_est2015$	0.9275658	0.9797042	-0.1150993	0.0257125	0.2257442
poverty_percent	-0.0885992	-0.0196484	0.3513716	-0.0229473	-0.7604683
study_per_cap	0.0762519	0.0530066	-0.0293587	0.0701454	0.0189502
median_age	-0.0229115	-0.0254858	0.0142876	0.0245092	-0.0288561
avg household size	0.0848187	0.1076423	-0.0424271	-0.1203914	0.1593060
percent married	-0.1655274	-0.2410169	-0.2211551	-0.1445795	0.2562195
pct_bach_deg18_24	0.2688210	0.2521097	-0.2490342	0.0826459	0.4625371
pct_bach_deg25_over	0.3071750	0.2886537	-0.4644337	-0.0073560	0.6672572
pct_employed16_over	0.1662126	0.0962653	-0.3560154	0.0084221	0.6385020
pct_unemployed16_over	0.0545340	0.1326806	0.3281160	0.0935346	-0.3440161
birth_rate	-0.0411180	-0.0831509	-0.0868656	-0.1202647	-0.0192905
median_inc	0.2282581	0.2021459	-0.3286698	0.0165010	0.9153934
pct_no_cov	-0.2181420	-0.1896046	0.1558121	-0.2235092	-0.5940330

	$avg\_ann\_count$	$avg\_deaths\_per\_year$	$target\_death\_rate$	$incidence\_rate$	$\operatorname{med}$ _income
black_high_ind	0.1171253	0.1796549	0.1757894	0.1261541	-0.0588084

```
bach = num_df %>%
   ggplot(aes(x = pct_bach_deg25_over, y = target_death_rate)) +
   geom_point()
inc = num_df %>%
   ggplot(aes(x = incidence_rate, y = target_death_rate)) +
  geom_point()
income = num_df %>%
   ggplot(aes(x = med_income, y = target_death_rate)) +
   geom_point()
employ = num_df %>%
   ggplot(aes(x = pct_employed16_over, y = target_death_rate)) +
  geom_point()
(bach + inc) / (income + employ)
   300 -
                                                       300 -
target_death_rate
                                                   target_death_rate
    50 -
                                                       50
                                                                    400
              10
                        20
                                                                             600
                                                                                       800
                                                                                               1000
                                  30
                                            40
                                                           200
                 pct_bach_deg25_over
                                                                        incidence_rate
   300
                                                       300
target_death_rate
                                                   target_death_rate
   250 -
                                                      250
   200 -
                                                       200
    150
                                                       150 -
   100 -
                                                      100 -
    50 -
                                                       50 -
                                 100000
                                                             20
             50000
                        75000
                                            125000
                                                                         40
                                                                                                 80
                      med_income
                                                                    pct_employed16_over
```

#### Stepwise

```
full_model = lm(target_death_rate ~ ., data = num_df)
summary(full model)
step_model <- stepAIC(full_model, direction = "both",</pre>
                      trace = FALSE)
summary(step_model)
vif(step_model)
step_model<- update(step_model,.~.-avg_deaths_per_year)</pre>
step_model_ours<- update(step_model,.~.-pop_est2015)</pre>
step_model_plus<- update(step_model_ours,.~.+black_high_ind*incidence_rate)
step_model_plus<- update(step_model_plus,.~.+pct_no_cov)</pre>
summary(step_model_ours)
##
## Call:
## lm(formula = target_death_rate ~ avg_ann_count + incidence_rate +
       poverty_percent + percent_married + pct_bach_deg25_over +
##
       pct_unemployed16_over + birth_rate + black_high_ind, data = num_df)
##
## Residuals:
       Min
##
                  10
                      Median
                                    30
                                            Max
## -106.944 -11.216
                     -0.425
                              10.734 137.092
##
## Coefficients:
                           Estimate Std. Error t value Pr(>|t|)
##
## (Intercept)
                          1.266e+02 9.249e+00 13.684 < 2e-16 ***
## avg_ann_count
                         -9.887e-04 3.067e-04 -3.223 0.001286 **
## incidence_rate
                         1.832e-01 8.667e-03 21.139 < 2e-16 ***
## poverty_percent
                         3.425e-01 1.359e-01
                                               2.520 0.011797 *
                         -2.343e-01 1.012e-01 -2.315 0.020707 *
## percent_married
## pct_bach_deg25_over -1.921e+00 1.054e-01 -18.238 < 2e-16 ***
## pct_unemployed16_over 6.863e-01 1.849e-01
                                               3.711 0.000212 ***
## birth rate
                        -7.779e-01 2.183e-01 -3.564 0.000374 ***
## black_high_ind
                         3.994e+00 1.126e+00 3.548 0.000397 ***
## ---
## Signif. codes: 0 '***' 0.001 '**' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 19.59 on 2083 degrees of freedom
## Multiple R-squared: 0.4163, Adjusted R-squared: 0.4141
## F-statistic: 185.7 on 8 and 2083 DF, p-value: < 2.2e-16
summary(step_model_plus)
##
## Call:
## lm(formula = target_death_rate ~ avg_ann_count + incidence_rate +
##
       poverty_percent + percent_married + pct_bach_deg25_over +
##
       pct_unemployed16_over + birth_rate + black_high_ind + pct_no_cov +
##
       incidence_rate:black_high_ind, data = num_df)
##
## Residuals:
##
     Min
              10 Median
                            3Q
                                  Max
```

```
## -89.73 -11.36 -0.49 10.78 136.59
##
## Coefficients:
                                  Estimate Std. Error t value Pr(>|t|)
##
                                  1.224e+02 9.707e+00 12.609 < 2e-16 ***
## (Intercept)
## avg ann count
                                 -1.023e-03 3.071e-04 -3.330 0.000885 ***
## incidence rate
                                 1.941e-01 1.013e-02 19.155 < 2e-16 ***
                                 3.984e-01 1.452e-01
                                                       2.745 0.006112 **
## poverty_percent
## percent married
                                 -2.228e-01 1.044e-01 -2.134 0.032964 *
                                -1.909e+00 1.081e-01 -17.666 < 2e-16 ***
## pct_bach_deg25_over
## pct_unemployed16_over
                                  6.850e-01 1.859e-01
                                                         3.684 0.000235 ***
                                 -7.546e-01 2.183e-01 -3.457 0.000557 ***
## birth_rate
                                  2.720e+01 9.172e+00
## black_high_ind
                                                         2.965 0.003060 **
                                 -7.527e-02 9.811e-02 -0.767 0.443086
## pct_no_cov
## incidence_rate:black_high_ind -5.099e-02 2.001e-02 -2.548 0.010900 *
## ---
## Signif. codes: 0 '***' 0.001 '**' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 19.56 on 2081 degrees of freedom
## Multiple R-squared: 0.4183, Adjusted R-squared: 0.4155
## F-statistic: 149.7 on 10 and 2081 DF, p-value: < 2.2e-16
vif(step_model)
##
                                incidence_rate
          avg_ann_count
                                                         pop_est2015
##
                7.591006
                                      1.094337
                                                            7.645096
##
                               percent_married
         poverty_percent
                                                 pct_bach_deg25_over
##
                2.565116
                                      2.167579
                                                            1.685273
                                    birth_rate
## pct_unemployed16_over
                                                      black_high_ind
##
                1.684463
                                      1.063198
                                                            1.299749
vif(step_model_plus)
##
                   avg_ann_count
                                                incidence_rate
##
                        1.168274
                                                      1.470170
##
                                               percent_married
                 poverty_percent
##
                        2.922602
                                                      2.311005
##
            pct_bach_deg25_over
                                         pct_unemployed16_over
##
                        1.769540
                                                      1.701674
##
                     birth_rate
                                                black_high_ind
##
                        1.062284
                                                     86.214943
##
                      pct_no_cov incidence_rate:black_high_ind
##
                        1.673038
                                                     88.098191
```

#### ${\bf Cp\&AIC\&adjustedr2}$

```
ours = glance(step_model_ours) %>%
   as.data.frame() %>%
   dplyr::select(adj.r.squared, sigma, AIC, BIC, p.value) %>%
   mutate(cp = ols_mallows_cp(step_model_ours, full_model)) %>%
   rename(RSE = sigma)

plus = glance(step_model_plus) %>%
```

```
as.data.frame() %>%
dplyr::select(adj.r.squared, sigma, AIC, BIC, p.value) %>%
mutate(cp = ols_mallows_cp(step_model_plus, full_model)) %>%
rename(RSE = sigma)
```

We decide to use plus as the final model

#### **Backward elimination**

```
back_model <- step(full_model, direction = "backward", trace=FALSE )
summary(back_model)
vif(back_model)</pre>
```

backward elimination suggest the same with stepwise

#### Forward elimination

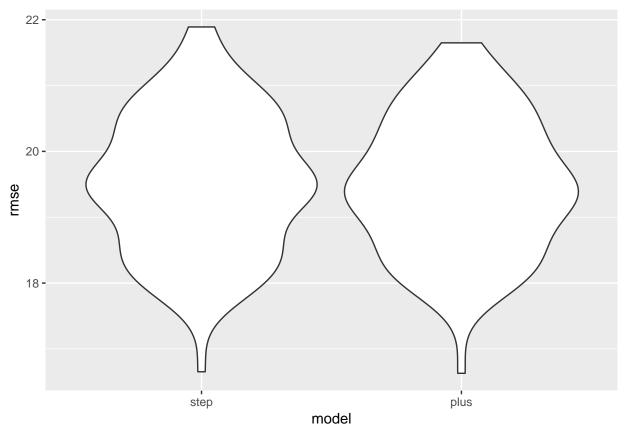
```
null<- lm(target_death_rate ~ 1, data = num_df)</pre>
for_model <- step(null, scope=list(lower=null, upper=full_model), direction="forward")</pre>
summary(for model)
vif(for model)
for_model<- update(for_model,.~.-avg_deaths_per_year)</pre>
for_model<- update(for_model,.~.-pop_est2015)</pre>
for_model<- update(for_model,.~.+black_high_ind*incidence_rate)</pre>
summary(for_model)
##
## Call:
## lm(formula = target_death_rate ~ pct_bach_deg25_over + incidence_rate +
       percent_married + pct_unemployed16_over + black_high_ind +
##
       birth_rate + avg_ann_count + poverty_percent + incidence_rate:black_high_ind,
##
##
       data = num df)
##
## Residuals:
##
      Min
                1Q Median
                                3Q
## -90.191 -11.355 -0.401 10.833 136.807
##
## Coefficients:
                                   Estimate Std. Error t value Pr(>|t|)
##
## (Intercept)
                                 1.209e+02 9.495e+00 12.728 < 2e-16 ***
                                 -1.892e+00 1.058e-01 -17.884 < 2e-16 ***
## pct_bach_deg25_over
## incidence_rate
                                 1.957e-01 9.906e-03 19.755 < 2e-16 ***
## percent_married
                                 -2.428e-01 1.011e-01 -2.401 0.016435 *
                                 6.693e-01 1.848e-01 3.622 0.000299 ***
## pct_unemployed16_over
                                  2.753e+01 9.161e+00 3.004 0.002692 **
## black_high_ind
## birth_rate
                                 -7.613e-01 2.181e-01 -3.491 0.000491 ***
## avg_ann_count
                                 -1.006e-03 3.064e-04 -3.285 0.001037 **
                                 3.592e-01 1.358e-01 2.644 0.008254 **
## poverty_percent
## incidence_rate:black_high_ind -5.172e-02 1.998e-02 -2.588 0.009718 **
## ---
## Signif. codes: 0 '***' 0.001 '**' 0.05 '.' 0.1 ' ' 1
```

```
##
## Residual standard error: 19.56 on 2082 degrees of freedom
## Multiple R-squared: 0.4182, Adjusted R-squared: 0.4157
## F-statistic: 166.3 on 9 and 2082 DF, p-value: < 2.2e-16
vif(for_model)
##
             {\tt pct\_bach\_deg25\_over}
                                                  incidence_rate
##
                         1.696786
                                                        1.405796
##
                 percent_married
                                          pct_unemployed16_over
##
                         2.167521
                                                        1.681153
##
                  black_high_ind
                                                      birth rate
##
                       86.027152
                                                        1.060582
##
                   avg_ann_count
                                                poverty_percent
##
                         1.162779
                                                        2.559924
## incidence_rate:black_high_ind
##
                       87.896436
```

 $https://www.cancer.org/latest-news/facts-and-figures-2018-rate-of-deaths-from-cancer-continues-decline. \\html$ 

#### Cross validation

```
cv df \leftarrow crossv mc(num df, n=100, test = .2)
step_lm <- lm(formula = target_death_rate ~ avg_ann_count + incidence_rate + poverty_percent + percent_
pct_unemployed16_over + birth_rate + black_high_ind, data = num_df)
plus_lm <- lm(formula = target_death_rate ~ avg_ann_count + incidence_rate +</pre>
poverty_percent + percent_married + pct_bach_deg25_over +
pct_unemployed16_over + birth_rate + black_high_ind + pct_no_cov +
incidence_rate:black_high_ind, data = num_df)
cv_result <- cv_df %>%
  mutate(train = map(train, as_tibble),
         test = map(test, as_tibble)) %>%
  mutate(step mod = map(train, ~step lm),
         plus_mod = map(train, ~plus_lm)) %>%
  mutate(rmse step
                    = map2_dbl(step_mod, test, ~rmse(model = .x, data = .y)),
         rmse_plus = map2_dbl(plus_mod, test, ~rmse(model = .x, data = .y)))
cv_result %>%
  dplyr::select(rmse_step,rmse_plus) %>%
  gather(key = model, value = rmse) %>%
  mutate(model = str_replace(model, "rmse_", ""),
         model = fct_inorder(model)) %>%
  ggplot(aes(x = model, y = rmse)) + geom_violin()
```



```
rmse_result <- cv_result %>%
  dplyr::select(rmse_step,rmse_plus) %>%
  lapply(mean) %>%
  as.data.frame(digit=3) %>%
  gather(key=model, value=rmse, rmse_step:rmse_plus)
```

#### Criterion Method Summary

```
rbind(ours, plus) %>%
  cbind(.,rmse_result) %>%
  dplyr::select(model, everything()) %>%
  knitr::kable(digits = 2)
```

model	adj.r.squared	RSE	AIC	BIC	p.value	ср	rmse
rmse_step	0.41	19.59	18395.16	18451.62	0	20.82	19.51
$rmse\_plus$	0.42	19.56	18391.85	18459.60	0	17.52	19.48

#### Ridge Regression

```
# Try a grid of values for lambda: from 10^-2 to 10^5
grid <- 10^seq(5,-2, length=100)
```

```
Y <- num_df[,3]
X <- model.matrix(target_death_rate ~ avg_ann_count + incidence_rate +</pre>
poverty_percent + percent_married + pct_bach_deg25_over +
pct_unemployed16_over + birth_rate + black_high_ind + pct_no_cov +
incidence_rate:black_high_ind, data = num_df)
set.seed(1)
test<-sample(1:nrow(X),nrow(X)/5)</pre>
train<-(-test)</pre>
Y.test<-Y[test]
# Cross-validation
set.seed(2)
cv.out<-cv.glmnet(X[train,],Y[train])</pre>
# Fit a Ridge model with all observations with the best lambda
best.lambda<- cv.out$lambda.min
ridge2<- glmnet(X[train ,],Y[train], alpha =0, lambda=best.lambda)</pre>
ridge2.cv<- cv.glmnet(X[train ,],Y[train], alpha = 0)</pre>
## Generating the coef
coef_ridge <- broom::tidy(coef(ridge2.cv))</pre>
## Warning: 'tidy.dgCMatrix' is deprecated.
## See help("Deprecated")
## Warning: 'tidy.dgTMatrix' is deprecated.
## See help("Deprecated")
coef_lm <- broom::tidy(coef(step_model_plus))</pre>
## Warning: 'tidy.numeric' is deprecated.
## See help("Deprecated")
coef <- cbind(coef_ridge[,-2],coef_lm[,-1])</pre>
colnames(coef) <- c('coef', 'ridge', 'lm')</pre>
knitr::kable(coef, digits = 3)
```

coef	ridge	lm
(Intercept)	132.383	122.400
avg_ann_count	-0.001	-0.001
incidence_rate	0.132	0.194
poverty_percent	0.498	0.398
percent_married	-0.190	-0.223
pct_bach_deg25_over	-1.263	-1.909
pct_unemployed16_over	0.743	0.685
birth_rate	-0.508	-0.755
black_high_ind	2.177	27.197

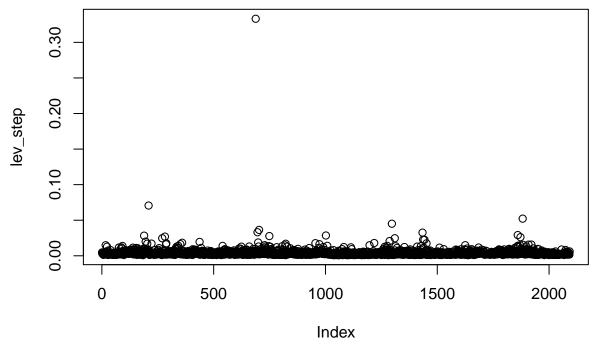
coef	ridge	lm
pct_no_cov	0.055	-0.075
incidence_rate:black_high_ind	0.004	-0.051

```
ridge.pred <- predict(ridge2.cv,s=best.lambda,newx=X[test,])</pre>
rmse_ridge <- sqrt(mean((ridge.pred-Y.test)^2))</pre>
cv_result %>%
  dplyr::select(rmse_step,rmse_plus) %>%
  lapply(mean) %>%
  as.data.frame(digit=3) %>%
  mutate(rmse_ridge = rmse_ridge)
     rmse_step rmse_plus rmse_ridge
```

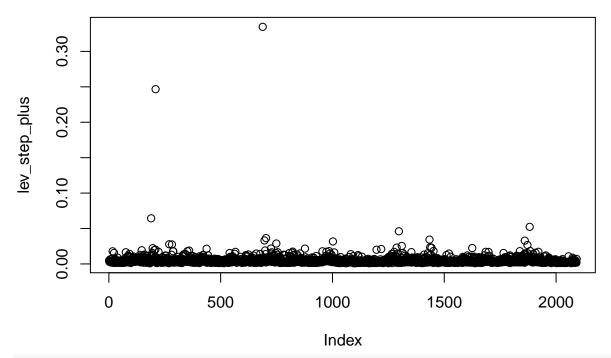
## 1 19.51484 19.4831 19.14778

#### Leverages

```
lev_step = hat(model.matrix(step_model_ours))
lev_step_plus = hat(model.matrix(step_model_plus))
# plot leverages
plot(lev_step)
```



plot(lev\_step\_plus)



# # show observation with high leverage num\_df[lev\_step > 0.30,] #observation 1000

```
##
        avg_ann_count avg_deaths_per_year target_death_rate incidence_rate
## 1000
                38150
                                    14010
                                                      148.4
##
        med_income pop_est2015 poverty_percent study_per_cap median_age
                                                    255.9415
## 1000
             55686
                      10170292
                                          18.7
        avg_household_size percent_married pct_bach_deg18_24
## 1000
                      3.02
                                      42.4
##
        pct_bach_deg25_over pct_employed16_over pct_unemployed16_over
## 1000
                       19.8
       birth_rate median_inc pct_no_cov black_high_ind
         4.705281
                     58020.05
                                    29.6
## 1000
num_df[lev_step_plus > 0.20,] #observation 282 and 1000
```

```
avg_ann_count avg_deaths_per_year target_death_rate incidence_rate
##
## 282
                  135
                                        23
                                                        162.1
                                                                       1014.2
## 1000
                38150
                                     14010
                                                        148.4
                                                                        405.5
##
        med_income pop_est2015 poverty_percent study_per_cap median_age
             46954
## 282
                          15052
                                           20.1
                                                        0.0000
                                                      255.9415
## 1000
             55686
                       10170292
                                            18.7
                                                                      35.6
        avg_household_size percent_married pct_bach_deg18_24
##
                       2.37
## 282
                                       26.2
  1000
                       3.02
                                       42.4
##
##
        pct_bach_deg25_over pct_employed16_over pct_unemployed16_over
## 282
                        27.1
                                             44.5
                                                                     8.5
## 1000
                        19.8
                                             58.0
                                                                    10.0
        birth_rate median_inc pct_no_cov black_high_ind
##
          2.181467
                     46611.30
                                     23.5
## 282
## 1000
          4.705281
                     58020.05
                                     29.6
                                                        0
```

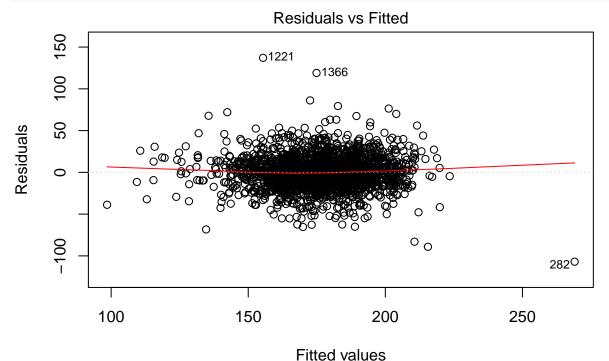
#### **Outliers Using Studentized Residuals**

```
stu res step = rstandard(step model ours)
outliers_y_step = stu_res_step[abs(stu_res_step) > 2.5]
outliers_y_step
##
                              122
                                         124
                                                   264
                                                              282
                                                                        466
         116
                    119
                                                                   2.647662
##
    4.062693 -3.343737
                         3.067104 -3.212129 -2.579202 -5.662949
                    476
                                         522
##
         469
                              514
                                                   597
                                                              621
                                                                        627
##
    2.681255 -2.583350 -2.808705
                                   3.228504 -2.661680 -2.674755
                                                                   3.714138
##
         650
                    666
                              775
                                         783
                                                   803
                                                              921
                                                                       1174
              2.725539
                         3.232067 -3.216149 -2.647519 -3.196297
##
   -3.341952
                                                                   2.549945
        1217
##
                   1221
                             1304
                                        1331
                                                  1345
                                                             1366
                                                                       1445
              7.019098 -2.635697 -2.825076 -2.820399
##
    2.825759
                                                        6.082577 -2.743788
##
        1497
                   1942
                             2066
                                        2318
                                                  2328
                                                             2353
                                                                       2427
    4.414372 -3.509839 -2.721258 -2.663586 -2.815765 -2.735108 -2.509145
##
        2440
                   2590
                                        2637
                                                  2646
                                                                       2714
##
                             2600
                                                             2659
##
   -2.802543
              2.866275
                        3.587372 3.073324 -4.571244 -4.253022 3.510342
                   2727
                             3036
##
        2726
##
   3.927474 3.457835 2.731785
stu_res_plus = rstandard(step_model_plus)
outliers y plus = stu res plus[abs(stu res plus) > 2.5]
outliers_y_plus
##
         116
                    119
                              122
                                         124
                                                   189
                                                              264
                                                                        282
##
    4.138483 -3.342005
                         3.092470 -3.210083 -2.542585 -2.715820 -5.023392
##
         466
                    469
                              476
                                         514
                                                   522
                                                              597
                                                                        621
##
    2.594243
              2.726490 -2.541161 -2.942100
                                             3.056187 -2.650811 -2.700448
##
         627
                    650
                              666
                                         775
                                                   783
                                                              803
                                                                        921
                         2.745194
##
    3.786666 -3.297155
                                  3.111158 -3.123388 -2.693816 -3.125507
##
        1174
                   1217
                             1221
                                        1290
                                                  1304
                                                             1331
                                                                       1345
##
    2.541108
             2.933401
                         7.002995 -2.720343 -2.642981 -2.858036 -2.827390
##
        1366
                   1445
                             1497
                                        1942
                                                  1962
                                                             2066
                                                                       2318
##
    6.105178 -2.912499
                         4.425304 -3.349023
                                              2.511229 -2.683825 -2.600052
##
                   2353
                             2427
                                        2440
                                                  2590
                                                             2600
                                                                       2637
        2328
##
   -2.748356 -2.728276 -2.504301 -3.061635
                                              2.812468
                                                        3.504731 3.087193
##
        2646
                  2659
                             2714
                                        2726
                                                  2727
                                                             3036
## -4.611051 -4.211316 3.690226
                                  3.901123
                                             3.442037
                                                        2.759001
stu_res_back = rstandard(back_model)
outliers_y_back = stu_res_back[abs(stu_res_back) > 2.5]
outliers_y_back
##
         116
                    119
                              122
                                         124
                                                   264
                                                              282
                                                                        466
##
    4.429086 -3.087604
                         3.409572 -2.969809 -2.504219 -5.536620
                                                                   2.629991
##
         469
                    476
                              514
                                         522
                                                   597
                                                              621
                                                                        627
##
    2.649356 -2.642270 -2.759734
                                  3.241725 -2.577617 -2.715107
                                                                   3.644194
         650
                    666
                              775
                                         783
                                                   803
                                                              921
                                                                       1174
##
   -3.362466 2.678954
                        3.190467 -3.259077 -2.695568 -3.202735
##
                                                                   2.551606
##
        1217
                   1221
                             1331
                                        1345
                                                  1366
                                                             1445
                                                                       1497
##
    2.796832 6.965050 -2.612628 -2.606354
                                             6.356507 -2.673548
                                                                   4.388556
                   2066
                                        2328
##
        1942
                             2318
                                                  2353
                                                             2440
                                                                       2590
   -3.532645 -2.655377 -2.668766 -2.834886 -2.771928 -2.769920
##
                                                                   2.869076
##
        2600
                   2637
                             2646
                                        2659
                                                  2714
                                                             2726
                                                                       2727
```

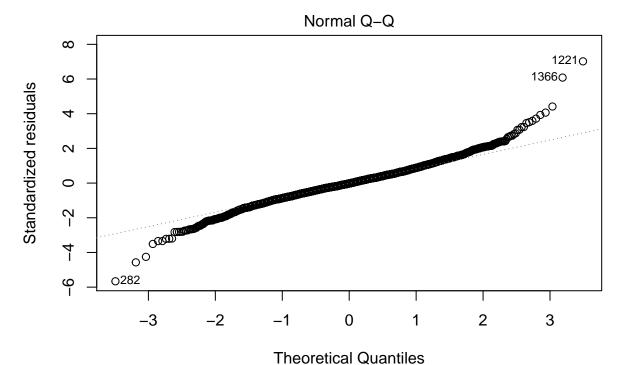
```
## 3.607012 3.055383 -4.563974 -4.250213 3.535576 4.008203 3.491002
## 3034 3036
## 2.568259 2.986786
# 282, 1221, 1366
```

#### Cook's Distance

```
# step model ours
plot(step_model_ours)
```

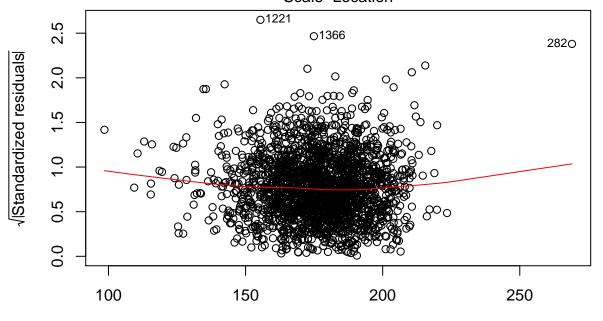


Im(target\_death\_rate ~ avg\_ann\_count + incidence\_rate + poverty\_percent + p ...



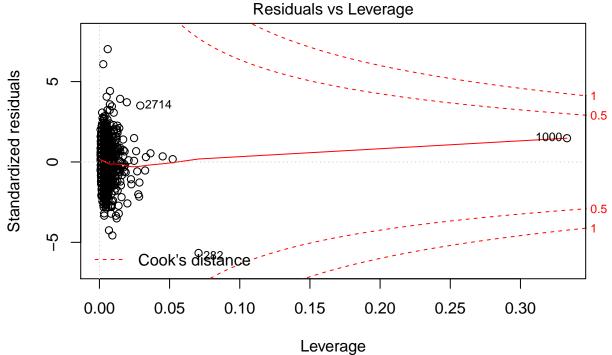
Im(target\_death\_rate ~ avg\_ann\_count + incidence\_rate + poverty\_percent + p ...

Scale-Location

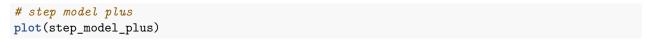


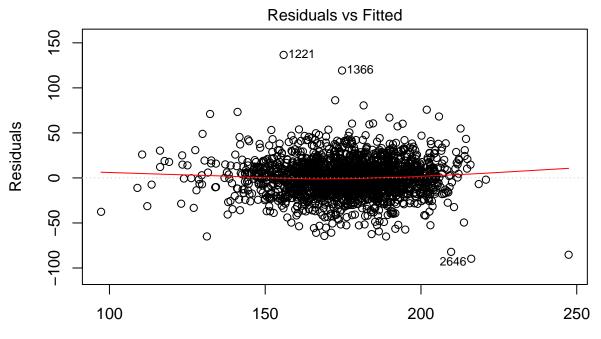
Fitted values

Im(target\_death\_rate ~ avg\_ann\_count + incidence\_rate + poverty\_percent + p ...



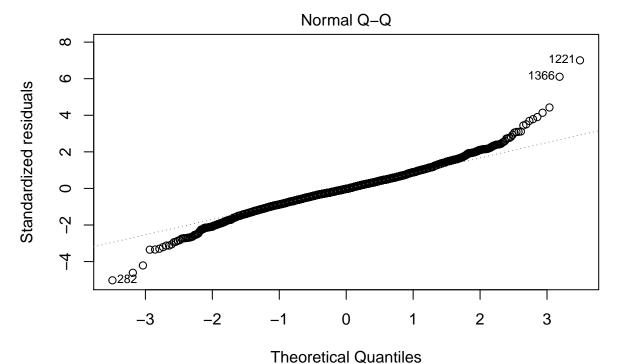
Im(target\_death\_rate ~ avg\_ann\_count + incidence\_rate + poverty\_percent + p ...





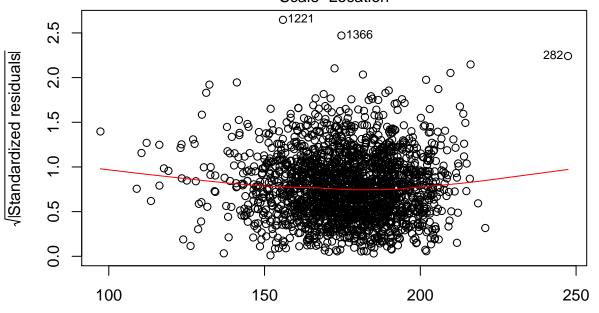
Fitted values

Im(target\_death\_rate ~ avg\_ann\_count + incidence\_rate + poverty\_percent + p ...



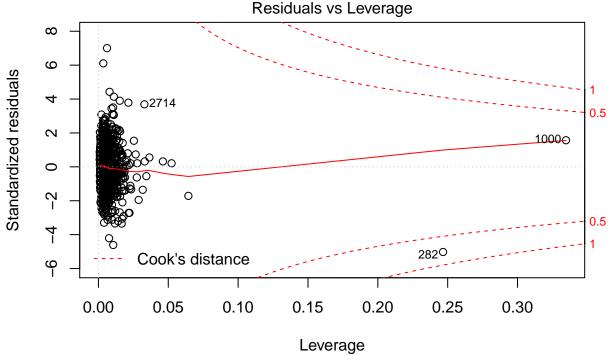
Im(target\_death\_rate ~ avg\_ann\_count + incidence\_rate + poverty\_percent + p ...

Scale-Location



Fitted values

Im(target\_death\_rate ~ avg\_ann\_count + incidence\_rate + poverty\_percent + p ...



Im(target\_death\_rate ~ avg\_ann\_count + incidence\_rate + poverty\_percent + p ...

# Observation 282, 1221, 1366 should be looked at

#### Various Measures of Influence

```
## Influence measures of
##
    lm(formula = target_death_rate ~ avg_ann_count + incidence_rate +
                                                                           pop_est2015 + poverty_perce
##
##
                 dfb.av__ dfb.inc_ dfb.p_20 dfb.pvr_
                                                          dfb.prc
                                                                    dfb.p 2
##
        2.41e-03 -1.76e-03 -3.76e-03 -5.38e-04
                                                4.96e-03 -5.34e-03
##
        2.32e-02 -2.31e-03 -4.51e-02 -1.07e-03 -2.73e-03 -8.37e-04 7.78e-03
        2.22e-03 -1.22e-04 -5.20e-03 5.77e-05 -6.23e-03 1.58e-03 -4.96e-03
                  1.87e-03 1.22e-02 -1.28e-03
                                               1.92e-03 -3.52e-04 -7.47e-05
        -5.85e-03
##
##
        6.78e-03
                  4.27e-03 -1.91e-02 -1.30e-03
                                                1.83e-02
                                                          3.46e-03 -4.21e-04
##
        1.94e-02 2.18e-04 -7.55e-03 -4.09e-04 -2.64e-02 -1.79e-02 -1.17e-02
##
  8
        3.39e-03 -1.23e-03 -8.41e-03 5.25e-04
                                                9.80e-04 -5.68e-05 -8.71e-04
##
  9
        -1.28e-02 -1.04e-03
                            4.20e-03
                                      7.50e-04
                                                1.27e-02
                                                          1.16e-02 7.69e-03
##
        2.10e-02 -8.39e-03 -2.64e-02 4.27e-03 -2.36e-02 -6.61e-03 -3.24e-03
  13
## 14
        1.83e-04 -5.97e-05 -9.99e-04 -7.13e-04
                                                9.13e-04
                                                         2.66e-04 -6.29e-04
## 15
        -5.97e-05 1.30e-03 -7.52e-04 5.10e-04
                                                1.82e-03 -1.24e-03 4.32e-03
## 16
        6.24e-03 -4.07e-05
                            1.92e-03 -2.70e-04 -7.63e-03 -1.01e-02 -1.96e-03
        5.41e-04 8.38e-05 -8.19e-04 -7.86e-05
                                                2.74e-04 -2.52e-05 -1.03e-03
##
  17
##
  18
        -2.63e-02
                  1.21e-02
                            3.41e-03 -7.88e-03
                                                4.53e-02 -1.10e-03 3.72e-02
       -1.17e-02
                  2.91e-03
                            2.30e-03 -1.12e-03
                                                2.88e-03
                                                          1.37e-02 -1.57e-03
##
  19
                  1.11e-03 -7.19e-03 -4.93e-05 -3.56e-03
##
  20
        3.36e-03
                                                          3.77e-03 -1.35e-02
##
  21
        1.10e-03 9.38e-04
                            1.17e-02 5.82e-03 -4.27e-02
                                                         1.31e-02 -5.08e-02
## 22
       -6.54e-03
                  2.29e-03
                            6.81e-03 -4.45e-03 -3.10e-03
                                                         6.06e-03
## 23
        3.09e-04
                  1.32e-04
                            1.08e-04 -2.73e-04 -3.06e-03 -1.59e-03 1.51e-03
## 25
       -4.60e-02 -5.64e-03
                            4.46e-02 1.06e-02
                                               4.87e-02
                                                          4.39e-02 -1.91e-02
       -1.24e-03 6.50e-04 -9.44e-04 -5.49e-04 8.81e-04 1.57e-03 1.37e-03
## 27
```

```
3.13e-03 -3.06e-04 7.74e-03 -5.56e-04 1.22e-02 -1.21e-02 5.73e-03
## 31
        1.84e-01 9.18e-03 -1.96e-01 -1.16e-02 -6.55e-02 -1.14e-01 -7.81e-02
## 32
       -1.08e-02 -2.74e-03 1.07e-02 3.84e-03 2.40e-02 3.46e-03 -7.07e-03
       -1.23e-01 9.58e-05 1.06e-01 -2.49e-03 4.24e-02 6.23e-02 9.38e-02
## 34
## 35
       -3.44e-03 -5.04e-04
                            3.89e-03 5.61e-04 5.32e-03 2.18e-03 1.06e-03
        2.71e-02 -1.61e-03 7.31e-04 8.69e-04 -7.61e-03 -3.04e-02 -1.97e-02
## 36
       -8.55e-04 9.56e-04 -1.69e-03 -7.32e-04 1.84e-03 1.56e-03 1.09e-03
## 37
       -2.75e-03 -6.96e-03 2.48e-02 5.61e-03 -8.13e-03 -6.48e-03 -3.21e-03
## 39
## 40
       -4.39e-03 -3.18e-03 6.92e-03 3.04e-03 5.20e-03 3.90e-03 -1.01e-03
## 41
        1.29e-02 -8.93e-03 -1.10e-02 4.45e-03 -2.35e-02 -9.47e-03 8.05e-03
## 42
        2.05e-03 9.79e-03
                           2.26e-02 -7.85e-03 6.31e-03 -1.50e-02 1.56e-03
                            2.89e-02 5.77e-03 1.33e-02 1.61e-03 -3.85e-03
## 43
       -1.21e-02 -5.78e-03
## 44
       -1.84e-02 -1.78e-03
                            2.47e-02 3.36e-03 2.80e-02 1.39e-02 -7.95e-03
       -3.14e-02 -6.42e-03 5.00e-02 9.21e-03 1.48e-02 2.23e-02 -2.63e-02
## 45
       -1.09e-03 -5.42e-04
                            6.19e-04 6.20e-04 9.28e-04 2.38e-03 -6.97e-04
## 48
## 49
        -3.79e-03 -1.58e-03
                           4.70e-03 1.86e-03 8.16e-03 5.43e-03 -7.37e-03
## 51
        2.02e-02 -3.93e-03 -1.04e-03 2.74e-03 -1.70e-02 -2.46e-02 -1.51e-02
## 53
       -1.54e-02 4.61e-03 4.85e-04 -7.52e-04 -1.72e-02 2.92e-02 -1.97e-02
       -5.77e-03 -1.63e-03 4.89e-04 2.26e-03 8.81e-03 8.17e-03 -2.04e-03
## 54
## 58
       -3.84e-02 7.75e-03 4.11e-02 -1.15e-02 2.80e-03 1.36e-02 4.90e-02
## 59
        6.04e-03 -6.11e-03 3.04e-03 7.21e-03 -4.33e-03 6.22e-03 -2.66e-02
        2.51e-03 -5.42e-04 -6.61e-03 9.02e-04 4.02e-03 3.06e-03 -3.22e-03
## 60
       -7.44e-03 2.62e-03 3.80e-03 -3.47e-03 -3.08e-03 4.40e-04 1.32e-02
## 61
## 62
        7.69e-04 3.67e-03 -6.89e-03 -3.51e-03 3.03e-03 2.75e-04 1.95e-03
## 63
        1.55e-03 -6.96e-04 6.58e-03 1.18e-03 7.85e-03 -2.12e-03 -3.45e-03
## 64
       -1.67e-03 9.47e-05 5.88e-03 -3.66e-04 -1.05e-02 -2.15e-03 8.68e-04
        3.79e-03 -5.52e-03 1.19e-02 4.97e-03 -1.00e-02 -9.34e-03 -1.50e-02
## 65
## 68
       -3.84e-05 2.05e-05 7.12e-05 -1.09e-05 2.75e-05 2.05e-05 5.97e-06
        8.00e-04 -4.68e-04 2.09e-04 4.34e-04 -1.59e-03 1.62e-04 -2.24e-03
## 70
## 71
       -5.53e-05 -3.82e-04 4.19e-04 3.89e-04 1.06e-03 -1.57e-05 -6.77e-04
       -5.84e-03 2.32e-04 3.08e-03 -3.35e-04 7.32e-04 4.06e-03 6.72e-03
## 72
## 74
        2.54e-04 9.14e-04 -3.07e-03 -1.03e-03 3.33e-05 7.56e-04 2.69e-03
## 75
        1.13e-03 1.56e-03 -1.85e-03 -1.65e-03 -3.67e-03 -7.91e-04 3.03e-03
       -4.43e-02 -2.45e-03 1.26e-02 9.04e-03 5.44e-02 5.35e-02 -2.50e-02
## 77
## 78
        4.36e-03 -2.32e-03 3.31e-03 1.85e-03 -4.50e-03 -3.30e-03 -1.04e-02
## 79
        6.11e-02 -2.26e-02 -3.32e-03 1.08e-02 -4.81e-02 -8.39e-02 -7.54e-03
## 80
       -3.86e-03 1.16e-03 3.32e-03 -1.34e-03 2.70e-03 1.03e-03 4.37e-03
## 82
        3.00e-04 2.92e-03 -5.89e-03 -2.95e-03 2.32e-03 4.52e-03 -7.44e-03
        6.66e-03 -2.80e-03 -7.31e-03 2.78e-03 -5.57e-03 -1.32e-03 -5.70e-03
## 83
        1.39e-03 1.95e-03 -1.79e-03 -1.55e-03 1.39e-03 -2.07e-03 -1.81e-03
## 85
       -7.20e-03 1.02e-02 -1.40e-02 -9.68e-03 1.74e-02 7.50e-03 1.26e-02
## 86
        1.43e-02 1.23e-02 -1.60e-02 -1.56e-02 -1.11e-02 -1.09e-02 1.91e-02
## 87
## 88
        1.90e-03 -1.56e-03 1.23e-03 1.20e-03 -3.98e-03 -1.75e-03 -1.09e-03
## 89
       -7.48e-03 4.36e-03 -3.34e-03 -4.00e-03 6.33e-03 7.21e-03 1.03e-02
## 91
        6.04e-03 -9.03e-04 -1.64e-03 8.64e-04 -5.90e-03 -4.81e-03 -4.58e-03
        9.62e-02 -1.03e-02 -8.42e-02 1.81e-03 -5.30e-02 -7.80e-02 -1.26e-02
## 93
## 94
       -1.28e-02 2.53e-03 8.08e-03 -1.12e-03 6.28e-03 1.16e-02 9.66e-04
## 95
       -5.24e-05 1.92e-05 1.08e-05 -8.27e-06 1.20e-05 6.93e-05 -3.64e-05
## 96
        2.70e-02 1.34e-04 -6.08e-02 -4.86e-04 -1.33e-02 1.29e-02 -1.24e-02
## 97
        -1.10e-02 6.20e-03 -8.23e-03 -5.92e-03 1.90e-02 9.48e-03 9.85e-03
        1.32e-02 1.48e-02 -2.92e-02 -1.27e-02 1.02e-02 5.27e-04 1.44e-02
## 98
## 99
       -1.03e-02 2.05e-03 3.03e-03 -1.63e-03 3.32e-03 9.82e-03 4.68e-03
## 101
       -3.10e-04 5.40e-03 -1.96e-03 -4.17e-03 5.67e-03 2.12e-03 -2.36e-03
        9.37e-03 -1.01e-02 -1.44e-02 1.20e-02 -5.83e-03 7.17e-03 -2.34e-02
## 103
```

```
3.38e-02 3.23e-04 -6.19e-02 -9.12e-05 -1.38e-02 9.65e-04 -1.16e-02
       -1.15e-02 -9.24e-03 1.25e-03 6.84e-03 5.57e-03 1.66e-02 1.93e-02
## 108
## 109
       -1.25e-03 -1.98e-03 -2.91e-03 4.71e-04 5.22e-03 7.62e-04 1.05e-02
        6.73e-03 1.35e-02 -2.46e-02 -1.25e-02 -9.91e-04 -9.59e-03 9.16e-03
## 110
## 111
        1.38e-02 -9.24e-03 -1.70e-02 6.23e-03 -2.33e-03 -7.06e-03 8.86e-03
       -1.21e-02 3.35e-01 -3.90e-02 -3.69e-01 5.95e-02 1.29e-02 3.65e-02
## 113
        1.11e-02 -6.13e-02 6.61e-03 5.89e-02 9.07e-03 -1.90e-02 -9.60e-03
## 114
       -1.77e-02 -8.18e-02 9.23e-03 7.44e-02 2.20e-02 8.45e-03 2.72e-02
## 115
## 116
        1.77e-01 2.89e-01 -8.30e-02 -2.92e-01 -1.69e-01 -1.85e-01 -7.23e-02
## 117
       -8.67e-03 3.79e-02 -3.10e-03 -3.45e-02 5.19e-03 2.18e-02 -2.36e-03
## 118
        2.18e-02 3.32e-02 -8.26e-03 -3.09e-02 -2.27e-02 -1.72e-02 -2.25e-02
       -7.63e-02 -2.04e-01 3.71e-02 1.88e-01 1.88e-01 8.00e-02 1.50e-01
## 119
## 120
        5.95e-02 -1.55e-01 1.40e-02 1.53e-01 -2.35e-02 -6.81e-02 -5.56e-02
        9.38e-03 4.06e-02 -9.83e-03 -3.95e-02 -2.15e-02 -6.22e-03 -8.24e-03
## 121
## 122
        1.05e-01 2.20e-01 -4.88e-02 -2.18e-01 -1.23e-01 -1.55e-01 -7.81e-02
       -1.53e-02 9.29e-02 -1.14e-02 -8.71e-02 -9.80e-03 1.99e-02 -7.94e-03
## 123
       -7.42e-02 -1.98e-01 1.29e-02 1.89e-01 6.07e-02 1.54e-01 7.08e-02
## 124
## 125
       -6.61e-02 -1.46e-01 4.45e-02 1.44e-01 9.71e-02 2.91e-02 4.09e-02
        7.26e-03 9.17e-03 -2.69e-03 -8.90e-03 -6.62e-03 -7.21e-03 -5.39e-03
## 127
        9.53e-03 3.94e-02 -7.00e-03 -3.86e-02 3.28e-04 -1.27e-02 7.09e-04
## 128
## 130
       -7.23e-03 -2.33e-03 5.16e-03 1.46e-03 1.51e-03 5.07e-03 7.30e-03
       -6.75e-03 4.35e-03 -6.87e-03 -1.92e-03 7.59e-03 1.29e-02 -5.40e-03
## 131
        2.01e-04 -1.03e-04 6.49e-05 8.19e-05 -1.68e-04 -2.37e-04 -1.85e-04
## 132
       -4.69e-03 1.43e-03 1.21e-03 -5.46e-04 3.08e-03 6.00e-03 -2.18e-03
## 133
## 134
        1.07e-03 3.86e-04 2.01e-03 9.36e-05 -3.23e-03 -2.81e-03 3.46e-03
## 135
        7.13e-04 -1.14e-03 4.56e-03 4.91e-04 -2.75e-03 -3.07e-03 3.48e-03
## 137
        3.75e-03 -2.73e-03 5.18e-03 1.28e-03 -4.26e-03 -8.14e-03 4.79e-03
## 138
       -3.71e-03 1.54e-03 -1.03e-03 -9.24e-04 4.17e-03 3.96e-03 1.05e-03
        1.91e-04 -4.90e-03 -5.06e-03 5.52e-03 1.04e-02 4.07e-03 -3.33e-03
## 139
## 140
       -5.58e-03 1.47e-02 9.60e-04 -9.08e-03 7.53e-04 4.02e-03 1.51e-02
        2.94e-04 -8.69e-04 -8.86e-04 7.59e-04
## 141
                                               1.32e-03 7.20e-05 -6.17e-04
## 142
       -1.24e-05 -1.09e-03 -9.81e-04 8.63e-04
                                              1.09e-03 7.26e-04 -2.93e-04
## 143
       -1.58e-02 8.00e-05 1.98e-02 -1.75e-03 9.90e-04 5.65e-03 1.41e-02
                                              1.68e-02 2.67e-02 1.47e-02
       -1.57e-02 -4.31e-04 -1.08e-02 1.96e-03
## 144
## 145
       -1.21e-02 -6.19e-03 7.47e-03 1.09e-03
                                               1.50e-02
                                                        1.66e-02 -5.05e-03
       -5.38e-03 2.03e-03 1.55e-02 -2.48e-03 -1.84e-02 6.35e-04 3.57e-03
## 146
## 147
       -1.74e-03 1.85e-03 2.91e-03 -2.30e-03 1.67e-05 2.14e-03 -3.81e-03
        5.12e-03 2.56e-03 -4.85e-03 -8.16e-04 2.94e-03 -2.72e-03 -1.23e-02
## 148
       -3.78e-04 -6.95e-03 -1.10e-02 6.70e-03 2.00e-02 7.61e-03 -1.09e-02
## 149
## 150
        2.75e-05 -1.65e-04 1.61e-05 2.44e-05 2.57e-04 -5.76e-05 -1.88e-04
       -9.36e-03 1.49e-02 1.13e-02 -1.12e-02 -2.24e-03 2.69e-03 1.52e-02
## 151
        6.66e-04 -2.09e-03 -7.66e-04 1.61e-03 2.18e-05 -2.65e-04 -3.21e-04
## 153
## 154
       -8.77e-03 -6.09e-03 6.27e-03 9.25e-04 -9.28e-04 9.12e-03 -3.31e-03
                          1.79e-03 1.35e-04 -2.87e-03 -7.71e-04 -4.74e-04
       -1.75e-05 -6.21e-04
## 155
## 156
       -5.36e-03 -6.26e-04 1.46e-03 -2.65e-04 -5.19e-03 5.66e-03 1.26e-02
                           1.15e-02 2.40e-03 -2.06e-02 1.07e-03 1.99e-02
       -6.19e-03 -6.06e-03
## 157
## 158
       -1.25e-02 -5.84e-03 4.51e-03 2.22e-03 2.74e-02 1.38e-02 -7.64e-04
## 159
       -5.84e-04 -2.38e-03 3.45e-03 1.07e-03 -8.35e-03 -9.98e-04 4.44e-03
## 160
       -1.70e-02 -1.47e-03 1.49e-02 -6.28e-03 -3.74e-03 1.99e-02 -7.27e-03
       -9.65e-04 2.59e-04
## 162
                            3.70e-03 -1.74e-04 -4.84e-03 1.48e-03 -1.78e-03
       -4.57e-02 -6.47e-03 6.48e-02 1.50e-02 -2.53e-02 6.35e-02 -1.28e-02
## 163
## 164
       -1.22e-02 1.75e-03 3.52e-02 3.95e-03 -1.84e-02 9.62e-03 -2.45e-02
## 165
       -2.35e-02 2.55e-03 3.77e-02 -4.51e-04 1.81e-03 1.55e-02 -1.37e-03
        1.88e-02 -4.90e-04 1.53e-02 5.89e-04 -4.78e-02 -1.30e-02 -3.88e-02
## 167
```

```
6.89e-03 -1.65e-03 -4.14e-03 1.52e-03 -4.76e-03 -6.59e-03 -4.26e-03
## 171
       -8.36e-03 -1.36e-03 1.84e-02 2.62e-03 -6.54e-03 4.89e-03 -1.27e-03
       -2.94e-03 5.54e-04 3.20e-03 -7.52e-04 8.79e-04 1.47e-03 2.49e-03
        1.92e-02 3.89e-03 3.17e-02 2.76e-03 -4.84e-02 -1.43e-02 -6.12e-02
## 173
## 180
       -3.58e-02 -3.40e-03 4.19e-02 6.23e-03 -4.90e-03 2.85e-02 2.18e-03
       -5.23e-03 -4.57e-04 9.67e-03 1.35e-03 -6.25e-03 3.75e-03 -3.35e-03
## 181
## 183
       -6.51e-02 2.26e-03 7.26e-02 -3.99e-03 4.34e-03 4.66e-02 2.85e-02
       -4.73e-02 -2.18e-04 5.57e-02 7.91e-03 1.16e-02 4.16e-02 -1.64e-02
## 188
## 189
        1.42e-01 1.09e-02 -1.37e-01 -8.13e-03 -1.61e-01 -8.29e-02 -6.99e-02
## 190
       -1.66e-02 -5.81e-04 1.40e-02 6.68e-04 -1.27e-05 1.14e-02 6.43e-03
## 191
        1.13e-02 -6.53e-04 1.21e-02 1.45e-03 -2.43e-02 -9.53e-03 -1.51e-02
       -4.36e-03 -1.47e-03 -1.56e-03 1.60e-03 3.45e-03 6.17e-03 5.55e-05
## 192
## 193
       -9.08e-03 5.32e-03 -1.45e-02 -4.16e-03 5.44e-03 1.77e-02 1.25e-02
## 195
       -2.01e-02 -7.83e-03 -1.51e-02 7.37e-03 4.97e-03 3.66e-02 1.23e-03
       -4.70e-02 8.44e-03 -3.25e-03 -5.66e-03 4.53e-02 5.47e-02 2.85e-02
## 197
## 199
       -3.71e-04 8.69e-04 -7.69e-03 -9.41e-04 -3.99e-03 4.56e-03
                                                                  8.90e-04
       -4.14e-03 5.41e-03 -2.27e-02 -5.65e-03 3.28e-03 1.24e-02 1.62e-02
## 200
## 202
        8.91e-03 9.79e-03 5.45e-02 -1.15e-02 -4.25e-02 -3.54e-02 -1.58e-02
       -1.93e-02 -1.02e-02 -1.32e-05 3.58e-03 -2.31e-02 3.90e-02 1.08e-02
## 203
## 204
       -3.08e-03 -1.25e-03 -2.06e-03 -1.47e-04 -6.96e-04 5.02e-03 7.81e-03
## 205
        1.08e-02 -4.39e-03 -2.02e-02 2.34e-03 -8.21e-03 -1.46e-03 -8.83e-03
       -1.19e-02 -1.79e-02 1.59e-02 9.87e-03 -3.63e-02 1.30e-02 9.44e-03
## 206
        7.60e-04 1.30e-03 -2.19e-03 -1.10e-03 2.45e-03 -1.10e-03 1.82e-03
## 207
       -2.22e-02 -5.03e-02 -3.05e-02 4.34e-02 -4.09e-03 3.00e-02 9.88e-02
## 210
## 211
        1.99e-03 -3.56e-03 -1.42e-03 2.04e-03 -1.28e-02 4.02e-03 -6.88e-03
## 212
        5.30e-03 -5.24e-05 -5.11e-03 -2.96e-04 1.61e-03 -3.95e-03 -5.16e-03
       -4.02e-03 3.67e-03 -1.81e-03 -2.53e-03 5.94e-03 5.38e-03 1.49e-03
## 213
        1.42e-02 4.10e-03 1.21e-03 -3.24e-03 -6.73e-03 -3.38e-02 -8.78e-04
## 214
        2.68e-02 1.07e-03 -8.88e-03 -3.21e-03 4.75e-03 -2.26e-02 -2.42e-02
## 215
## 216
       -1.73e-02 -6.68e-03 2.31e-02 3.75e-03 5.39e-03 1.81e-02 3.02e-03
## 217
       -1.09e-03 3.67e-04 1.45e-03 1.93e-04 -4.41e-03 2.28e-03 -4.45e-03
## 218
       -1.48e-05 -1.50e-03 3.65e-03 9.10e-04 -1.77e-03 -1.10e-03 -1.18e-03
## 219
        2.41e-03 -1.65e-02 -8.02e-03 1.01e-02 -5.21e-02 3.46e-02 -1.43e-02
       -4.11e-02 -1.07e-02 5.07e-02 2.53e-03 3.22e-02 1.12e-02 2.54e-02
## 220
## 221
       -4.03e-02 -5.94e-03 5.14e-03 2.48e-03 1.15e-02 4.71e-02 2.17e-02
## 222
        1.27e-03 4.69e-04 -2.34e-03 -2.24e-05 -1.64e-03 7.01e-04 -3.75e-04
## 223
        2.09e-03 4.37e-03 -8.01e-03 -2.00e-03 1.29e-02 -7.54e-03 4.23e-03
## 224
        7.80e-03 -3.65e-03 -5.86e-03 3.63e-03 -7.70e-03 -3.17e-03 -1.42e-02
        5.82e-03 1.96e-03 -1.59e-02 -1.30e-03 7.76e-03 3.95e-03 -4.10e-03
## 225
        9.94e-05 -6.19e-03 4.21e-04 3.40e-03 -1.34e-02 4.55e-03 1.71e-03
## 227
       -1.06e-02 3.21e-03 6.52e-03 -8.90e-04 1.96e-02 6.50e-03 6.50e-03
## 229
## 230
        6.49e-03 -1.36e-02 -1.25e-02 1.37e-02 -1.29e-02 4.55e-05 5.10e-03
## 232
       -1.05e-03 -7.42e-04 -8.46e-04 5.52e-04 7.25e-04 2.21e-03 1.65e-03
       -8.75e-03 4.64e-03 6.46e-04 -2.26e-03 6.60e-03 1.26e-02 1.49e-02
## 233
## 235
        1.46e-02 -1.66e-03 -1.84e-02 1.21e-03 -4.91e-03 -6.13e-03 -4.64e-03
       -5.23e-03 1.89e-03 6.70e-03 -1.87e-03 3.89e-03 -1.06e-04 2.28e-03
## 236
## 238
        6.08e-03 8.54e-03 -6.57e-02 -5.29e-03 3.11e-02 4.17e-02 -9.93e-03
## 240
        2.43e-02 -1.73e-03 -3.14e-02 3.28e-03 1.72e-02 -1.08e-02 -1.93e-02
## 241
        3.57e-03 -3.07e-04 -2.51e-03 5.10e-05 -2.66e-03 -2.12e-03 -2.93e-03
        1.05e-04 -2.82e-03 -7.56e-04 2.09e-03 -5.87e-03 2.12e-03 2.91e-04
## 242
       -5.26e-04 -1.55e-02 -2.77e-03 1.10e-02 -2.65e-02 9.82e-03 1.14e-02
## 243
## 244
        9.69e-04 -2.52e-03 -6.51e-03 -8.30e-05 -1.01e-02 4.06e-03 1.31e-03
## 246
        2.09e-02 4.48e-04 -4.89e-02 2.40e-03 1.40e-02 5.34e-03 -2.35e-02
        5.23e-02 -1.68e-02 -2.08e-02 1.12e-02 -5.59e-02 -4.55e-02 -2.32e-02
## 247
```

```
3.30e-03 -1.74e-03 -4.31e-03  1.12e-03 -1.16e-03 -7.52e-04  6.74e-04
       -1.17e-02 1.85e-03 4.92e-03 2.67e-04 1.42e-02 7.26e-03 9.94e-03
## 249
## 250
        6.19e-02 6.23e-03 -8.89e-02 -8.53e-03 8.20e-03 -2.86e-02 -2.24e-02
## 251
        -5.09e-03 1.46e-03 4.28e-03 -1.19e-03 5.32e-03 -4.59e-04 6.81e-03
## 255
        -3.89e-02 -4.15e-02 1.27e-01 3.47e-02 -3.31e-03 -4.83e-02 -2.59e-03
        8.01e-02 3.74e-02 -2.55e-01 -1.37e-02 -1.34e-01 7.98e-02 -1.11e-01
## 256
## 257
        3.77e-03 -6.11e-03 -1.40e-03  4.84e-03 -1.94e-02 -8.44e-04  1.98e-03
        -4.44e-02 1.57e-02 -9.52e-03 -5.96e-03 7.03e-02 4.10e-02 3.61e-02
## 258
## 260
        -9.44e-04 -6.39e-03 1.18e-05 1.75e-03 -5.62e-03 -1.06e-03 2.27e-02
## 261
         3.35e-02 -6.66e-03 -4.54e-03 -1.15e-02 -1.86e-02 -6.46e-02 2.68e-02
## 262
        -1.56e-02 1.10e-02 -2.74e-02 -1.76e-03 1.56e-02 4.22e-02 -1.29e-02
        5.88e-04 -6.40e-05 8.93e-05 -2.88e-05 -6.77e-04 -7.64e-04 -2.37e-04
## 263
## 264
        7.61e-04 3.22e-02 -1.64e-01 -8.57e-03 -1.43e-01 1.50e-01 -1.17e-01
## 265
        4.85e-02 -1.29e-02 3.72e-02 3.41e-03 -6.14e-02 -8.29e-02 -4.62e-02
        -9.64e-04 -2.06e-03 1.05e-02 -2.60e-03 1.90e-02 -1.65e-02 2.10e-02
## 266
## 267
         1.65e-03 -5.50e-04 -2.47e-03 1.74e-04 -2.29e-03 -5.09e-04 -1.10e-04
         1.51e-02 -2.38e-03 -3.28e-03 7.65e-04 -1.20e-02 -1.75e-02 -4.49e-03
## 268
## 269
        3.60e-03 -8.94e-04 1.07e-03 2.42e-04 -1.10e-04 -7.80e-03 1.50e-03
        -1.20e-03 -5.38e-03 -4.15e-04 3.17e-03 -6.22e-03 3.88e-03 8.36e-03
## 272
## 274
        8.56e-03 7.87e-04 -6.94e-05 -5.36e-03 2.23e-02 -1.97e-02 1.80e-02
## 276
        5.19e-03 -1.08e-03 7.95e-03 -8.33e-04 -8.79e-04 -1.43e-02 4.33e-04
        1.06e-02 -5.43e-03 7.68e-03 3.43e-03 -1.13e-02 -1.56e-02 -2.94e-03
## 277
        -9.33e-04 6.40e-03 -2.19e-02 -1.38e-03 -2.26e-03 1.35e-02 -8.36e-03
## 278
        8.88e-04 -8.45e-03 5.17e-03 3.77e-03 -1.64e-02 -1.71e-03 3.28e-03
## 279
## 281
        -5.47e-04 -1.18e-03 4.43e-03 9.42e-04 -8.71e-04 -1.32e-03 -1.45e-03
## 282
        5.16e-01 2.35e-01 -1.41e+00 -1.28e-01 -1.86e-01 2.58e-01 -3.95e-01
## 283
        7.72e-02 -9.14e-03 -3.97e-02 -6.51e-05 -5.84e-02 -7.34e-02 -2.65e-02
        1.98e-03 4.64e-03 5.39e-02 -4.87e-03 -1.08e-02 -2.08e-02 3.34e-04
## 284
        2.12e-02 -1.76e-03 -3.92e-02 -1.23e-03 -8.51e-03 -1.80e-03 -5.48e-04
## 285
## 286
        1.31e-03 9.97e-04 -7.70e-04 -9.42e-04 -1.01e-03 -5.64e-04 -2.58e-03
        -1.27e-02 -8.69e-03 1.09e-02 3.93e-03 -1.92e-04 5.23e-03 1.82e-02
## 290
## 291
         2.41e-03 -5.30e-05 -1.23e-03 -1.68e-04 -2.73e-03 -1.32e-03 -2.79e-04
## 292
         1.57e-02 7.18e-03 -5.90e-03 -7.38e-03 -1.45e-02 -2.25e-02 -3.65e-03
        -5.94e-03 -9.34e-04 1.89e-02 2.67e-03 -5.38e-03 1.34e-03 -5.15e-03
## 293
## 296
        -2.40e-03 1.63e-03 2.70e-03 -1.51e-03 3.52e-03 1.69e-03 1.98e-03
        5.93e-03 9.40e-04 -1.17e-02 9.65e-05 3.13e-03 2.06e-03 -8.21e-04
## 297
## 298
        2.80e-02 6.90e-03 -9.47e-03 -2.61e-03 3.99e-03 -2.48e-02 -3.45e-02
## 299
        1.94e-02 4.86e-03 -1.17e-02 -1.45e-04 -6.63e-03 -1.04e-02 -3.04e-02
        -1.22e-02
                  1.10e-02 5.91e-03 1.95e-02 1.14e-02 6.07e-03 2.25e-02
## 300
        -9.56e-03 1.45e-03 7.74e-03 3.99e-04 4.12e-03 1.14e-02 -2.50e-04
## 301
       -7.20e-03 4.03e-04 2.53e-03 -3.66e-04 7.91e-03 6.73e-03 1.89e-03
## 302
        7.55e-03 -1.75e-03 -1.09e-02 7.72e-04 -5.81e-03 -2.71e-03 2.00e-03
## 303
## 304
        1.30e-04 1.35e-04 6.49e-04 -3.55e-05 2.94e-04 -6.66e-04 -3.51e-05
## 306
        1.74e-02 -3.28e-03 -3.10e-02 8.85e-04 -6.24e-03 -5.24e-03 3.12e-03
## 307
        2.46e-02 -6.23e-03 -1.56e-02 3.91e-03 -3.11e-02 -1.98e-02 -5.19e-03
         2.69e-03 1.03e-03 -1.89e-03 -5.35e-04 -2.52e-04 -2.01e-03 -3.07e-03
## 308
## 309
         7.17e-03 -1.24e-02 -7.69e-03 9.57e-03 -3.07e-03 -2.67e-03 -3.67e-04
## 312
         9.66e-04 1.47e-02 -3.80e-02 -9.19e-03 2.74e-02 1.99e-02 -1.38e-02
## 313
        -3.18e-02 3.98e-03 5.74e-03 -3.43e-03 1.13e-02 2.92e-02 2.72e-02
        8.02e-03 -2.07e-03 -1.38e-02 2.14e-03 -5.24e-03 -8.40e-04 -8.33e-03
## 314
        -7.33e-04 5.21e-04 5.86e-05 -5.65e-04 1.37e-03 -8.66e-05 1.99e-03
## 316
## 318
       -6.02e-03 1.85e-03 4.01e-03 -1.33e-03 7.13e-03 5.54e-03 3.73e-03
## 319
        2.23e-03 6.35e-04 -1.27e-02 -1.65e-03 -7.06e-04 4.71e-03 -1.16e-03
## 320
        1.03e-02 -4.94e-05 -1.82e-02 -1.28e-03 -1.57e-03 -3.40e-03 1.18e-03
```

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-2.91e-03 4.66e-04 2.23e-04 9.20e-04 -8.03e-03 8.35e-03 -6.87e-03
        6.29e-03 -2.87e-04 3.23e-03 -1.71e-04 -9.69e-03 -1.06e-02 -1.15e-03
## 322
## 323
        7.42e-04 -5.77e-05 -2.58e-04 3.40e-04 -1.37e-03 1.52e-04 -3.09e-03
## 325
        6.52e-03 -1.01e-03 -3.20e-03 -1.72e-03 -3.64e-03 -4.09e-03 -9.40e-03
## 326
       -5.65e-02 1.19e-02 9.13e-02 -6.21e-03 4.28e-02 2.10e-02 1.21e-02
        8.39e-05 1.26e-04 -2.10e-04 -1.21e-04 4.94e-04 -1.21e-04 2.07e-04
## 328
        3.07e-03 -3.58e-04 -1.68e-03 2.26e-04 -2.52e-03 -2.46e-03 -1.39e-03
## 330
        6.13e-04 -5.64e-03 -3.81e-03 4.46e-03 -1.32e-02 4.16e-03 1.13e-02
## 331
## 334
       -9.62e-04 -1.46e-02 -2.19e-03 8.93e-03 5.92e-03 8.45e-05 5.94e-03
## 335
        5.52e-03 4.10e-03 -1.09e-02 -1.94e-03 4.20e-03 -1.11e-03 -2.35e-03
## 337
        1.52e-02 -1.79e-03 -6.01e-02 -1.73e-03 -1.11e-02 1.07e-02 6.71e-03
        6.89e-02 -5.79e-04 -9.46e-02 -2.04e-03 -3.98e-02 -2.72e-02 -2.67e-02
## 339
## 340
        6.17e-03 2.72e-03 2.07e-04 -1.34e-03 6.82e-04 -6.29e-03 -1.05e-02
## 341
       -8.29e-04 -1.72e-03 -5.51e-03 1.54e-03 -3.67e-03 6.71e-03 -4.46e-03
        4.15e-02 -5.39e-03 -3.98e-02 6.03e-03 -4.57e-02 -2.19e-02 -2.46e-02
## 342
## 344
        7.28e-04 -1.12e-03 1.16e-03 5.76e-04 -6.98e-03 -1.69e-04 -3.89e-03
        6.49e-03 -2.02e-03 -6.00e-03 2.28e-03 -1.76e-03 -3.89e-03 -1.83e-03
## 345
## 346
       -1.46e-02 5.85e-04 -1.80e-02 7.04e-04 2.44e-02 2.65e-02 4.21e-03
       -3.68e-03 1.00e-02 1.23e-03 -5.93e-03 3.57e-04 3.54e-03 3.33e-03
## 347
## 348
        8.24e-03 -7.01e-04 2.27e-02 2.03e-05 -2.20e-02 -2.35e-02 -5.22e-03
## 349
        4.96e-03 -6.62e-05 5.28e-03 -2.25e-05 -4.77e-03 -7.76e-03 6.93e-05
## 350
        4.69e-03 2.03e-04 7.91e-03 5.86e-04 -3.61e-04 -1.10e-02 -2.89e-03
        1.84e-02 5.42e-03 -3.04e-02 -5.02e-03 -1.21e-02 -7.69e-03 2.05e-03
## 351
## 353
       -3.93e-03 -6.15e-03 2.60e-03 4.58e-03 -5.14e-03 1.09e-02 -1.45e-04
## 355
        8.63e-03 7.16e-04 6.17e-03 -1.38e-04 5.06e-04 -1.68e-02 -2.30e-03
## 356
       -4.41e-03 -3.11e-04 2.79e-03 1.35e-04 1.57e-03 3.26e-03 1.32e-03
       -4.56e-03 -5.89e-03 -1.12e-03 6.60e-03 1.07e-02 7.37e-03 2.74e-03
## 357
## 358
        5.20e-06 -5.56e-06 -4.65e-05 -1.58e-06 6.98e-05 -3.67e-06 4.51e-05
        2.72e-04 -2.32e-04 -1.22e-03 3.37e-04 3.97e-04 3.10e-04 -7.95e-04
## 359
## 363
        1.58e-03 1.13e-03 -1.40e-03 -1.27e-03 1.38e-03 -2.08e-03 2.44e-03
        6.65e-03 -1.99e-03 -4.70e-03 1.40e-03 -2.26e-03 -4.66e-03 -2.02e-03
## 364
## 365
       -8.30e-04 1.65e-03 -2.31e-04 -8.44e-04 4.38e-04 3.17e-03 -8.97e-03
## 366
       -3.42e-03 3.32e-02 2.17e-03 -2.17e-02 5.41e-03 1.22e-04 -3.60e-03
       -2.79e-03 -6.16e-04 2.99e-03 5.50e-04 1.73e-03 1.74e-03 8.37e-04
## 367
        1.41e-02 -3.49e-02 -3.30e-04 3.14e-02 -9.28e-03 -1.72e-02 6.00e-04
## 368
       -3.03e-03 -2.40e-02 2.99e-03 2.46e-02 -1.99e-03 9.40e-03 -8.98e-03
## 371
       -9.03e-03 5.32e-03 -2.56e-02 -4.54e-03 5.00e-03 2.24e-02 1.04e-02
       -1.24e-02 2.27e-03 -1.23e-03 -1.16e-03 1.23e-02 1.26e-02 6.21e-03
## 374
       -2.60e-02 6.60e-03 -1.32e-02 -4.18e-03 1.91e-02
## 375
                                                         3.52e-02
       -2.24e-02 5.99e-03 3.19e-04 -3.39e-03 2.56e-02 1.98e-02 1.29e-02
## 379
## 381
       -3.49e-03 3.82e-03 -1.75e-02 -3.76e-03 5.36e-03 1.05e-02 1.44e-02
       -2.11e-03 4.73e-03 -1.34e-02 -4.29e-03 9.90e-03 6.92e-03 7.44e-03
## 382
        6.76e-04 -2.72e-04 3.67e-04 1.45e-04 -9.30e-04 -9.97e-04 -3.30e-04
## 384
        1.06e-02 6.53e-03 -1.57e-02 -6.18e-03 6.76e-03 -2.04e-03 -6.87e-04
## 386
## 387
        8.98e-03 -2.34e-02 1.77e-03 -1.55e-02 -2.57e-02 -7.53e-03 9.84e-04
       -4.30e-04 6.96e-03 -7.62e-03 -7.29e-03 1.09e-02 -3.04e-03 1.67e-02
## 388
## 389
       -1.32e-02 3.08e-03 -1.05e-03 -2.39e-03 6.71e-03 1.53e-02 6.92e-03
## 390
       -1.86e-02 4.86e-03 -9.08e-03 -3.37e-03 1.52e-02 2.31e-02 9.83e-03
## 392
       -1.92e-02 9.38e-03 -3.51e-02 -6.52e-03 1.09e-02 4.73e-02 1.93e-02
        5.97e-03 -7.51e-02 -3.66e-03 5.14e-02 9.31e-03 -9.76e-03 1.87e-03
## 393
       -1.26e-03 -4.11e-03 6.51e-04 2.03e-03 -1.22e-03 2.56e-03 -2.78e-03
## 394
## 395
       -1.06e-02 -3.74e-03 -8.70e-03 2.77e-03 1.19e-02 1.65e-02 7.61e-03
## 396
       -1.03e-02 -6.62e-03 -1.20e-02 5.06e-03 1.31e-03 2.23e-02 3.17e-03
        5.26e-04 -3.73e-03 -3.19e-03 2.89e-03 -4.94e-04 1.50e-03 -1.21e-03
## 397
```

```
-6.45e-03 3.49e-03 -7.50e-03 -2.03e-03 1.05e-02 1.16e-02 -1.72e-03
       -1.11e-02 4.60e-03 -8.83e-03 -3.68e-03 1.33e-02 1.48e-02 1.35e-02
## 400
        6.53e-03 -1.15e-03 -1.15e-03 -3.99e-04 -5.70e-03 -9.27e-03 -5.00e-03
## 402
       -2.57e-03 -5.98e-04 1.10e-03 1.68e-04 -1.97e-03 3.05e-03 2.11e-03
## 403
       -4.75e-04 -1.71e-04 5.96e-04 -6.68e-05 3.06e-03 -3.56e-04 2.05e-03
       -3.06e-03 -1.51e-03 5.43e-04 1.41e-03 -5.34e-04 4.41e-03 9.44e-04
## 404
        -6.96e-03 -4.30e-04 1.75e-03 -7.47e-05 4.86e-03 8.27e-03 -1.21e-03
## 405
         1.42e-03 4.10e-04 -3.21e-04 1.29e-04 -5.06e-04 -1.28e-03 -1.41e-03
## 406
## 410
         1.77e-02 1.39e-03 -2.89e-03 -1.01e-03 -1.89e-02 -1.92e-02 -1.35e-02
## 412
        1.18e-02 2.66e-03 -1.20e-02 4.29e-03 1.84e-02 -1.13e-02 7.13e-03
## 413
        -5.06e-03 -7.85e-03 8.50e-04 1.09e-02 2.96e-03 1.80e-03 1.47e-02
         3.48e-03 6.21e-04 -9.50e-04 -5.93e-04 -4.33e-03 -4.47e-03 -1.01e-03
## 414
## 415
        1.40e-02 2.38e-03 5.91e-03 3.32e-03 -1.68e-02 -1.91e-02 2.86e-03
## 416
        3.07e-02 -1.92e-03 -1.16e-02  4.58e-03 -1.78e-02 -3.24e-02 -2.62e-02
## 417
        1.24e-03 -9.15e-05 -1.04e-03 -7.21e-04 -2.75e-03 -1.88e-03 2.55e-04
        -2.64e-03 -1.68e-04 -6.54e-04 -8.17e-04 3.42e-03 1.07e-03 8.81e-03
## 418
        6.71e-03 4.54e-03 -3.43e-03 -4.07e-03 4.64e-03 -5.38e-03 -1.44e-03
## 420
## 421
         3.38e-04 - 3.33e-04 - 3.40e-04 \ 3.42e-05 - 5.20e-05 - 5.10e-04 \ 1.33e-03
        8.02e-02 1.23e-02 -4.83e-02 -5.52e-03 -3.29e-02 -8.03e-02 -2.17e-02
## 422
## 423
        2.84e-04 -2.42e-03 2.98e-03 -2.04e-04 -2.59e-03 -1.52e-03 -1.93e-03
## 425
        1.93e-02 2.00e-03 1.66e-02 1.33e-03 2.56e-03 -3.00e-02 -9.33e-03
## 426
        -7.87e-04 -6.73e-04 1.14e-03 -8.53e-05 -1.81e-03 4.25e-05 -5.90e-04
        2.59e-03 1.32e-03 3.88e-04 1.58e-03 -8.93e-03 3.82e-03 -1.67e-02
## 427
         5.93e-03 1.97e-03 2.12e-03 -3.16e-04 -3.58e-03 -6.97e-03 -1.08e-02
## 428
## 429
        8.90e-03 4.02e-04 -1.85e-02 -2.34e-03 -1.37e-03 -3.80e-03 5.87e-03
## 432
        8.79e-03 -1.28e-03 -1.36e-02 1.56e-03 -1.29e-03 -5.50e-03 5.12e-03
## 433
        6.57e-03 -1.12e-03 -7.76e-03 1.64e-03 1.61e-03 -4.47e-03 2.00e-04
## 434
        1.48e-02 -2.64e-03 3.40e-03 4.11e-03 -9.16e-03 -1.79e-02 -3.07e-03
## 438
        1.97e-05 3.01e-04 -2.09e-04 -2.92e-04 7.77e-04 -3.11e-04 6.78e-04
## 440
        -9.40e-03 -9.39e-03 3.06e-02 7.89e-03 1.27e-02 -5.86e-03 -2.34e-03
## 441
         1.65e-02 2.05e-03 1.76e-02 6.91e-04 -2.64e-02 -2.74e-02 -3.08e-02
## 443
        -1.04e-02 -3.89e-03 -1.26e-03 2.85e-03 1.85e-03 1.28e-02 1.30e-02
## 445
        -1.84e-02 -1.88e-02 3.95e-03 2.51e-02 8.93e-03
                                                         1.55e-02 3.51e-02
       -9.12e-04 1.28e-04 9.46e-05 -2.83e-04 1.01e-03 5.54e-04 8.73e-04
## 449
        -3.80e-03 1.37e-03 -3.56e-04 -2.71e-03
                                               1.22e-02
                                                         1.94e-03
## 451
       -1.71e-03 1.98e-03 -7.23e-04 -2.21e-03 1.42e-03 1.33e-03 6.27e-03
## 452
## 454
        1.33e-02 5.62e-03 4.95e-03 -5.54e-03 -1.49e-02 -2.71e-02 -1.04e-02
## 455
       -8.11e-03 -8.87e-03 1.18e-02 6.82e-03 2.94e-03 2.56e-03 1.05e-02
        1.05e-02 4.43e-03 -1.83e-02 -2.92e-03 -5.93e-02 1.87e-02 -1.78e-02
## 456
       -4.14e-02 -4.71e-02 5.12e-02 4.27e-02 -1.75e-02 3.05e-02 1.15e-02
## 458
        -4.75e-03 5.43e-03 3.66e-04 -3.57e-03 4.11e-03 6.32e-03 -8.41e-03
## 460
        -6.31e-03 7.99e-03 -3.87e-03 -5.34e-03 1.59e-03 1.49e-02 -1.52e-02
## 461
## 463
        4.22e-05 7.49e-04 3.00e-03 -4.87e-04 -1.09e-03 -7.08e-04 -2.32e-03
        1.31e-03 2.55e-02 6.07e-02 -2.17e-02 4.65e-03 -1.69e-02 -2.97e-02
## 464
## 466
        1.06e-02 -5.62e-02 1.07e-01 4.27e-02 -2.41e-02 -7.78e-02 1.21e-02
        7.06e-03 -3.45e-03 -2.41e-02 3.59e-03 4.01e-03 9.55e-03 -2.53e-03
## 467
## 468
         8.42e-04 1.89e-03 -3.38e-03 -1.75e-03 7.84e-04 -3.76e-04 6.51e-04
## 469
         5.79e-02 -3.15e-02 -3.91e-02 2.39e-02 -1.05e-02 -3.80e-02 1.34e-03
## 470
        -4.35e-04 5.63e-04 -4.82e-04 -3.01e-04 -8.75e-04 1.28e-03 -1.38e-03
## 471
         1.26e-02 3.40e-03 7.82e-03 -4.03e-03 -2.00e-02 -2.10e-02 -7.34e-03
## 473
        1.95e-02 9.91e-03 -1.68e-02 -1.07e-02 -6.69e-03 -1.24e-02 -8.35e-04
## 474
        8.07e-02 7.02e-03 5.12e-02 -1.28e-02 -1.03e-01 -1.40e-01 -5.11e-02
## 476
       -5.03e-02 1.24e-02 8.81e-02 -1.89e-02 1.12e-03 -3.54e-02 6.07e-02
## 477
        7.38e-03 9.08e-03 -3.21e-03 -8.16e-03 -2.51e-03 -2.81e-03 -4.71e-03
```

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2.01e-02 1.72e-02 2.08e-03 -1.94e-02 -4.58e-02 -5.08e-02 -1.26e-03
        4.21e-02 2.07e-02 -4.92e-02 -2.14e-02 -1.92e-02 -4.01e-02 -4.62e-03
## 480
## 481
        6.97e-03 1.55e-02 -1.72e-02 -1.44e-02 1.24e-02 -2.18e-02 7.49e-03
## 482
        1.31e-04 2.38e-04 -3.23e-04 -1.77e-04 5.16e-05 -2.73e-05 -2.41e-04
## 484
        3.40e-03 -3.76e-02 1.36e-02 3.43e-02 1.58e-03 -1.35e-02 -1.58e-04
        4.76e-03 1.40e-03 2.81e-03 -1.60e-03 -1.83e-03 -6.47e-03 -2.02e-03
## 485
        2.98e-03 -7.06e-04 -5.71e-04 4.13e-04 -5.39e-04 -2.72e-03 -4.10e-04
## 488
        1.79e-02 -1.46e-02 3.05e-03 1.27e-02 -2.28e-02 -2.00e-02 -1.36e-02
## 489
## 491
       -2.60e-02 2.13e-02 -7.79e-03 -1.62e-02 2.65e-02 2.99e-02 5.83e-03
## 494
        1.98e-02 6.34e-03 3.77e-02 -1.18e-02 -6.55e-02 -6.62e-02 1.66e-03
## 496
       -2.40e-02 2.11e-02 5.47e-03 -1.66e-02 3.54e-02 2.96e-02 2.85e-03
       -2.96e-02 1.25e-02 5.60e-02 -9.37e-03 3.55e-02 -5.06e-03 6.39e-03
## 497
## 498
        5.68e-03 -4.65e-03 3.94e-03 2.96e-03 -1.67e-03 -8.72e-03 3.01e-03
        1.59e-02 6.31e-03 -1.44e-02 -6.20e-03 -4.09e-03 -8.50e-03 -4.68e-03
## 499
       -4.23e-03 5.74e-03 -4.55e-03 -3.90e-03 4.69e-03 4.94e-03 -2.48e-03
## 500
## 502
       -4.12e-03 3.95e-04 -1.13e-04 -8.04e-04 -5.96e-04 5.45e-03 5.47e-03
       -1.56e-03 -1.20e-03 2.29e-03 8.58e-04 2.09e-03 1.37e-03 -4.80e-03
## 504
       -1.26e-02 -1.71e-03 1.15e-02 1.60e-03 5.53e-03 1.20e-02 3.16e-03
       -1.11e-02 -1.11e-02 -9.49e-03 1.28e-02 1.20e-02 1.97e-02 2.05e-02
## 507
## 508
       -1.50e-02 -6.38e-03 -1.72e-03 7.43e-03 5.97e-03 1.70e-02 -4.51e-03
## 510
        2.07e-02 3.82e-03 -4.96e-02 -2.48e-03 6.10e-04 2.41e-02 -3.67e-02
       -1.76e-04 8.51e-05 9.00e-04 -1.29e-04 -5.63e-04 -3.75e-04 2.23e-04
## 511
       -8.04e-03 -2.69e-04 8.87e-03 2.04e-03 -2.54e-03 5.60e-03 -5.67e-04
## 513
        1.38e-02 -1.52e-02 7.22e-02 2.12e-02 -4.36e-02 -5.52e-02 1.24e-02
## 514
## 516
       -1.44e-03 -5.59e-04 6.30e-04 4.75e-04 -4.88e-04 2.28e-03 -4.92e-04
## 517
        3.84e-02 5.47e-03 -5.76e-03 -3.29e-03 -1.05e-02 -6.15e-02 3.77e-03
       -2.17e-02 7.42e-04 -1.95e-02 -7.44e-03 4.71e-02 2.03e-02 3.03e-02
## 518
        1.31e-02 2.89e-03 1.76e-03 -1.44e-03 -9.96e-03 -2.19e-02 3.25e-03
## 519
       -6.26e-03 -6.52e-04 -2.94e-02 -2.44e-03 4.04e-02 1.68e-02 2.61e-02
## 520
## 521
       -1.10e-02 -4.06e-03 1.28e-03 5.36e-03 7.70e-03 1.64e-02 -3.29e-03
## 522
        3.61e-02 6.03e-03 -8.08e-02 -1.92e-02 8.99e-02 -5.47e-02 3.12e-02
## 523
       -3.42e-02 2.95e-03 -1.34e-02 -3.24e-03 6.04e-02 6.49e-02 -9.52e-03
## 527
       -4.53e-04 3.27e-06 3.80e-05 -5.73e-05
                                              3.43e-04
                                                        4.51e-04 3.41e-04
       -5.22e-03 2.83e-03 4.69e-03 -2.89e-03 9.44e-03 3.22e-03 5.58e-03
## 531
## 532
       -3.32e-04 -1.89e-04 3.96e-04 1.65e-04 -1.35e-04
                                                        2.87e-04 -4.06e-05
        4.51e-03 2.65e-04 -1.02e-02 -7.33e-05 2.22e-03 8.47e-03 -1.48e-02
## 535
## 536
        4.38e-03 2.24e-03 -5.78e-03 -2.39e-03 8.52e-05 -9.64e-03 1.84e-02
## 538
       -6.00e-04 2.22e-03 8.51e-04 -2.62e-03 -9.08e-03 -2.82e-03 4.28e-03
       -3.23e-04 9.27e-05 5.65e-04 -1.93e-04 8.74e-04 -1.95e-04 2.91e-04
## 541
       -2.93e-03 -2.11e-03 -5.42e-03 2.19e-03 1.10e-02 3.75e-03 2.66e-03
## 542
        3.81e-03 -3.52e-03 3.20e-03 4.53e-03 3.58e-02 -8.49e-03 -1.12e-02
## 544
       -1.83e-03 -3.15e-04 2.25e-03 7.20e-04 -7.04e-04 2.48e-03 8.07e-04
## 546
## 548
        3.33e-02 1.83e-03 -3.26e-02 -2.69e-03 -1.70e-02 -7.95e-03 -3.53e-02
       -6.60e-03 -1.04e-02 -5.91e-03 9.08e-03 3.84e-02 -8.50e-03 1.94e-03
## 549
## 550
       -2.34e-02 -1.71e-02 3.18e-02 1.70e-02 -1.63e-03 1.64e-02 1.29e-03
       -1.11e-02 -2.21e-04 -1.51e-02 3.57e-03 1.88e-02 3.48e-02 -1.19e-02
## 551
## 553
        1.93e-02 -2.64e-03 -1.97e-02 -1.30e-03 -4.95e-03 -1.79e-02 -1.61e-02
## 556
        1.91e-02 6.95e-04 1.87e-02 -7.75e-03 -6.46e-02 -5.27e-02 1.76e-02
## 558
       -8.77e-05 2.46e-04 8.14e-04 2.86e-05 -3.32e-04 -5.71e-04 -3.53e-04
       -3.23e-03 -8.94e-04 -2.24e-02 4.77e-03 5.38e-02 3.05e-02 -1.02e-02
## 559
       -1.90e-03 6.46e-04 -5.75e-03 -1.68e-03 1.42e-02 4.60e-03 -1.71e-03
## 560
## 561
        1.68e-03 -4.05e-03 9.22e-03 5.20e-03 2.40e-03 2.50e-03 -1.69e-02
## 564
       -8.69e-04 -1.51e-02 4.06e-02 1.53e-02 1.45e-02 -3.34e-02 -3.98e-02
       -4.11e-03 -1.17e-03 8.99e-04 1.59e-03 4.05e-03 7.42e-03 -6.00e-03
## 567
```

```
-8.01e-03 -9.26e-03 -3.25e-03 1.29e-02 3.14e-02 1.75e-02 -2.04e-02
       -1.52e-03 8.95e-04 -3.08e-04 -8.51e-04 2.69e-03 1.14e-03 1.07e-03
## 572
       -5.88e-03 -1.06e-03 1.32e-04 2.21e-03 2.57e-02 2.33e-03 8.69e-03
       -4.60e-03 2.94e-04 7.39e-03 -1.02e-03 -6.65e-04 -2.96e-04 8.58e-03
## 576
## 581
       -1.23e-03 -4.18e-03 -3.80e-04 4.28e-03 9.94e-03 -1.19e-03 8.83e-03
        5.07e-03 -6.46e-03 -2.64e-04 6.30e-03 6.81e-05 -2.09e-05 -1.51e-02
## 584
       -1.01e-04 3.92e-04 6.39e-04 -1.43e-03 2.88e-04 -1.91e-04 -4.83e-04
## 585
        2.31e-03 -1.50e-03 -3.29e-03 1.83e-03 -3.70e-03 2.74e-03 -6.63e-03
## 587
## 588
        3.01e-06 8.07e-04 1.43e-02 1.76e-03 1.23e-02 -1.09e-02 -6.39e-03
## 591
       -6.03e-04
                 1.10e-03 3.70e-05 1.57e-04 -3.12e-04 2.74e-04 1.82e-03
## 592
       -1.17e-03 2.42e-04 3.38e-04 -6.08e-05 4.17e-04 2.02e-03 2.98e-04
                            8.50e-03 -4.61e-02 -5.60e-02 -1.31e-02 -2.53e-02
## 594
        2.40e-02 2.15e-02
## 595
        1.84e-04 6.88e-03
                            3.29e-03 -3.64e-03 1.45e-02 1.53e-03 8.40e-04
## 597
       -1.97e-02 1.18e-02 7.37e-02 -6.82e-03 1.91e-02 3.10e-02 -2.53e-02
       -6.82e-02 1.02e-02 3.48e-02 -2.98e-03 3.95e-02 6.24e-02 1.61e-02
## 598
## 599
        9.79e-03
                  2.58e-02 5.60e-03 -4.55e-02 -2.42e-02 -4.83e-03 -1.33e-05
        3.35e-02 2.60e-03 -4.13e-03 -4.15e-04 -3.79e-02 -2.62e-02 -3.38e-02
## 600
## 601
        1.03e-03 -5.17e-03 -2.23e-03 1.65e-03 2.36e-03 -4.38e-03 2.04e-02
        2.24e-02 3.53e-03 2.68e-02 -5.72e-05 -6.08e-02 -3.44e-02 -4.81e-02
## 602
## 604
        2.00e-02 4.01e-03 1.67e-02 -5.36e-03 -3.43e-02 -3.41e-02 -1.56e-02
## 605
       -1.81e-02 6.68e-03 3.31e-02 -1.83e-03 -1.66e-03 -1.06e-03 -1.69e-02
       -2.80e-02 -7.78e-03 3.29e-02 6.05e-03 2.74e-02 1.54e-02 2.02e-02
## 606
       -5.99e-03 1.09e-02 -3.06e-02 -6.79e-03 1.88e-02 2.10e-02 1.27e-02
## 607
        2.41e-02 6.48e-03 -2.96e-02 -6.98e-03 -1.87e-02 -1.35e-02 -4.21e-03
## 609
## 610
        1.41e-02 9.49e-03 -8.98e-03 -2.52e-03 -2.31e-02 -6.66e-03 -4.42e-02
## 611
        4.04e-02 1.14e-02 -1.69e-02 -9.66e-03 -2.62e-02 -3.32e-02 -2.57e-02
       -2.42e-03 -1.43e-03 -7.71e-04 3.10e-04 1.01e-02 1.01e-03 8.28e-03
## 612
## 613
       -3.45e-02 9.07e-03 -9.04e-03 -7.29e-03 -1.66e-02 4.96e-02 1.45e-02
        1.53e-03 -7.05e-04 -1.86e-04 6.75e-04 -1.73e-03 -1.38e-03 -1.51e-03
## 615
## 616
       -1.81e-02 8.18e-03 -2.36e-02 -5.54e-03 -1.27e-02 4.34e-02 8.42e-03
        1.01e-02 -4.48e-03 -8.87e-03 2.96e-03 -3.70e-03 -2.76e-03 5.00e-04
## 619
## 620
       -1.20e-03 4.72e-04 3.96e-05 -2.25e-05 -1.36e-03 2.22e-03 -1.61e-03
## 621
        8.72e-02 4.33e-02 -9.82e-02 -4.26e-02 -8.72e-03 -1.03e-01 -5.36e-03
## 623
        2.63e-04 1.48e-04 -1.23e-04 -1.15e-04 -1.72e-04 -1.95e-04 -2.43e-04
## 624
       -2.47e-03 5.73e-03 -9.43e-03 -6.02e-03 -7.63e-03 5.58e-03 8.00e-03
        6.15e-03 1.74e-02 6.02e-03 -1.77e-02 -1.78e-02 -2.84e-02 4.13e-03
## 625
## 626
        7.55e-03 1.48e-03 1.05e-02 -1.81e-03 -2.83e-02 -1.60e-02 -9.26e-03
## 627
        1.72e-02 -6.47e-02 -5.79e-02 5.03e-02 -3.94e-02 -7.59e-02 4.67e-02
        1.45e-03 -1.09e-03 2.00e-03 7.79e-04 -3.11e-04 -3.15e-03 2.38e-03
## 628
       -1.10e-02 1.32e-02 -1.70e-02 -9.95e-03 1.43e-02 1.87e-02 4.64e-03
## 629
        7.81e-02 2.22e-02 -4.76e-02 -2.70e-02 -6.61e-02 -8.22e-02 -1.38e-02
## 630
        5.40e-03 1.29e-02 -2.90e-02 -1.43e-02 2.44e-04 -7.63e-03 1.88e-02
## 631
## 632
       -1.08e-04 7.19e-03 5.40e-04 -7.92e-03 3.66e-03 -8.43e-03 1.09e-02
        1.95e-02 8.18e-03 9.77e-03 -9.55e-03 -2.88e-02 -3.10e-02 -9.88e-03
## 633
## 634
       -6.19e-03 2.32e-04 1.19e-02 -1.75e-03 -4.69e-03 -8.76e-03 9.21e-03
       -1.24e-02 -1.79e-02 2.66e-02 1.82e-02 -5.62e-03 1.26e-02 -1.41e-02
## 636
## 637
        3.61e-03 -3.96e-03 -4.05e-03 3.95e-03 -7.94e-03 -1.35e-03 -5.92e-03
## 640
       -8.25e-03 -4.88e-03 5.88e-03 5.27e-03 4.06e-03 1.06e-02 2.22e-04
## 641
        1.58e-02 2.82e-03 5.47e-03 -3.98e-03 -1.84e-02 -2.96e-02 -6.13e-03
       -2.46e-02 3.23e-02 -7.71e-03 -2.54e-02 3.25e-02 4.55e-02 -2.88e-03
## 642
       -1.28e-02 3.53e-03 9.68e-03 -3.40e-03 1.47e-02 5.81e-03 1.28e-02
## 644
## 645
       -2.11e-02 1.19e-02 3.58e-02 -1.10e-02 2.10e-02 -4.76e-03 1.29e-02
## 646
        4.10e-03 2.00e-03 -7.65e-04 -2.14e-03 -4.81e-03 -5.74e-03 -1.59e-03
       -1.19e-01 2.28e-02 7.82e-02 -2.12e-02 6.67e-02 4.46e-02 9.25e-02
## 650
```

```
-1.47e-03 2.70e-03 -5.89e-04 -2.48e-03 3.30e-03 4.50e-04 2.88e-03
        5.34e-04 9.32e-04 -1.75e-03 -8.56e-04 2.55e-04 5.73e-05 2.96e-04
## 652
## 653
       -8.26e-03 -3.85e-03 9.57e-03 7.38e-03 6.63e-03 -1.29e-03 2.73e-02
        8.67e-03 4.61e-03 5.22e-03 -4.88e-03 -1.10e-02 -1.81e-02 -2.75e-03
## 654
## 655
       -1.59e-02 9.35e-03
                           7.22e-03 -8.40e-03 1.47e-02 6.77e-03 1.32e-02
        1.27e-02 7.41e-03 4.86e-02 -8.05e-03 -2.73e-02 -4.51e-02 -1.47e-02
## 656
       -6.46e-05 4.55e-03 -3.87e-03 -4.10e-03 3.36e-03 -5.93e-04 2.31e-03
## 659
        5.51e-02 1.17e-02 -1.32e-04 -1.17e-02 -7.33e-02 -7.68e-02 -4.06e-02
## 660
## 661
       -1.74e-02 2.59e-02 -3.26e-02 -2.59e-02 1.43e-02 8.19e-05 4.49e-02
## 662
       -1.08e-02 -8.16e-03 1.06e-04 7.88e-03 -2.34e-03 3.18e-02 -2.39e-03
## 663
       -1.22e-02 8.09e-03 1.17e-02 -9.86e-03 -6.79e-04 -2.93e-03 2.02e-02
       -4.51e-03 1.09e-02 -1.24e-02 -9.91e-03 7.33e-03 1.56e-02 6.44e-03
## 664
## 665
        6.04e-04 -1.11e-03 -1.31e-03 8.93e-04 -1.10e-03 1.52e-03 2.51e-04
## 666
       -1.55e-02 -3.05e-02 1.62e-02 3.50e-02 2.05e-02 5.19e-02 -3.39e-02
        1.47e-03 2.84e-03 -5.58e-03 -3.07e-03 -1.75e-04 4.69e-04 3.60e-03
## 667
## 668
        9.96e-04 5.96e-04 2.28e-04 -6.69e-04 -1.39e-03 -1.65e-03 -3.90e-04
        5.79e-03 8.55e-03 -6.03e-03 -7.43e-03 1.45e-03 -2.20e-03 -2.63e-03
## 669
## 670
        5.52e-02 -1.12e-02 -5.33e-02 1.34e-02 -3.47e-02 -9.84e-03 -5.56e-02
        2.36e-02 -3.91e-03 -6.64e-03 3.33e-03 -1.06e-02 -2.01e-02 -1.59e-02
## 671
## 672
        2.00e-02 1.95e-02 -1.09e-02 -1.63e-02 6.22e-03 -9.46e-03 -1.54e-02
## 675
        1.72e-02 6.35e-03 -1.05e-02 -6.89e-03 -1.70e-02 -1.85e-02 -4.41e-03
        1.85e-03 -2.16e-03 -9.68e-04 1.88e-03 8.25e-04 -3.80e-03 5.70e-03
## 676
       -1.43e-04 6.46e-03 -1.02e-03 -6.45e-03 7.30e-03 -9.03e-03 8.96e-03
## 679
       -2.66e-02 2.21e-02 -2.76e-03 -1.84e-02 2.48e-03 2.36e-02
## 680
                                                                   1.53e-02
## 681
       -3.04e-02 1.15e-02 2.34e-02 -1.21e-02 1.92e-02 1.29e-02 3.03e-02
## 682
        3.90e-04 -7.49e-03 -1.07e-02 2.25e-03 -3.39e-03 -5.57e-03 2.32e-02
       -1.14e-02 6.87e-03 7.76e-03 -5.25e-03 1.34e-02 8.66e-03 3.90e-03
## 684
## 686
        1.31e-03 -6.83e-04 -5.47e-03 9.00e-04 3.21e-04 2.99e-03 -1.13e-03
        1.02e-02 -7.24e-03 -1.21e-02 6.31e-03 -9.33e-04 7.90e-03 -2.19e-03
## 687
## 690
        1.41e-02 -1.93e-02 -1.16e-02 1.85e-02 -2.20e-02 5.84e-03 -1.69e-02
        6.28e-04 -5.99e-04 -6.01e-04 6.12e-04 -2.49e-04 9.05e-04 -1.02e-03
## 691
## 692
       -2.59e-02 -1.32e-02 1.13e-02 1.24e-02 2.97e-02 2.82e-02 1.56e-02
## 693
       -7.16e-03 -3.41e-03 9.16e-03 3.61e-03 9.80e-03 7.49e-03 1.22e-03
       -3.28e-02 1.37e-02 -2.51e-02 -1.43e-02 3.44e-02
## 694
                                                        3.21e-02 4.80e-02
## 695
       -1.28e-02 -2.32e-02 1.25e-02 1.93e-02 -1.84e-02
                                                        6.93e-03 3.13e-02
        5.13e-03 -9.93e-03 -4.14e-03 8.53e-03 -1.30e-02 3.74e-03 -2.87e-03
## 696
## 697
       -5.08e-03 2.55e-03 3.54e-03 -1.75e-03 -6.97e-04 4.79e-03 -5.81e-04
       -6.14e-03 -1.90e-03 1.09e-02 9.49e-03 2.93e-02 -1.72e-02 4.37e-02
## 698
       -1.64e-02 -2.63e-03 -4.80e-03 4.03e-03 1.92e-02 2.97e-02 -9.43e-03
## 699
        1.17e-02 -4.52e-03 -8.77e-03 4.20e-03 1.08e-02 -1.08e-02 -1.10e-02
## 700
        2.42e-03 -2.57e-03 5.14e-03 2.62e-03 -4.56e-03 -3.22e-03 -6.48e-03
## 701
## 702
        9.63e-05 -4.94e-04 -7.38e-03 -3.42e-05 6.73e-03 4.81e-03 -1.99e-03
## 703
        7.38e-03 1.55e-03 -2.50e-03 -5.48e-04 -1.47e-03 -8.68e-03 -3.91e-03
## 705
        9.65e-04 1.43e-03 -1.87e-03 -1.06e-03 6.61e-04 -4.17e-04 3.78e-04
## 706
       -6.42e-03 -6.54e-04 1.30e-03 -1.14e-03 5.40e-03 1.27e-02 -9.81e-03
       -1.18e-03 -8.94e-04 8.32e-04 3.67e-04 -2.48e-03 3.65e-03 -4.27e-03
## 707
## 709
       -7.42e-04 -2.67e-04 2.13e-03 5.39e-04 1.21e-03 1.30e-03 -2.40e-03
## 711
       -3.87e-03 -1.42e-04 2.97e-03 2.27e-04 4.67e-03 2.47e-03 1.51e-03
## 712
        4.39e-04 -1.33e-03 -4.23e-04 1.01e-03 -1.11e-04 -3.46e-05 -1.34e-03
## 715
        8.25e-03 9.08e-04 -2.17e-03 -3.19e-04 -4.17e-03 -7.53e-03 5.24e-04
       -1.18e-02 -1.58e-03 1.55e-02 2.21e-03 8.94e-03 8.51e-03 -3.49e-03
## 716
## 719
       -3.20e-02 -2.79e-03 2.16e-02 4.41e-03 3.03e-02 3.22e-02 -9.75e-04
## 721
       -2.45e-02 -6.72e-03 1.17e-02 8.79e-03 3.12e-02 3.68e-02 -1.12e-02
## 722 -2.63e-02 -1.03e-02 3.99e-02 1.05e-02 1.03e-02 1.65e-02 -7.69e-03
```

```
3.21e-03 9.04e-05 1.10e-04 -5.78e-05 -2.81e-03 -4.19e-03 2.62e-03
                 1.77e-03 -6.51e-03 -2.01e-03 -2.49e-03 -3.62e-03 3.39e-03
## 724
        3.83e-03
## 726
       -1.20e-02 6.39e-03 7.11e-03 -3.84e-03 1.45e-02 8.39e-03 1.50e-02
## 729
        7.78e-04 7.70e-05 -1.17e-04 -1.16e-04 -7.19e-04 -7.39e-04 -9.17e-05
## 730
       -2.90e-02 -5.65e-03 3.01e-02 6.84e-03 2.41e-02 2.33e-02 7.03e-04
        1.14e-02 -5.16e-03 -8.61e-03 4.11e-03 -4.48e-03 -9.60e-03 -7.36e-03
## 731
        8.37e-03 1.05e-03 -2.95e-03 -7.76e-04 -3.01e-03 -9.55e-03 -4.99e-03
## 732
        2.86e-03 -1.40e-03 -7.35e-04 1.38e-03 -1.55e-03 -8.06e-04 -5.72e-03
## 733
## 735
       -3.94e-03 -1.23e-03 5.90e-03
                                     1.73e-03 3.02e-03 3.19e-03 -2.91e-03
## 737
       -2.34e-02 -4.46e-03 3.34e-02 6.25e-03 3.34e-02 2.02e-02 -4.23e-03
## 738
        8.86e-05 -1.04e-02 2.05e-02
                                     9.46e-03 -7.76e-03 5.44e-04 -1.64e-02
                                     6.51e-04 -2.92e-03 1.15e-04 -2.53e-03
## 739
        1.79e-03 -1.24e-03 -1.18e-03
## 741
       -3.25e-02 -1.82e-03 1.38e-02 2.90e-03 1.75e-02 3.15e-02 7.10e-03
## 742
       -1.79e-02 -1.71e-02 -1.40e-03 1.45e-02 -1.09e-02 2.23e-02 1.43e-02
        8.67e-03 2.01e-03 -1.69e-02 -4.93e-03 -2.30e-02 -8.72e-03 1.94e-02
## 744
## 745
       -2.32e-02 6.85e-04 4.01e-04 -2.96e-03 1.67e-02 3.31e-02 1.29e-03
## 749
       -5.18e-02 -4.06e-03 3.10e-02 8.81e-03 4.26e-02 7.53e-02 -2.55e-02
## 750
       -2.98e-03 -1.40e-03 -2.52e-05 -1.65e-04 1.75e-02 -1.06e-04 1.36e-02
        4.44e-05 2.88e-05 -6.29e-05 -2.84e-05
## 753
                                              1.99e-05 -3.43e-05 1.11e-05
## 754
       -7.89e-03 -1.03e-02 8.20e-04 9.28e-03
                                               4.86e-03
                                                        7.98e-03 1.73e-02
## 756
       -2.30e-02 -7.72e-03
                           1.58e-02 1.02e-02 2.32e-02 3.79e-02 -2.16e-02
       -3.39e-03 1.92e-02 1.76e-03 1.85e-03
                                              3.03e-02 -1.89e-02 2.62e-02
## 758
                            2.74e-02 1.80e-02
                                               4.45e-03 2.35e-02 -4.95e-02
## 759
       -6.55e-03 -1.22e-02
## 760
       -4.09e-02 -1.07e-02
                            4.26e-02 1.18e-02
                                               1.54e-02 4.30e-02 -1.13e-02
## 761
       -6.59e-03 2.32e-03 4.08e-03 -1.53e-03 7.39e-03 5.48e-03 3.81e-03
## 762
        9.49e-04 3.75e-03 -4.92e-03 -4.07e-03 4.00e-03 -7.74e-04 -1.74e-03
## 763
       -2.57e-03 -4.64e-03
                            6.36e-03 3.31e-03 -1.46e-02 3.32e-03 -1.17e-02
## 764
        8.57e-03 -8.69e-03
                            2.38e-03 6.05e-03 -2.74e-02 -1.21e-02 -3.00e-02
       -2.37e-02 -2.87e-03
                           2.28e-02 4.49e-03 2.23e-02 2.11e-02 -3.02e-03
## 766
## 768
        9.74e-03 -6.04e-03 4.37e-03 6.62e-03 4.60e-04 -1.42e-02 -1.91e-02
                                               7.25e-03 -4.38e-04 8.46e-03
## 769
       -1.30e-03 -8.56e-04 1.48e-03 2.87e-04
## 771
       -1.85e-02 -5.19e-04 -4.13e-03 -4.19e-03
                                              1.90e-02 2.02e-02 1.74e-02
## 773
       -4.88e-02 -1.45e-02 9.09e-03 9.36e-03 2.39e-02 4.72e-02 7.52e-02
       -6.51e-03 -8.51e-03 6.00e-03 6.49e-03 -5.60e-03 6.86e-03 1.55e-02
## 774
## 775
        1.50e-01 -2.77e-03 -9.03e-02 4.97e-03 -1.66e-02 -1.17e-01 -1.30e-01
        1.83e-02 -9.82e-03 -1.11e-02 1.07e-02 -2.15e-02 -1.24e-02 -2.48e-02
## 776
## 777
        1.17e-02 5.01e-03 -2.68e-02 -3.90e-03 5.73e-03 -8.05e-03 2.17e-02
       -1.26e-02 -6.91e-03 1.72e-03 6.02e-03 1.69e-02 9.36e-03 7.76e-03
## 778
       -6.25e-03 9.87e-04 5.71e-03 -1.18e-03 1.40e-03 3.24e-03
## 781
       -7.25e-04 8.76e-04 2.39e-03 -7.31e-04 1.25e-03 -1.56e-03 2.72e-04
## 782
       -8.24e-02 -1.36e-02 1.50e-01 -5.20e-03 -6.80e-02 -4.51e-02 1.20e-01
## 783
## 785
        5.04e-03 -2.10e-03 -5.52e-03 1.67e-03 -6.03e-03 -1.82e-03 -2.73e-03
## 787
       -7.00e-02 7.12e-05 5.29e-02 -5.78e-06 -2.39e-03 6.89e-02 3.42e-02
## 788
        3.47e-03 3.73e-03 -2.31e-03 -4.24e-03 2.96e-03 -3.98e-03 -4.52e-04
## 790
       -4.64e-03 -1.79e-03 -8.11e-03 6.43e-04 3.96e-03 1.10e-02 9.63e-03
        2.58e-03 -5.80e-03 -3.65e-03 6.45e-03 -7.82e-03 1.12e-03 -2.98e-04
## 793
## 794
       -3.42e-03 1.09e-02 6.67e-03 -6.72e-03 -4.38e-02 1.66e-02 -3.62e-02
## 795
        2.18e-02 -3.50e-03 -1.68e-02 -1.21e-03 -2.50e-03 -1.90e-02 1.34e-02
## 797
        8.47e-03 -1.90e-03 -5.28e-03 2.03e-03 1.35e-02 -1.19e-03 -3.12e-03
## 799
       -1.94e-03 3.84e-03 -6.80e-03 -2.58e-03 3.99e-03 4.47e-03 1.05e-03
       -1.60e-03 1.08e-04 3.19e-03 -1.36e-04 1.19e-03 -2.24e-04 6.58e-04
## 801
## 802
       -1.88e-03 -2.88e-04 -1.71e-04 6.04e-04 -3.31e-03 -1.04e-03 7.54e-03
## 803
        1.23e-01 4.19e-02 -9.93e-02 -4.38e-02 -2.68e-02 -1.16e-01 -7.57e-03
       -1.16e-03 1.85e-03 -1.08e-02 5.64e-03 -1.86e-02 3.36e-02 -2.88e-03
## 805
```

```
2.33e-03 8.72e-04 1.68e-03 -6.61e-04 9.34e-04 -5.69e-03 4.10e-03
       -1.35e-03 1.87e-03 -9.72e-03 -1.35e-03 -4.27e-04 5.30e-03 5.57e-03
## 810
## 813
        4.41e-03 -1.10e-03 6.62e-03 8.10e-04 6.32e-03 -2.08e-03 -2.10e-02
       -5.90e-05 -1.35e-04 6.18e-04 7.88e-05 -2.73e-04 -2.51e-04 -4.55e-04
## 814
## 815
        3.41e-03 -2.54e-03
                            1.30e-02 1.62e-03 -3.03e-03 -1.00e-02 -7.52e-03
       -6.31e-03 -1.25e-03 1.37e-02 9.82e-04 1.62e-02 2.58e-03 -5.06e-03
## 816
        1.23e-02 8.30e-03 -1.48e-04 -5.60e-03 -6.58e-03 -1.47e-02 -5.03e-03
## 817
       -4.10e-03 -1.93e-03 7.89e-03 9.67e-04 4.17e-03 -3.89e-04 -2.43e-03
## 818
## 819
        2.59e-03 -4.37e-03 6.11e-03 2.69e-03 -2.00e-03 -9.50e-03 8.66e-03
## 820
        3.34e-03 -8.71e-04 9.89e-04 9.45e-04 -1.43e-03 -1.27e-03 -7.75e-03
## 823
        1.30e-03 -3.00e-03 4.52e-03 2.85e-03 -4.25e-03 -3.23e-03 -1.42e-03
        1.47e-02 -4.38e-03 6.25e-04 7.35e-03 -4.24e-02 -8.50e-03 -1.85e-02
## 826
## 828
       -5.62e-03 2.52e-04 9.21e-03 -1.98e-03 2.08e-02 -6.13e-03 1.33e-02
## 829
       -2.58e-03 2.24e-03 -8.18e-04 -2.02e-03 1.15e-03 6.52e-04 7.12e-03
       -1.03e-02 4.34e-03 -1.25e-02 -2.00e-03 9.04e-03 1.36e-02 1.79e-02
## 830
## 831
        -3.75e-03 -5.67e-04 -2.49e-03 8.69e-04 3.89e-04 4.89e-03 4.23e-03
        5.86e-03 -5.13e-04 -9.05e-04 8.01e-04 -1.06e-02 -7.53e-03 -6.66e-04
## 833
## 836
        8.87e-03 -4.82e-03 5.93e-04 2.36e-03 -1.58e-02 -9.06e-03 -5.57e-03
        1.96e-03 1.73e-04 -8.30e-04 -6.20e-04 -1.22e-03 -1.46e-03 -3.21e-03
## 837
## 838
        2.19e-05 -1.14e-05 1.55e-05 4.16e-06 -4.79e-05 -2.30e-05 -3.61e-05
## 839
        4.25e-03 -1.13e-03 -2.58e-04 -4.56e-04 1.10e-03 -4.87e-03 -3.21e-03
       -1.24e-03 1.79e-04 -3.37e-04 1.55e-04 1.27e-03 1.96e-03 2.07e-03
## 842
       -6.09e-03 -4.78e-05 7.32e-03 -1.39e-03 1.03e-02 2.16e-03 5.39e-03
## 844
       -8.05e-04 -1.69e-03 1.44e-02 2.99e-03 1.52e-02 -1.70e-03 -1.39e-02
## 846
## 847
       -8.09e-03 -5.80e-04 5.81e-03 5.62e-04 2.47e-02 1.60e-02 -1.75e-02
## 849
       -1.63e-02 -1.17e-02 1.34e-02 8.58e-03 -8.39e-03 1.72e-02 -1.98e-03
        1.32e-03 -8.91e-04
                            6.11e-03 -3.40e-04 6.72e-03 -6.00e-03 -3.21e-03
## 851
## 854
       -4.95e-02 4.18e-03
                            2.24e-02 8.61e-03 -1.33e-02 7.38e-02 -1.20e-02
       -2.40e-02 -2.10e-03 3.23e-02 2.49e-03 4.69e-02 1.36e-02 -4.34e-03
## 855
## 857
       -4.23e-03 2.18e-04 2.83e-03 -9.05e-06 5.68e-03 3.50e-03 1.89e-03
## 860
        5.88e-03 2.23e-03 -6.01e-03 -8.02e-04 -1.31e-03 -2.57e-03 -8.92e-03
## 863
        5.45e-03 -4.51e-03 -1.44e-03 2.43e-03 -2.59e-03 -6.00e-03 6.18e-03
## 866
       -8.52e-03 -1.77e-03 5.59e-03 1.11e-03 6.70e-03 5.35e-03 4.95e-03
        5.87e-04 -7.92e-03 2.16e-03 3.87e-03 -5.86e-03 -3.13e-03 1.61e-02
## 867
## 868
        2.84e-03 -2.37e-03
                            2.17e-03 1.74e-03 -2.61e-03 -3.02e-03 -5.13e-03
       -9.33e-03 -3.54e-03 8.01e-03 1.62e-03 6.13e-03 4.92e-03 1.30e-02
## 869
## 870
       -3.08e-02 -9.25e-03 3.74e-02 4.85e-03 1.92e-02 8.67e-03 2.27e-02
       -1.53e-03 5.00e-04 5.10e-03 -6.33e-04 -9.67e-04 -1.36e-03 4.91e-03
## 871
       -2.65e-02 2.99e-03 -3.81e-02 -1.30e-03 2.27e-02 5.21e-02
## 872
        1.03e-02 3.04e-03 -1.21e-03 1.50e-03 -2.86e-02 -7.19e-03 2.07e-03
## 873
        5.99e-03 -2.03e-03 -3.16e-03 8.85e-04 -1.13e-02 -2.53e-03 -2.90e-03
## 875
       -3.90e-03 1.94e-03 -4.16e-05 -1.11e-03 7.02e-03 1.59e-03 8.47e-03
## 876
## 877
        8.28e-03 -5.50e-03 4.85e-04 4.37e-03 -1.94e-02 -5.19e-03 4.61e-03
## 878
        1.20e-02 -6.70e-03 7.47e-03 5.69e-03 -2.24e-02 -1.26e-02 -9.96e-03
## 879
        4.97e-02 -1.35e-02 -2.68e-02 9.26e-03 -6.33e-02 -3.31e-02 -2.35e-02
       -3.17e-05 1.74e-03 -2.99e-03 6.07e-06 4.60e-03 1.12e-03 2.24e-03
## 880
## 881
        3.31e-04 -3.54e-04 -4.43e-04 2.38e-04 -1.17e-03 8.56e-05 5.05e-04
## 882
       -1.67e-02 7.53e-03 1.32e-02 -7.49e-03 2.25e-02 5.18e-03 2.15e-02
## 883
       -2.30e-04 -1.26e-04 4.70e-04 8.38e-05 -1.25e-03 2.63e-04 3.39e-04
        1.45e-03 -4.87e-04 -2.11e-04 2.08e-05 -1.56e-03 -1.39e-03 -2.59e-04
## 885
       -8.93e-03 6.24e-03 2.66e-02 -2.04e-02 2.23e-02 -5.84e-03 -1.72e-02
## 886
## 887
        3.46e-02 -9.60e-03 -1.67e-02 1.45e-02 -3.26e-02 -3.12e-02 -1.52e-02
## 888
        4.24e-03 -1.38e-02 -7.26e-03 7.66e-03 -2.14e-02 -1.52e-04 2.35e-02
## 889
        2.15e-02 -1.00e-02 -1.60e-02 6.93e-03 -3.11e-02 -7.67e-03 -9.07e-03
```

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3.60e-04 1.97e-03 1.79e-03 6.81e-04 5.91e-03 -6.10e-03 -3.88e-03
       -3.04e-03 1.76e-04 8.74e-04 -5.18e-05 4.90e-03 2.14e-03 3.43e-03
## 892
       -2.82e-03 -3.29e-03 1.66e-02 4.72e-04 -3.16e-03 -7.31e-03 4.34e-03
       -3.42e-03 -1.78e-03 5.14e-03 -7.45e-04 -7.82e-03 9.72e-04 5.46e-03
## 894
## 895
        7.47e-02 3.56e-02 2.56e-03 -2.68e-02 -3.57e-02 -1.20e-01 -1.39e-02
        6.53e-04 -2.25e-03 -1.58e-03 2.27e-03 9.76e-04 1.58e-04 -2.44e-03
## 896
## 897
       -2.16e-02 -1.40e-03 7.33e-04 4.60e-03 2.21e-02 2.95e-02 -4.09e-03
       -1.81e-02 3.16e-03 1.14e-02 -8.82e-05 7.67e-03 1.22e-02 5.84e-03
## 899
## 900
        1.45e-02 1.36e-02
                            3.93e-02 -2.06e-02 -1.11e-01 -1.65e-02 -3.63e-02
## 901
       -1.42e-02 1.73e-03 9.23e-03 -1.14e-03 8.03e-03 7.01e-03 1.64e-02
## 902
       -3.11e-02 -1.62e-02 6.87e-03 1.69e-02 1.54e-02 4.33e-02 4.29e-03
        2.88e-02 -6.37e-03 -2.06e-02 7.66e-03 -9.87e-03 -1.55e-02 -2.71e-02
## 907
## 908
        1.97e-02 -8.17e-03 -2.17e-02 7.32e-03 -2.94e-02 -7.04e-03 -1.42e-02
## 909
        3.69e-04 8.72e-04 2.56e-03 -6.09e-04 1.03e-03 -1.57e-03 -1.81e-04
       -2.35e-03 -8.15e-03 -9.29e-05 7.40e-03 -6.88e-03 7.41e-04 -7.94e-04
## 914
       -3.36e-03 9.76e-03 2.29e-03 -8.76e-03 5.53e-03 4.04e-03 8.96e-03
        2.61e-02 3.60e-02 -2.62e-03 -3.69e-02 3.19e-03 -2.81e-02 -4.55e-02
## 918
## 919
        2.45e-02 1.28e-02 -1.04e-02 -1.41e-02 -1.63e-03 -2.81e-02 3.74e-03
       -3.24e-02 1.06e-02 9.69e-02 -1.46e-02 2.07e-02 -3.48e-02 4.34e-02
## 920
## 921
       -3.90e-03 1.86e-02 6.98e-02 -1.28e-02 3.55e-02 -7.04e-02 5.64e-03
## 922
        3.03e-02-4.98e-03-1.95e-02-9.64e-05-1.10e-02-2.65e-02 4.25e-03
        8.16e-02 1.29e-02 -4.77e-03 -5.25e-03 -7.93e-02 -5.64e-02 -9.77e-02
## 923
       -2.37e-02 1.38e-02 3.57e-02 -7.66e-03 2.64e-02 2.06e-03 -3.10e-03
## 925
        3.50e-03 -7.55e-03 -3.49e-02 5.56e-03 -1.17e-02 1.68e-02 4.92e-03
## 928
## 929
       -6.76e-03 4.67e-02 5.47e-03 -6.75e-02 7.91e-03 6.27e-03 -8.94e-03
## 931
       -3.75e-03 2.55e-03 1.31e-02 -1.65e-03 -2.19e-03 -2.29e-03 -1.70e-03
       -1.50e-03 9.72e-03 5.36e-03 -1.01e-02 1.26e-02 -3.20e-03 1.31e-02
## 932
## 933
        1.97e-02 8.44e-03 -1.82e-03 -4.08e-03 -1.07e-02 -2.11e-02 -3.73e-02
        1.96e-02 2.63e-02 -2.82e-02 -2.19e-02 3.06e-02 -1.36e-02 -1.04e-02
## 934
## 935
       -4.12e-02 1.59e-02 4.05e-02 -1.49e-02 4.54e-02 2.39e-02 2.90e-02
## 937
        1.74e-03 2.93e-02 9.99e-03 -1.78e-02 2.48e-02 -1.89e-02 -4.76e-02
## 939
        2.93e-02 6.74e-03 9.59e-03 -6.92e-03 -3.01e-02 -3.64e-02 -2.33e-02
## 941
        2.00e-02 -8.72e-03 -6.21e-03 3.68e-03 -2.05e-02 -2.12e-02 7.92e-03
       -5.19e-03 -3.44e-03 8.04e-03 1.07e-03 6.42e-03 3.41e-05 1.41e-02
## 942
## 947
        -5.74e-02 -2.58e-02
                            6.45e-02 1.74e-02 -9.19e-04 4.04e-02 4.41e-02
       -4.38e-04 2.96e-04 1.02e-04 -1.96e-04 -3.35e-04 3.96e-04 -1.02e-04
## 950
## 951
        2.85e-03 -1.89e-03 2.89e-03 5.80e-04 -2.08e-03 -5.30e-03 3.46e-03
## 952
        3.58e-03 -2.54e-03 1.57e-03 6.88e-04 -1.85e-03 -5.48e-03 7.05e-03
        3.87e-03 -6.93e-03 4.55e-03 1.80e-03 -3.24e-03 -8.68e-03 1.96e-02
## 953
        1.41e-04 1.47e-03 -1.53e-03 -6.51e-04 -1.46e-04 8.08e-04 -4.03e-03
## 954
       -1.97e-02 -2.06e-03 1.53e-02 1.32e-03 2.49e-02 2.58e-02 -6.65e-03
## 955
        1.67e-02 -6.07e-03 -1.45e-02 6.50e-03 -3.13e-03 -1.06e-02 -1.69e-02
## 957
## 960
       -2.60e-03 1.03e-03 3.06e-03 -7.63e-04 2.67e-03 -2.35e-03 6.22e-03
        3.92e-02 -2.10e-02 -3.10e-02 1.06e-02 -1.77e-02 -4.97e-02 5.62e-02
## 961
## 962
        5.32e-03 -1.85e-03 -4.51e-03 1.76e-03 -5.64e-03 -1.62e-03 -2.95e-03
        4.58e-03 -2.76e-03 -2.56e-03 2.19e-03 -5.91e-03 -3.61e-03 -3.26e-03
## 963
## 964
        1.01e-02 -1.79e-02 1.52e-02 1.43e-02 -3.02e-02 -9.85e-03 -2.42e-02
## 965
       -2.39e-03 2.67e-03 6.05e-03 -1.98e-03 4.96e-03 -4.37e-03 -1.04e-03
## 966
       -7.57e-02 3.35e-03 1.15e-02 4.50e-03 3.84e-02 8.29e-02 6.21e-02
## 968
        3.73e-03 4.46e-04 -4.01e-03 -7.62e-04 -7.72e-04 -1.92e-03 -2.73e-03
       -8.88e-03 4.13e-04 1.58e-02 -5.41e-06 4.92e-03 -3.87e-03 8.53e-03
## 969
## 970
        4.66e-03 -5.29e-03 6.64e-03 3.06e-03 -1.86e-02 -3.00e-03 -9.81e-03
## 971
        3.97e-04 -2.10e-04 -1.91e-03 \ 3.03e-04 \ 8.64e-04 \ 1.01e-03 \ -7.00e-04
## 973 -1.43e-02 5.42e-05 5.53e-03 4.35e-04 -1.89e-03 9.66e-03 1.24e-02
```

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9.47e-04 8.07e-04 -1.95e-03 -6.79e-04 3.18e-03 -5.62e-04 -2.47e-03
        7.93e-02 -2.74e-02 -3.45e-02 1.40e-02 -9.03e-02 -7.85e-02 -7.59e-03
## 975
## 976
        5.92e-03 -2.32e-03 -6.19e-03 2.27e-03 -3.27e-03 -1.63e-03 -4.93e-03
        7.58e-03 -5.23e-03 -1.44e-02 2.55e-03 -1.93e-02 9.18e-03 -7.32e-03
## 977
## 978
       -8.31e-03 2.09e-03 5.18e-03 -4.22e-05 7.60e-03 8.24e-03 7.36e-03
        5.74e-03 -5.69e-04 -2.94e-03 1.04e-04 -6.32e-03 -4.49e-03 -4.26e-03
## 980
       -2.17e-02 1.26e-03 9.43e-03 1.69e-04 1.81e-02 1.41e-02 1.82e-02
## 981
        1.26e-04 4.62e-04 3.90e-04 -6.91e-04 1.29e-04 -3.65e-04 -6.32e-04
## 982
## 983
        2.35e-02 -1.05e-02 -3.42e-02 6.15e-03 -2.63e-02 -5.80e-03 1.10e-02
## 984
       -1.39e-02 4.57e-03 3.87e-02 -5.00e-03 -1.73e-03 -1.77e-02 1.08e-02
## 985
       -9.14e-04 -7.70e-03 -6.44e-03 3.81e-03 -1.64e-02 1.22e-02 4.08e-03
        6.66e-03 1.48e-03 1.52e-03 -1.86e-03 -8.40e-03 -9.96e-03 -3.22e-03
## 986
## 987
        6.54e-03 -1.45e-02 3.98e-03 1.13e-02 -2.62e-02 -2.60e-03 5.14e-03
## 989
        5.45e-04 -1.30e-02 2.03e-02 1.20e-02 -1.64e-02 2.66e-03 -1.14e-02
       -5.50e-03 3.75e-05 4.51e-03 3.64e-04 2.41e-03 3.03e-03 4.79e-03
## 994
## 996
        8.44e-03 -2.98e-03 -5.93e-03 5.62e-04 -1.26e-02 -1.11e-02 1.96e-02
        1.11e-03 -1.18e-04 -4.75e-04 3.30e-04 -1.17e-03 1.15e-04 -1.30e-03
## 998
       -1.61e-02 8.94e-04 1.25e-02 -5.66e-05 8.97e-03 1.50e-02 7.81e-03
## 1000 -1.26e-02 -6.15e-02 -2.07e-03 3.44e-01 3.55e-02 5.79e-02 -1.50e-01
## 1001 -1.89e-02 6.75e-03 1.29e-02 -1.17e-02 -3.28e-02 2.54e-02 1.41e-02
## 1003 2.30e-02 5.57e-03 1.24e-02 -2.58e-03 -3.01e-03 -2.40e-02 -2.14e-02
## 1004 -2.81e-03 7.33e-04 5.85e-04 2.09e-03 2.37e-03 1.03e-02 -1.10e-02
## 1005 7.75e-03 1.02e-02 1.71e-02 -1.30e-02 -1.07e-02 -4.21e-04 -9.07e-03
        5.12e-03 2.51e-03 4.24e-03 -1.19e-03 -1.05e-02 -2.77e-03 -8.63e-03
## 1006
## 1008 7.10e-03 -5.71e-05 -3.91e-03 4.81e-03 4.09e-03 3.04e-03 8.98e-04
## 1009 8.72e-03 -8.88e-04 -2.15e-02 -1.82e-03 1.15e-03 -3.97e-03 -5.97e-03
## 1013 -1.22e-03 1.12e-03 -1.85e-03 1.22e-02 2.17e-03 3.10e-03 -1.11e-03
## 1014 3.20e-04 -9.92e-05 -8.43e-05 6.92e-05 3.28e-04 -2.55e-04 -9.15e-04
## 1015 -1.70e-03 2.30e-03 9.68e-03 7.34e-04 1.69e-02 -2.63e-03 -3.75e-03
## 1016 -3.99e-03 1.37e-02 1.06e-02 -5.59e-02 8.71e-03 -4.66e-03 2.37e-02
## 1018 -1.31e-02 1.39e-02 1.23e-02 -7.90e-03 3.90e-02 1.55e-02 -2.54e-03
## 1019 -1.99e-03 2.07e-02 1.97e-03 -4.20e-02 7.04e-04 1.07e-03 1.15e-02
## 1020 -1.75e-03 -2.50e-04 -2.26e-03 1.42e-03 4.20e-03 7.06e-03 -4.28e-03
## 1021 -1.02e-03 4.39e-03 -2.20e-03 2.83e-02 4.17e-03 3.70e-03 -7.05e-03
## 1023 4.50e-03 5.24e-03 2.94e-03 -1.27e-02 -2.46e-03 -2.01e-03 -3.16e-03
## 1024 -6.44e-03 -2.48e-03 2.35e-03 2.22e-03 -1.66e-03 9.93e-03 -1.37e-02
## 1025 -7.96e-04 -2.09e-03 8.50e-04 1.16e-04 3.41e-03 1.70e-03 -6.37e-03
## 1026 -1.72e-02 9.05e-04 8.86e-03 -5.48e-03 -5.93e-03 2.64e-02 -2.08e-02
## 1028 -4.86e-03 3.38e-03 -6.16e-04 -1.33e-03 -6.02e-03 1.64e-02 -2.87e-02
## 1029 3.99e-03 1.75e-03 1.84e-03 -1.48e-03 -6.41e-03 -5.04e-03 -2.77e-03
## 1030 1.53e-02 1.36e-04 -2.12e-02 -1.41e-03 -6.82e-03 -4.67e-03 -1.98e-03
## 1032 -2.61e-02 6.55e-04 -3.00e-03 -4.18e-03 2.45e-02 2.31e-02 3.32e-02
## 1035 -5.55e-03 6.78e-03 9.73e-03 -1.45e-02 2.12e-02 7.16e-03 5.62e-03
## 1037 8.09e-03 2.30e-03 -8.05e-03 -9.80e-04 7.78e-03 -6.74e-03 3.67e-03
## 1039 2.23e-02 1.56e-02 1.82e-02 -2.72e-02 -6.02e-02 -1.91e-02 -1.78e-02
## 1041 -6.73e-03 -7.13e-04 5.89e-03 -8.22e-03 1.11e-02 6.30e-03 -4.43e-03
## 1046 -2.97e-03 1.67e-03 6.20e-03 8.97e-04 -9.87e-03 6.50e-03 -1.04e-02
## 1047 2.92e-03 7.46e-03 4.82e-03 -9.41e-03 3.79e-03 -3.22e-03 -1.80e-02
## 1049 -2.23e-02 -1.49e-03 -3.39e-02 1.69e-03 7.12e-02 4.53e-02 3.00e-02
       2.12e-03 7.42e-03 5.99e-03 -4.35e-03 -9.43e-03 4.06e-03 -3.81e-02
## 1052 -2.25e-02 -3.09e-02 -1.44e-02 1.21e-02 -2.08e-02 1.96e-02 1.13e-01
## 1053 4.77e-03 -9.78e-04 8.42e-03 -1.89e-03 -2.42e-02 -1.03e-02 6.22e-03
## 1054 -2.88e-04 3.18e-03 8.44e-03 -7.28e-04 -1.94e-03 -2.72e-03 -1.33e-02
## 1055 -2.09e-02 1.03e-02 5.21e-02 -6.51e-04 2.21e-02 3.02e-03 -2.70e-02
```

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## 1056 1.44e-03 2.64e-03 2.33e-03 -7.77e-04 4.11e-04 -2.60e-03 -9.94e-03
## 1060 -3.13e-03 -3.41e-04 3.25e-04 5.88e-05 1.23e-03 3.12e-03 2.95e-03
## 1062 9.76e-03 -9.48e-03 -3.88e-03 1.08e-02 3.35e-04 -1.79e-02 2.03e-02
## 1063 -2.69e-02 -2.55e-03 4.33e-02 3.94e-03 3.79e-04 6.69e-03 -6.79e-04
## 1064 -2.78e-05 -2.32e-03
                           3.15e-03 1.33e-03 -5.60e-03 1.42e-04 -2.82e-03
## 1065 -3.56e-02 -1.84e-02 2.57e-03 1.45e-02 1.31e-02 3.51e-02 6.40e-02
## 1066 -2.46e-02 2.45e-02 6.70e-02 -1.49e-03 6.14e-03 2.36e-02 -1.29e-01
## 1067 2.78e-04 4.79e-04 5.99e-04 -2.53e-04 7.51e-04 -9.75e-04 -1.02e-03
## 1068 7.95e-03 6.81e-03 -2.80e-03 -1.10e-02 3.47e-05 -4.98e-03 -1.42e-02
## 1071 -3.36e-02 1.30e-02 2.68e-02 -5.95e-03 3.27e-02 1.94e-02 -7.38e-03
## 1072 -2.45e-03 3.87e-04 6.17e-03 5.45e-04 1.40e-04 -2.05e-04 -4.74e-03
                                              1.73e-03 1.07e-03 -4.67e-03
## 1075 -8.10e-04 -3.67e-04 9.92e-04 -3.62e-04
## 1076 6.94e-02 -9.76e-03 -6.55e-02 9.66e-03
                                              1.33e-03 -1.91e-02 -3.54e-02
## 1077 -3.74e-03 2.90e-03 4.24e-03 -2.76e-03 3.76e-03 4.59e-03 4.14e-03
## 1078 3.03e-03 -1.04e-03 -9.08e-03 -3.50e-04 4.18e-03 2.63e-05 7.55e-03
## 1079 -3.40e-03 7.68e-03 6.96e-03 -1.82e-03 3.91e-04 7.72e-03 -3.14e-02
## 1082 -8.47e-02 1.41e-03 5.79e-02 5.07e-03 3.28e-02 6.82e-02 3.87e-02
## 1083 -6.61e-02 3.16e-03 4.23e-02 -9.06e-06 2.83e-02 4.78e-02 3.56e-02
## 1084 3.58e-04 1.39e-03 4.25e-03 -5.81e-04 -1.79e-04 1.26e-03 -8.60e-03
## 1086 -1.11e-02 2.88e-03 6.11e-03 -2.38e-03 1.03e-02 8.17e-03 7.98e-03
## 1087 4.23e-03 7.21e-03 6.43e-03 -1.94e-03 -3.91e-03 -6.72e-03 -2.01e-02
## 1088 7.78e-03 9.58e-04 1.46e-02 3.53e-04 -4.88e-03 -1.83e-02 -1.18e-02
## 1089 -2.14e-02 5.03e-03 1.39e-02 -5.56e-03 1.62e-02 1.00e-02 2.28e-02
                           2.60e-02 2.87e-03 -8.21e-03 -1.84e-02 -3.68e-02
## 1091 6.41e-03 2.04e-03
## 1093 1.86e-02 1.60e-02 3.92e-03 -1.37e-02 2.39e-03 -1.94e-02 -1.17e-02
## 1094 -1.13e-01 2.66e-02 1.26e-01 2.09e-02 7.49e-02 1.43e-01 -1.99e-01
## 1097 -2.54e-04 -7.37e-03 -3.01e-03 4.66e-03 2.14e-03 2.88e-03 -2.77e-03
## 1098 -1.35e-02 1.81e-03 7.40e-03 5.54e-05 8.87e-03 1.23e-02 -1.49e-03
## 1099 8.20e-03 3.83e-03 -2.84e-03 -2.09e-03 -3.39e-03 -1.05e-02 -4.00e-04
## 1100 1.36e-02 -1.23e-03 -6.05e-03 -4.01e-04 -5.15e-03 -1.53e-02 3.92e-03
## 1101 5.72e-04 3.54e-02 1.50e-03 -1.14e-02 -2.79e-03 -3.54e-03 9.89e-03
## 1102 9.25e-03 3.18e-02 -7.02e-02 -1.51e-02 2.78e-02 2.30e-02 -4.06e-02
## 1103 -3.81e-03 1.65e-02 7.32e-03 -1.13e-02 -9.06e-03 -3.03e-03 2.09e-02
## 1104 -8.96e-04 4.64e-03 3.12e-03 -3.58e-03 -4.88e-03 1.14e-04 1.92e-03
       4.31e-03 -1.98e-04 1.15e-03 1.16e-03 7.94e-04 -8.55e-03 3.54e-03
## 1105
## 1106 5.40e-03 1.19e-02 1.08e-03 -4.53e-03 -6.85e-03 -8.87e-03 4.87e-03
## 1108 -3.48e-02 5.38e-03 2.43e-02 5.23e-04 2.86e-02 2.48e-02 7.51e-03
## 1109 4.63e-03 -2.31e-03 -8.83e-03 2.53e-03 -4.73e-03 1.82e-03 -1.73e-03
## 1111 -2.48e-04 -6.38e-05 -1.13e-04 2.68e-05 9.00e-06 4.18e-04 2.36e-04
## 1113 -4.93e-03 1.69e-04 2.63e-03 1.27e-04 3.43e-03 3.94e-03 3.26e-03
## 1114 9.30e-03 -1.25e-03 -1.70e-02 1.13e-03 -9.71e-03 2.78e-04 -4.63e-03
## 1115 7.50e-04 -1.77e-05 -1.81e-04 -4.67e-05 -6.31e-04 -9.45e-04 -1.95e-04
## 1116 -1.03e-03 1.17e-03 -8.04e-04 -7.70e-04 2.77e-03 8.23e-04 8.43e-04
## 1118 -1.69e-03 1.56e-04 1.38e-03 -1.67e-04 9.48e-04 1.05e-03 1.23e-03
## 1119 1.10e-02 4.04e-04 -8.34e-03 -1.62e-03 -1.21e-02 -7.75e-03 -5.24e-03
## 1121 6.79e-03 4.24e-03 -7.04e-03 -2.61e-03 4.75e-04 -5.46e-03 -6.91e-03
## 1122 4.52e-04 5.41e-05 -2.64e-05 -1.68e-05 2.08e-05 -5.72e-04 -2.03e-04
## 1123 -5.73e-03 3.16e-03 1.76e-03 -3.10e-03 7.12e-03 1.54e-06 8.24e-03
## 1127 -5.20e-03 2.46e-03 7.98e-04 -2.01e-03 5.86e-03 3.98e-03 1.93e-03
## 1128 -2.29e-02 3.47e-03 6.34e-03 -2.85e-03 1.90e-02 1.99e-02 1.83e-02
## 1129 4.36e-03 -3.18e-03 3.37e-03 2.00e-03 -5.99e-03 -9.52e-03 5.05e-03
## 1130 -6.27e-02 2.25e-02 3.09e-02 -2.14e-02 7.29e-02 2.40e-02 6.19e-02
## 1131 -7.10e-03 2.56e-03 -3.89e-04 -1.37e-03 4.16e-03 9.79e-03 -2.79e-03
## 1133 1.36e-03 6.25e-03 -2.81e-03 -5.59e-03 3.66e-03 -6.49e-04 6.71e-03
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## 1134 -9.86e-04 2.40e-03 -4.54e-03 -2.42e-03 4.63e-03 -4.00e-04 5.43e-03
## 1136 -2.03e-03 6.80e-03 -1.22e-02 -6.71e-03 1.68e-02 4.04e-03 1.49e-03
## 1137 -1.99e-03 1.05e-03 -9.52e-04 -1.10e-03 3.26e-03 9.38e-04 4.03e-03
## 1138 7.19e-03 -1.74e-02 1.75e-02 1.70e-02 -3.36e-02 -7.52e-03 -3.60e-02
## 1139 -1.60e-02 -1.08e-02 2.98e-02 5.83e-04 3.72e-02 -5.02e-02 3.68e-02
## 1140 1.25e-04 1.39e-02 5.14e-03 -5.79e-03 9.82e-03 -8.32e-03 5.89e-03
## 1141 2.03e-04 -1.89e-03 1.64e-03 1.67e-03 -1.40e-03 -1.86e-03 -7.55e-04
## 1142 1.25e-05 5.04e-05 -7.80e-05 -5.64e-05 7.85e-05 -4.12e-05 1.03e-04
## 1144 -1.56e-03 4.67e-03 -4.21e-03 -4.50e-03 3.00e-03 2.14e-03 -5.47e-03
## 1145 -3.23e-02 -1.28e-02 2.00e-02 5.11e-03 9.82e-04 2.37e-02 6.07e-02
## 1147 6.10e-02 -4.11e-03 -7.13e-02 -7.42e-05 -2.39e-02 -3.23e-02 -1.98e-03
## 1148 3.20e-02 -3.14e-03 -5.03e-02 2.17e-03 -2.41e-02 -4.89e-03 -1.21e-02
## 1149 -2.60e-03 1.62e-03 3.47e-03 -3.56e-04 -1.00e-03 2.68e-03 -6.17e-03
## 1151 -9.19e-04 -3.73e-04 -9.29e-03 1.24e-03 1.75e-02 2.99e-03 2.97e-03
## 1152 -3.70e-04 1.35e-03 1.02e-03 -1.52e-03 2.60e-04 -1.36e-03 2.35e-03
## 1153 5.34e-03 -1.51e-03 5.94e-04 1.64e-03 -6.35e-03 -7.42e-03 -2.15e-03
## 1154 -2.95e-03 -2.21e-03 5.59e-03 2.44e-03 4.08e-03 3.15e-03 -2.81e-03
## 1156 1.18e-02 -4.36e-03 -7.21e-03 3.30e-03 -8.95e-03 -7.31e-03 -2.86e-03
## 1158 -1.53e-02 5.26e-03 -3.39e-04 -5.68e-03 1.71e-02 7.90e-03 2.04e-02
## 1159 -2.30e-03 2.60e-03 -4.28e-03 -2.32e-03 8.12e-03 2.44e-03 1.62e-03
## 1160 -3.62e-02 1.82e-02 2.96e-02 -2.08e-02 4.40e-02 2.00e-03 5.98e-02
## 1163 5.14e-02 9.45e-03 -4.93e-02 -7.36e-03 -2.37e-02 -3.66e-02 -2.67e-02
## 1165 -3.67e-02 -1.64e-02 2.62e-02 1.42e-02 1.24e-02 3.93e-02 1.33e-02
## 1166 2.30e-03 2.91e-03 -2.83e-03 -2.41e-03 5.11e-03 -3.20e-03 -4.38e-03
## 1168 6.90e-03 -5.17e-03 5.03e-03 4.82e-03 -1.38e-02 -6.16e-03 -9.83e-03
## 1169 6.03e-04 -2.60e-04 -3.86e-04 2.78e-04 -6.28e-04 4.00e-05 -1.01e-03
## 1170 2.10e-03 -7.33e-04 1.63e-03 5.44e-04 -1.40e-03 -3.49e-03 7.05e-04
## 1171 -1.31e-02 5.77e-03 1.05e-04 -5.49e-03 2.17e-02 6.89e-03 1.42e-02
## 1172 -9.37e-04 4.32e-03 1.14e-02 4.39e-03 -5.31e-02 1.87e-02 -6.50e-02
## 1173 -3.60e-03 2.19e-03 2.27e-03 -1.75e-03 3.54e-03 2.06e-03 1.73e-03
## 1174 7.54e-02 -4.11e-02 -1.90e-02 3.63e-02 -9.76e-02 -4.76e-02 -5.31e-02
## 1175 -2.35e-02 9.08e-03 8.57e-03 -7.30e-03 1.44e-02 1.80e-02 1.27e-02
## 1176 1.19e-02 -2.25e-02 -1.21e-03 2.05e-02 -4.08e-02 -9.60e-03 -2.20e-02
## 1177 1.47e-02 -1.64e-03 -4.53e-02 2.65e-03 -1.11e-02 1.83e-02 -1.03e-02
## 1179 -3.14e-03 1.30e-03 3.72e-03 -7.65e-04 1.90e-03 2.28e-03 9.51e-05
## 1180 -7.20e-04 1.14e-02 -1.42e-02 -1.02e-02 9.48e-03 9.85e-03 6.29e-03
## 1184 -7.59e-03 2.50e-03 6.48e-04 -2.06e-03 7.18e-03 7.45e-03 3.98e-03
## 1186 -3.36e-03 2.46e-03 3.38e-03 -1.72e-03 2.01e-03 1.23e-03 -1.33e-03
## 1187 -1.20e-02 1.21e-02 5.27e-03 -1.03e-02 1.35e-03 1.47e-02 2.46e-03
## 1188 9.23e-05 -3.73e-03 2.16e-03 2.60e-03 -8.22e-04 6.82e-04 4.01e-03
## 1189 -1.95e-02 8.99e-03 4.03e-02 -6.00e-03 2.88e-02 -8.65e-03 1.39e-03
## 1190 -2.78e-02 1.45e-02 1.83e-02 -1.22e-02 3.48e-02 2.26e-02 1.48e-02
## 1191 1.52e-02 -1.31e-02 -1.77e-02 -1.34e-03 3.03e-03 -2.22e-02 7.58e-02
## 1193 -6.02e-04 -5.84e-03 1.05e-03 4.11e-03 -3.89e-03 2.14e-03 2.29e-03
## 1196 3.54e-02 -4.31e-03 -2.40e-02 4.50e-03 -1.92e-02 -1.56e-02 -3.66e-02
## 1197 -2.75e-02 -3.48e-03 3.73e-02 5.34e-03 9.89e-03 1.44e-02 2.14e-02
## 1199 3.18e-03 2.16e-04 8.68e-04 4.81e-04 -2.83e-03 -4.32e-03 -2.10e-03
## 1200 -1.33e-04 -7.21e-04 9.48e-03 3.61e-04 -2.01e-03 -5.23e-03 -2.29e-03
## 1201 -1.05e-02 -2.53e-03 -1.37e-02 5.08e-03 -7.85e-03 3.34e-02 -1.10e-02
## 1204 -1.67e-02 2.07e-02 4.80e-03 -2.35e-02 1.76e-01 -2.16e-02 8.01e-03
## 1205 8.20e-05 7.80e-04 -1.57e-03 -7.14e-04 5.14e-04 3.37e-04 1.41e-03
## 1206 7.28e-04 -1.56e-04 5.91e-04 6.87e-05 -1.55e-03 -7.49e-04 -1.25e-03
## 1207 2.23e-03 1.26e-04 -1.14e-03 -7.43e-05 -3.75e-03 -2.76e-03 7.49e-04
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## 1210 7.39e-03 -4.53e-05 -1.80e-03 1.56e-04 -1.71e-02 -4.66e-03 -1.59e-03
## 1214 -2.05e-02 -1.11e-03 1.33e-02 5.41e-03 -3.23e-03 2.27e-02 5.63e-03
## 1215 -4.02e-03 -5.26e-04 3.57e-03 3.66e-04 2.56e-03 3.30e-03 -4.56e-05
## 1217 -6.02e-02 -1.11e-02 8.00e-02 4.44e-03 5.26e-02 3.14e-02 2.35e-02
## 1219 -1.57e-03 6.88e-05 5.39e-03 -3.41e-04 1.33e-02 6.65e-03 -9.83e-03
## 1221 -1.78e-01 -7.38e-02 5.02e-02 1.59e-02 1.30e-01 1.40e-01 3.83e-01
## 1223 2.63e-02 4.53e-04 -1.32e-02 -3.02e-03 1.16e-03 -1.94e-02 -2.18e-02
## 1224 2.66e-02 4.36e-03 -2.69e-02 -9.40e-04 -8.58e-03 -2.14e-02 6.24e-03
## 1226 -4.77e-03 7.58e-04 4.46e-03 7.05e-05 2.34e-03 4.63e-03 4.54e-03
## 1227
       6.20e-03 3.66e-04 -7.46e-04 8.84e-04 -8.06e-03 -7.48e-03 -9.57e-04
## 1229 8.47e-03 -1.97e-03 1.82e-02 1.87e-02 -6.74e-02 2.07e-02 -8.94e-02
## 1230 6.78e-04 -2.03e-03 1.34e-02 -3.54e-03 2.72e-02 -2.18e-02 3.12e-03
## 1231 -8.50e-03 -5.50e-04 5.69e-03 -7.16e-05 9.02e-04 8.97e-03 -1.52e-03
## 1234 -7.55e-03 3.36e-03 -2.26e-03 -2.56e-03 3.34e-03 4.47e-03 1.55e-02
## 1237 3.94e-03 6.86e-03 -9.56e-03 -4.70e-03 9.21e-03 -6.05e-03 -5.22e-03
       1.30e-02 -7.49e-04 -4.34e-03 2.26e-03 -2.44e-02 -1.02e-02 -5.81e-04
## 1240
       1.14e-02 2.57e-03 -3.57e-02 -5.80e-04 2.66e-02 1.79e-02 -2.53e-02
## 1241
       1.50e-02 -6.28e-03 3.69e-03 1.05e-03 -1.66e-02 -1.96e-02 -1.39e-02
       1.14e-02 1.20e-04 1.18e-02 3.36e-04 1.12e-04 -2.54e-02 8.43e-03
## 1246
## 1247
       2.09e-03 1.26e-03 7.76e-04 -1.68e-03 -1.93e-06 -7.42e-03 6.83e-03
## 1251 4.27e-05 -1.76e-04 7.44e-04 -4.22e-04 3.00e-03 -5.05e-04 8.97e-04
## 1253 -1.67e-02 -1.13e-03 -3.07e-03 -3.58e-04 2.98e-02 1.34e-02 1.29e-03
## 1256 2.01e-02 -1.57e-04 -8.30e-03 3.94e-03 -2.71e-02 -1.20e-02 -1.69e-02
## 1257 -2.20e-02 -5.82e-03 4.35e-02 7.35e-03 2.90e-02 1.11e-02 -2.01e-02
## 1259 -1.10e-02 2.63e-04 6.98e-03 3.14e-03 -3.07e-02 2.07e-02 -1.73e-02
## 1260 4.37e-03 -2.56e-03 -1.41e-02 2.23e-03 -4.13e-03 4.05e-03 -8.45e-04
## 1262 -1.19e-03 4.80e-04 -6.93e-04 -4.49e-04 1.05e-03 1.48e-03 1.76e-03
## 1264 -1.53e-02 -5.23e-04 -5.64e-03 1.33e-03 1.87e-02 2.30e-02 7.69e-03
## 1265 1.29e-03 -5.11e-03 5.39e-03 7.17e-03 1.25e-02 6.60e-03 -2.15e-02
## 1268 -7.02e-03 -7.29e-03 7.65e-03 3.50e-03 2.57e-02 -8.52e-03 3.84e-02
## 1269 7.28e-03 -2.03e-03 2.64e-03 1.34e-03 -2.17e-03 -1.21e-02 -1.94e-03
## 1270 -1.58e-02 -2.96e-03 1.26e-02 3.81e-03 3.07e-02 1.20e-02 -3.73e-03
## 1271 -3.05e-02 -1.03e-02 2.92e-02 9.84e-03 2.23e-02 2.12e-02 1.07e-02
## 1272 -3.13e-04 1.17e-04 -1.07e-04 -8.37e-05 1.61e-04 3.99e-04 1.28e-04
## 1273 1.22e-02 4.37e-04 1.19e-02 2.69e-04 -1.31e-02 -1.95e-02 -1.24e-02
## 1275 -5.08e-03 -7.83e-03 7.77e-03 6.69e-03 -4.36e-03 -2.48e-03 -3.88e-03
## 1277 -1.78e-04 -6.92e-03 -6.09e-03 6.30e-03 -1.08e-02 1.03e-02 3.03e-03
## 1279 -2.53e-02 6.41e-03 4.27e-03 -6.95e-03 1.59e-02 1.35e-02 2.82e-02
## 1280 8.69e-03 6.16e-03 4.31e-03 -5.10e-03 -1.03e-03 -1.41e-02 -1.18e-02
## 1281 -4.44e-02 -2.57e-02 6.61e-02 2.91e-02 2.84e-02 2.96e-02 -2.31e-02
## 1284 4.05e-04 -1.43e-03 4.21e-04 3.85e-04 -4.55e-04 -1.28e-03 3.27e-03
## 1285 -1.35e-03 1.05e-03 -1.23e-03 -7.73e-04 8.78e-04 1.80e-03 7.14e-04
## 1287
       1.13e-02 -5.55e-04 -2.51e-02 1.18e-03 7.72e-03 7.70e-03 -1.26e-02
## 1288 1.05e-02 1.07e-03 -1.21e-03 -7.84e-04 -6.28e-03 -9.20e-03 -5.24e-03
## 1289 -2.58e-02 -1.32e-02 4.88e-03 1.38e-02 3.11e-02 3.06e-02 2.80e-03
## 1290 -1.76e-01 -1.18e-02 1.66e-01 1.74e-02 6.11e-02 9.49e-02 1.00e-01
## 1291 -4.00e-03 -2.44e-03 -3.94e-03 2.53e-03 1.50e-02 4.02e-03 -2.94e-03
## 1294 -6.11e-05 8.14e-04 -1.29e-03 -9.52e-04 2.01e-03 -2.59e-04 1.67e-03
## 1296 2.74e-02 -5.12e-02 -6.34e-03 4.90e-02 -2.57e-02 -1.93e-02 -2.74e-02
## 1297 -2.95e-02 9.80e-02 -6.18e-03 -9.11e-02 3.80e-03 4.85e-02 3.73e-03
## 1299 -1.27e-02 1.81e-02 1.54e-03 -1.69e-02 1.18e-02 1.52e-02 9.61e-03
## 1303 -4.59e-04 1.86e-03 -2.07e-05 -1.75e-03 6.04e-04 5.58e-04 4.58e-04
## 1304 -2.97e-02 -1.65e-01 1.68e-02 1.49e-01 2.18e-02 -5.27e-05 6.38e-02
## 1306 -1.57e-03 3.08e-02 -2.07e-03 -2.78e-02 -8.09e-04 7.89e-03 -6.86e-03
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## 1307 -5.65e-04 7.29e-03 -8.08e-04 -6.70e-03 -1.45e-03 2.33e-03 -1.38e-03
## 1308 4.62e-03 -1.51e-02 -4.70e-04 1.31e-02 -6.25e-03 -7.35e-03 2.04e-03
## 1310 -1.32e-02 1.29e-01 -2.80e-03 -1.11e-01 3.40e-02 4.69e-02 -4.11e-02
## 1311 -3.57e-03 -1.17e-01 8.67e-03 1.11e-01 1.22e-02 2.19e-03 4.22e-03
## 1313 -4.36e-03 -3.70e-02 5.89e-04 3.49e-02 9.92e-04 7.94e-03 2.44e-03
## 1314 6.70e-04 2.13e-03 -3.26e-04 -2.03e-03 -5.71e-04 -5.67e-04 -1.35e-04
## 1315 3.47e-04 -3.48e-03 2.05e-04 3.35e-03 -1.84e-04 -3.25e-04 -4.04e-04
## 1316 -6.45e-02 1.49e-01 -5.21e-04 -1.35e-01 3.36e-02 8.02e-02 -1.50e-03
## 1317 -1.57e-02 -1.31e-01 1.01e-02 1.19e-01 2.47e-02 -2.24e-03 4.60e-02
## 1318 7.00e-03 4.83e-02 -3.24e-03 -4.80e-02 9.61e-03 -2.00e-02 1.21e-02
## 1320
       3.21e-03 -7.47e-02 4.92e-03 6.99e-02 -4.73e-03 -1.01e-02 1.63e-03
       2.64e-03 -6.17e-02 2.45e-03 5.47e-02 -5.18e-03 -1.45e-02 1.66e-02
## 1321
## 1323
       3.35e-03 -3.55e-02 2.42e-03 3.37e-02 3.76e-03 -6.38e-03 -2.52e-03
## 1324
       3.51e-03 -3.15e-02 2.07e-03 2.96e-02 -9.70e-03 -1.01e-02 -4.42e-03
## 1325 7.64e-03 9.63e-02 -9.27e-03 -9.04e-02 1.07e-02 -1.21e-02 -8.29e-03
## 1326 -5.69e-03 6.64e-02 -2.46e-03 -5.78e-02 1.20e-02 2.13e-02 -2.16e-02
## 1327 -1.94e-02 -4.24e-02 8.79e-03 3.92e-02 1.43e-02 1.01e-02 2.11e-02
## 1328 5.88e-03 -3.68e-02 5.62e-04 3.38e-02 -8.68e-03 -1.19e-02 -1.99e-03
## 1329 -1.72e-03 3.61e-02 -3.18e-05 -3.32e-02 1.34e-02 -1.31e-03 -1.23e-03
## 1331 -6.96e-02 -1.70e-01 8.18e-03 1.62e-01 -7.60e-04 1.03e-01 2.42e-02
## 1332 -1.31e-03 2.45e-02 -2.92e-03 -2.30e-02 -9.09e-04 5.15e-03 -1.89e-03
## 1334 1.40e-02 -5.66e-02 5.22e-03 5.20e-02 -1.04e-02 -3.34e-02 -1.49e-03
## 1335 2.12e-02 2.53e-02 -5.96e-03 -2.37e-02 -3.37e-03 -1.76e-02 -1.29e-02
## 1336 -8.83e-03 3.14e-02 8.02e-04 -2.93e-02 5.04e-03 8.38e-03 3.91e-03
## 1337 -6.43e-03 1.16e-02 7.78e-04 -1.13e-02 4.31e-03 6.14e-03 6.80e-03
## 1338 4.56e-03 5.41e-02 -6.30e-03 -5.31e-02 -5.36e-03 -1.90e-03 6.46e-03
## 1339 -3.91e-02 7.83e-02 8.59e-03 -7.38e-02 3.64e-02 3.18e-02 3.20e-02
## 1340 5.63e-05 1.80e-03 -1.19e-04 -1.66e-03 4.40e-04 -8.61e-07 -2.74e-05
## 1341 2.41e-04 -4.43e-02 1.55e-03 4.08e-02 -4.97e-03 -2.00e-03 4.84e-03
## 1342 -1.41e-03 1.31e-02 -6.38e-04 -1.22e-02 3.26e-03 2.20e-03 4.46e-04
## 1343 -2.26e-03 -8.66e-03 7.25e-04 9.19e-03 -4.93e-03 5.93e-03 -6.93e-03
## 1344 -5.66e-04 -1.05e-02 8.53e-04 9.74e-03 -7.17e-04 -7.41e-04 1.19e-03
## 1345
       4.33e-03 -1.70e-01 3.37e-03 1.59e-01 1.65e-02 1.07e-02 1.82e-02
       1.26e-02 -5.13e-02 -4.97e-04 4.80e-02 -2.58e-03 -7.83e-03 -2.54e-03
## 1346
        1.63e-03 -4.28e-03 1.24e-04 3.98e-03 2.71e-05 -2.45e-03 -4.23e-04
## 1348
## 1349 -1.32e-03 -2.23e-03 3.52e-04 3.22e-03 1.69e-04 8.82e-04 3.04e-03
## 1350 -3.36e-02 -6.59e-02 1.26e-02 6.19e-02 2.41e-02 3.53e-02 3.15e-02
## 1351 1.62e-03 1.49e-02 -9.25e-04 -1.42e-02 2.60e-03 -4.77e-03 6.90e-03
        1.88e-02 -5.18e-02 -2.88e-03 4.67e-02 -2.11e-02 -2.51e-02 -5.30e-03
## 1354 8.00e-03 -3.02e-02 -1.11e-03 2.72e-02 -1.02e-02 -9.40e-03 6.15e-04
       6.45e-02 -1.16e-01 -8.71e-03 1.06e-01 -7.93e-02 -7.53e-02 -3.96e-02
## 1356 4.96e-02 -8.02e-02 -1.44e-02 7.38e-02 -3.22e-02 -3.46e-02 -2.61e-02
## 1358 -1.45e-04 1.79e-03 -1.25e-04 -1.69e-03 7.30e-05 2.10e-04 4.19e-05
## 1359 -6.44e-04 -1.13e-02 6.65e-04 1.09e-02 -1.69e-03 4.73e-04 -1.72e-03
## 1360 -3.50e-02 7.61e-02 2.87e-03 -6.96e-02 3.84e-02 5.20e-02 2.01e-02
## 1361 7.51e-03 -4.76e-02 4.63e-03 4.51e-02 9.96e-04 -1.75e-02 -3.02e-03
## 1364 -2.08e-03 3.20e-02 -8.88e-04 -2.88e-02 3.60e-03 6.35e-03 -6.14e-03
## 1365 -2.84e-03 -2.88e-02 2.43e-03 2.64e-02 -3.61e-03 1.62e-03 6.80e-03
## 1366 -4.79e-02 4.33e-01 -2.38e-03 -3.99e-01 2.08e-01 3.27e-02 1.64e-02
## 1367 8.10e-03 8.09e-02 -1.44e-02 -7.62e-02 2.60e-02 -1.85e-02 -4.93e-03
## 1370 -4.48e-03 -8.96e-03 1.77e-02 8.35e-03 -1.09e-02 2.53e-03 -9.04e-03
## 1371 3.54e-04 -1.31e-03 1.35e-03 1.50e-03 4.39e-04 4.63e-05 -3.36e-03
## 1372 5.77e-03 1.16e-03 -5.91e-03 -1.55e-03 -5.36e-03 -4.62e-03 4.35e-04
## 1376 3.48e-03 6.21e-03 -1.61e-02 -4.05e-03 -5.10e-03 4.10e-03 1.15e-03
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## 1377 8.27e-03 4.77e-04 -7.81e-03 -4.92e-04 -7.93e-03 -5.07e-03 -3.07e-03
## 1378 -4.54e-03 4.75e-03 -1.05e-02 -3.63e-03 -3.75e-04 1.05e-02 4.21e-03
## 1383 5.88e-04 -1.37e-03 2.73e-03 2.50e-03 5.26e-03 8.84e-04 -9.16e-03
## 1384 -3.42e-02 -1.38e-02 4.75e-02 1.45e-02 1.28e-02 1.65e-02 -1.00e-02
        3.64e-05 -2.63e-03 8.30e-03 5.49e-04 5.71e-03 -7.31e-03 7.44e-03
## 1386 7.09e-03 -9.79e-03 2.56e-02 5.55e-03 -1.16e-02 -2.56e-02 9.61e-03
## 1387 -1.88e-02 -6.90e-03 2.50e-02 7.93e-03 1.02e-02 1.49e-02 -6.47e-03
## 1388 2.81e-03 -3.96e-03 9.66e-03 2.78e-03 -7.14e-03 -9.60e-03 -9.25e-03
## 1389 -4.67e-02 -5.31e-03 4.91e-02 5.92e-03 4.22e-02 3.00e-02 7.54e-03
## 1391 1.73e-02 2.86e-03 -5.86e-03 -1.61e-03 -6.64e-03 -1.33e-02 -5.30e-03
## 1392 -1.75e-02 -9.98e-03 3.37e-02 7.63e-03 7.71e-03 5.36e-03 7.23e-03
## 1395 -9.92e-03 -1.07e-03 4.41e-03 7.66e-04 6.16e-03 1.17e-02 -2.58e-03
## 1396 -8.47e-03 -1.06e-03 6.49e-03 1.77e-03 8.80e-04 1.42e-02 -6.74e-03
## 1397 -2.10e-03 5.69e-03 3.82e-03 -4.87e-03 5.40e-03 1.58e-03 8.70e-04
## 1398 8.26e-03 3.16e-03 3.42e-02 -3.98e-04 -2.89e-02 -2.64e-02 -2.21e-02
## 1401 -6.96e-03 7.16e-03
                           2.13e-02 3.94e-03 -3.37e-03 1.40e-02 -6.12e-02
## 1402 -4.55e-02 7.27e-03 4.58e-02 -2.34e-03 2.25e-02 3.09e-02 6.35e-03
## 1404 7.50e-03 7.79e-03 8.45e-03 -3.78e-03 1.04e-02 -2.26e-02 -1.63e-02
## 1405 -1.90e-02 1.67e-02 5.36e-02 -1.62e-02 2.06e-02 -2.70e-02 2.16e-02
## 1407 -2.40e-03 2.84e-03
                           3.26e-03 -2.99e-03 3.14e-03 1.16e-03 -7.27e-04
## 1409 1.13e-02 -3.40e-02 -3.87e-03 2.06e-02 1.34e-02 -9.82e-03 -2.10e-02
## 1410 -2.55e-03 -3.30e-02 1.05e-05 2.22e-02 1.11e-02 4.22e-03 -1.34e-03
## 1412 -3.98e-03 1.10e-03 -5.84e-03 4.52e-04 1.11e-02 7.47e-03 -7.96e-03
## 1413 -6.02e-03 -2.48e-02 -1.15e-03 1.70e-02 1.01e-02 7.24e-03 4.23e-03
## 1415 -2.77e-02 6.40e-03 6.96e-04 -2.59e-03 3.20e-02 3.08e-02 -1.72e-03
## 1416 -5.68e-03 7.03e-04 2.09e-03 -3.57e-04 6.13e-03 5.14e-03 2.56e-03
## 1418 -5.93e-03 -4.43e-04 3.81e-03 4.13e-04 6.07e-03 4.20e-03 2.28e-03
## 1419
       5.01e-04 4.82e-04 -4.03e-03 -3.17e-04 2.81e-03 1.06e-03
## 1420 4.01e-03 3.17e-03 1.18e-03 -1.64e-03 -5.69e-03 -5.51e-03 8.64e-04
## 1421 -1.83e-05 -1.29e-02 -9.88e-03 1.07e-02 1.44e-02 -1.52e-03 1.20e-02
       2.15e-02 2.20e-04 -6.12e-04 5.17e-04 -1.10e-02 -3.29e-02 4.53e-03
## 1422
## 1424 2.28e-03 -1.46e-03 1.93e-03 1.05e-03 -1.90e-03 -1.99e-03 -7.82e-03
## 1427 6.74e-05 1.58e-02 -2.58e-03 -1.25e-02 -4.06e-03 1.09e-03 1.18e-04
## 1428 -4.21e-03 -1.16e-02 4.53e-03 2.81e-03 3.19e-03 2.46e-03 3.66e-03
## 1430 -1.67e-02 -1.67e-03 1.94e-02 3.02e-03 2.00e-03 8.28e-03 1.17e-02
## 1431 -1.02e-02 -1.95e-02 2.25e-02 1.70e-02 2.70e-02 -4.04e-03 7.15e-03
## 1432 2.67e-03 -2.32e-03 -4.71e-05 2.01e-03 -1.87e-03 -3.05e-03 -1.21e-03
## 1433 -5.84e-04 -7.61e-04 6.47e-05 4.19e-04 -4.91e-03 1.93e-03 2.67e-04
## 1435 4.60e-04 5.04e-04 -1.54e-03 -1.27e-03 -2.39e-03 -2.29e-04 -1.71e-03
## 1438 -3.21e-03 9.49e-03 5.98e-03 -3.05e-03 2.40e-03 -1.72e-03 3.65e-03
## 1439 1.85e-02 2.79e-03 -7.82e-03 -2.97e-03 -1.54e-02 -1.85e-02 -4.84e-03
## 1441 -4.10e-04 -3.37e-04 1.14e-03 5.87e-04 2.74e-03 -1.15e-03 5.72e-04
## 1442 -2.57e-02 5.10e-03 -2.13e-02 -7.42e-03 6.15e-02 4.03e-02 1.13e-02
## 1443 -4.04e-03 -7.84e-04 4.39e-03 1.43e-03 -1.66e-03 3.47e-03 8.36e-04
## 1444 4.97e-02 -2.69e-03 -4.54e-02 5.77e-04 -2.04e-02 -3.91e-02 -3.15e-02
## 1445 -1.38e-01 -1.95e-02 1.54e-01 2.62e-02 7.38e-02 5.26e-02 1.06e-01
## 1446 1.14e-04 3.69e-06 -3.19e-04 -1.41e-04 4.58e-04 -8.06e-05 5.81e-05
## 1449 -1.78e-02 -4.14e-03 4.31e-02 5.55e-03 -9.28e-03 4.02e-03 1.85e-02
## 1451 4.14e-04 2.26e-04 -4.81e-04 -1.78e-04 3.65e-05 -4.28e-04 4.85e-04
        2.15e-02 -1.65e-02 2.24e-02 1.66e-02 -5.07e-03 -3.98e-02 -3.98e-03
       3.18e-02 1.58e-02 -1.16e-01 -1.77e-02 2.17e-02 7.70e-03 5.60e-03
## 1454
## 1455
       2.04e-03 -4.00e-03 5.06e-03 4.86e-03 5.05e-03 -4.59e-03 -3.98e-03
## 1456 1.68e-03 2.37e-05 -1.99e-03 -2.40e-04 -8.89e-04 -8.76e-04 -6.76e-04
## 1457 1.24e-02 3.06e-03 -3.57e-02 -7.91e-03 7.48e-04 -8.90e-03 -4.39e-03
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## 1458 8.68e-03 -1.51e-02 -1.38e-03 1.20e-02 3.64e-03 -1.25e-02 1.13e-03
## 1459 -9.71e-03 -3.97e-02 2.67e-02 2.45e-02 2.76e-04 7.30e-04 -3.11e-03
## 1460 -4.58e-05 6.06e-05 2.57e-04 4.92e-06 -2.66e-04 1.27e-04 -5.52e-04
## 1461 -1.74e-04 -8.02e-06 2.88e-04 -4.96e-05 3.56e-04 -1.37e-07 8.04e-05
## 1462 -1.38e-02 -2.98e-04 2.15e-02 -8.73e-04 2.30e-03 8.88e-03 -2.29e-02
## 1463 4.71e-02 1.24e-03 -4.68e-02 -5.82e-03 1.04e-04 -4.46e-02 -3.53e-02
## 1466 5.51e-03 -2.19e-02 -2.23e-03 1.84e-02 1.71e-03 -6.02e-03 3.72e-03
## 1467 -6.69e-03 -4.33e-03 1.10e-02 5.95e-03 1.03e-02 5.87e-03 -1.11e-02
## 1468 -2.34e-02 -5.50e-02 3.81e-02 -3.04e-02 -1.44e-02 3.73e-03 4.10e-02
## 1469 2.62e-02 -2.48e-03 -1.73e-02 -9.27e-04 -1.02e-02 -2.63e-02 6.13e-03
## 1470 1.74e-03 1.74e-03 -3.41e-03 -1.14e-03 4.19e-03 -1.67e-04 -1.24e-03
## 1472 -2.28e-02 5.58e-04 9.52e-03 1.56e-03 2.64e-02 2.60e-02 -5.85e-04
## 1473 -8.07e-04 6.90e-04 -1.12e-03 -8.49e-04 3.57e-03 1.49e-03 -1.50e-03
## 1474 -9.97e-04 6.34e-03 1.27e-03 -1.21e-02 -1.23e-03 1.74e-03 -2.91e-03
## 1476 -2.55e-03 -4.90e-02 1.48e-02 3.26e-02 -1.68e-03 -2.74e-03 -8.66e-04
## 1477 -1.16e-04 -1.72e-03 -7.82e-05 1.19e-03 2.79e-04 1.50e-04 2.49e-04
## 1479 1.05e-02 -4.79e-02 -6.86e-03 3.18e-02 -2.37e-03 -1.01e-02 1.08e-02
## 1481 -2.39e-03 -1.58e-03 -5.76e-04 5.37e-04 -1.11e-03 2.26e-03 1.16e-02
## 1482 -4.89e-03 -1.25e-02 1.94e-02 1.02e-02 1.29e-02 -3.92e-03 3.84e-03
## 1483 -3.16e-03 1.64e-02 5.14e-04 -9.85e-03 9.26e-03 -1.80e-03 9.48e-03
## 1484 7.00e-03 -1.34e-02 -1.35e-02 1.11e-02 -2.40e-02 -1.18e-03 1.72e-02
## 1485 -5.58e-03 -1.86e-02 1.04e-02 1.55e-02 5.63e-03 9.95e-04 -3.35e-03
## 1486 2.10e-03 -1.95e-04 -2.69e-03 1.46e-04 -3.54e-03 -1.67e-03 3.30e-03
## 1488 -7.74e-05 1.65e-03 -5.44e-03 -2.06e-03 5.57e-03 4.17e-03 -2.33e-03
## 1489 4.12e-03 -1.88e-04 -2.25e-03 1.80e-05 -4.40e-04 -4.42e-03 -5.33e-03
## 1491 3.35e-03 7.42e-03 -4.45e-03 -5.48e-03 -8.05e-04 -1.23e-03 -2.21e-03
## 1492 3.16e-02 -4.81e-03 -9.81e-03 4.11e-04 -3.16e-02 -2.18e-02 -2.45e-02
## 1493 -3.17e-04 1.03e-03 -1.34e-03 -8.98e-04 1.49e-03 7.29e-04 -1.27e-04
## 1494 1.14e-02 -9.62e-03 1.39e-02 8.10e-03 5.80e-04 -2.08e-02 -7.91e-03
## 1495 1.07e-02 -8.86e-03 -2.35e-03 2.97e-03 2.87e-02 -2.88e-02 2.52e-02
## 1497 -1.58e-01 -2.64e-02 6.76e-02 3.12e-02 2.57e-01 2.03e-01 9.18e-02
## 1498 3.18e-03 -2.20e-03 7.20e-04 2.29e-03 -1.60e-03 -4.35e-03 1.21e-03
## 1501 -1.90e-02 -2.85e-03 -3.20e-02 1.85e-03 2.34e-02 4.20e-02 1.44e-02
## 1502 6.97e-03 -6.43e-03 1.04e-02 5.82e-03 7.56e-03 -1.38e-02 -1.00e-02
## 1503 -6.68e-03 -6.62e-03 2.48e-02 8.57e-03 6.69e-03 2.33e-03 -1.36e-02
## 1504 1.95e-02 -2.15e-02 -3.80e-04 1.27e-02 3.12e-02 -3.38e-02 3.68e-02
## 1505 -2.96e-03 -1.19e-04 -5.09e-03 4.39e-05 6.03e-03 6.81e-03 2.17e-03
## 1507 -3.90e-03 -1.19e-02 -1.16e-02 9.15e-03 2.15e-03 1.86e-02 9.00e-03
## 1508 -5.25e-03 -6.02e-03 4.54e-03 5.52e-03 4.49e-03 3.43e-03 4.24e-03
## 1509 -2.56e-02 -1.62e-02 5.55e-02 1.88e-02 5.21e-02 4.35e-03 -1.20e-02
## 1510 2.50e-02 -9.82e-03 -1.67e-02 1.04e-02 -1.40e-02 -6.14e-03 -2.12e-02
## 1511 -1.30e-02 -6.95e-03 4.64e-03 5.54e-03 1.14e-02 1.61e-02 1.25e-02
## 1512 -1.56e-03 2.38e-03 -3.33e-03 -2.21e-03 -1.55e-02 9.38e-03 -5.14e-04
## 1514 -1.15e-02 1.03e-02 -7.50e-03 -1.01e-02 6.18e-03 5.35e-03 1.55e-02
## 1515 -1.83e-02 -1.13e-03 6.47e-03 1.88e-03 2.65e-02 1.71e-02 5.92e-03
## 1517 -1.26e-03 -1.30e-02 5.94e-03 9.56e-03 8.96e-03 -5.71e-03 5.04e-03
## 1519 3.25e-02 -7.45e-03 -2.21e-02 5.87e-03 2.08e-02 -2.90e-02 -1.77e-02
## 1520 2.82e-03 -6.26e-03 8.29e-03 3.91e-03 7.74e-03 -1.27e-02 3.94e-03
## 1521 -3.62e-04 -1.06e-03 9.35e-04 1.04e-03 -5.74e-04 8.48e-04 -6.96e-04
## 1522 -4.71e-02 -1.62e-02 5.22e-02 1.46e-02 7.25e-02 3.56e-02 2.28e-02
## 1524 -5.55e-03 6.59e-03 -6.27e-02 -2.96e-03 6.88e-02 3.22e-02 4.40e-03
## 1525 1.86e-02 -5.82e-03 -2.82e-02 7.46e-03 -1.14e-02 4.07e-03 -2.63e-02
## 1527 2.28e-02 -1.03e-02 2.59e-03 1.05e-02 -1.62e-02 -1.59e-02 -2.86e-02
## 1529 -5.35e-03 -2.22e-03 4.54e-03 2.65e-03 1.49e-02 4.90e-03 -2.77e-03
```

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## 1531 -4.18e-03 -2.25e-03 3.48e-03 2.24e-03 6.58e-04 4.99e-03 -2.35e-04
## 1533 -9.81e-03 -5.74e-03 -9.07e-04 6.37e-03 1.90e-02 1.55e-02 -7.10e-04
## 1534 1.12e-02 -1.05e-02 1.16e-02 9.57e-03 1.04e-02 -7.35e-03 -1.02e-02
## 1535 -2.93e-02 -1.09e-03 1.97e-02 -1.13e-03 3.54e-02 1.86e-02 1.58e-02
## 1536 -4.03e-02 -1.01e-02 1.70e-02 8.62e-03 2.15e-02 3.73e-02 2.58e-02
## 1537 1.60e-02 -2.00e-03 -1.98e-02 1.46e-03 -6.77e-03 -1.73e-03 -1.23e-02
## 1539 -6.46e-03 3.98e-03 2.26e-03 8.58e-03 1.89e-02 1.07e-03 1.43e-02
## 1540 -5.82e-03 -5.89e-03 2.11e-02 3.50e-03 1.04e-02 -1.38e-02 3.36e-03
## 1541 -1.49e-03 -1.82e-05 4.73e-03
                                    1.30e-04 3.21e-05 -3.26e-03 3.03e-03
## 1542 -1.11e-03 -1.34e-03 -2.76e-02 1.86e-03 4.98e-02 1.11e-02 -5.26e-03
## 1543 2.11e-03 -1.49e-02 -7.51e-03 1.36e-02 6.42e-03 9.50e-03 -9.80e-03
## 1544 -1.59e-03 -4.13e-03 4.12e-03 7.49e-04 2.54e-02 -1.21e-02 2.61e-02
## 1545 -5.76e-03 -2.68e-04 -5.55e-03 1.58e-03 3.35e-02 9.34e-03 2.94e-03
## 1546 3.83e-03 -9.58e-03 1.44e-02 5.16e-03 9.97e-03 -2.00e-02 1.53e-02
## 1547 5.68e-05 -3.00e-03 4.01e-03 2.77e-03 4.55e-03 -2.60e-03 1.67e-04
## 1549 -2.72e-03 2.97e-04 2.24e-03 -2.44e-04 3.22e-04 1.25e-03
                                                                 1.05e-03
## 1550 -3.49e-03 -4.82e-03 9.80e-04 4.41e-03 -3.53e-03 7.09e-03 3.51e-03
## 1551 -1.36e-02 -2.76e-03 1.55e-02 2.94e-03 2.68e-02 3.27e-03 3.50e-03
## 1552 -5.44e-02 9.22e-03 -3.82e-02 -5.96e-03 1.25e-01 6.61e-02 4.33e-02
## 1553 7.70e-04 -2.19e-03 -1.37e-03 2.11e-03 3.99e-03 5.44e-03 -1.91e-03
## 1554 -7.66e-03 2.83e-03 7.97e-03 -2.31e-03 -2.41e-04 2.62e-03 1.47e-03
## 1555 5.11e-03 2.79e-04 3.79e-03 -1.43e-04 -1.60e-02 -5.82e-03 -5.96e-03
## 1556 -6.24e-03 5.76e-03 6.04e-03 1.42e-03 4.42e-03 1.84e-03 1.23e-02
## 1557 8.14e-03 -7.23e-03 -9.20e-03 5.95e-03 -1.42e-02 1.18e-03 -5.42e-04
## 1559 -1.85e-02 -9.47e-03 6.37e-03 9.18e-03 2.14e-02 2.52e-02 9.66e-03
## 1560 -6.80e-02 2.57e-02 -4.07e-03 -1.58e-02 8.01e-03 8.35e-02 2.91e-03
## 1561 -2.30e-02 2.93e-03 1.74e-02 -2.38e-03 1.30e-02 1.22e-02 1.34e-02
## 1563 -5.16e-03 -3.19e-03 -5.33e-03 -2.43e-03 1.78e-02 -3.39e-03 4.10e-02
## 1565 1.28e-04 -1.10e-03 1.21e-03 6.78e-04 -2.93e-04 -1.15e-03 8.16e-04
## 1567 -4.74e-03 1.31e-03 1.30e-03 -2.41e-03 4.32e-03 1.33e-03 4.62e-03
## 1568 9.41e-02 1.12e-02 -2.03e-02 -8.21e-03 -2.83e-02 -9.62e-02 -3.72e-02
## 1570 2.12e-02 2.91e-03 -1.39e-02 -9.50e-04 -4.55e-03 -1.37e-02 -2.87e-02
## 1571 -2.54e-03 2.58e-03 -4.64e-03 -2.20e-03 2.44e-03 4.20e-03 9.53e-04
## 1573 -1.05e-02 1.31e-02 3.48e-02 -9.26e-03 9.92e-03 2.50e-03 6.72e-03
## 1574 2.59e-02 4.47e-05 1.22e-02 6.87e-04 -1.26e-02 -3.22e-02 -1.55e-02
## 1575 -9.34e-05 -3.50e-03 -1.66e-03 1.21e-03 6.32e-03 -8.64e-06 1.25e-02
## 1577 -4.34e-03 1.41e-04 1.40e-02 1.48e-03 1.80e-03 2.57e-03 -3.79e-03
## 1578 -6.91e-03 9.92e-04 5.45e-03 -9.67e-04 3.79e-03 3.66e-03 2.41e-03
## 1579 4.44e-03 -7.28e-05 -7.35e-05 4.04e-04 -4.37e-03 -3.39e-03 -4.26e-03
## 1580 -2.34e-03 1.35e-03 4.07e-02 3.20e-03 -1.97e-02 -2.20e-02 -1.35e-02
## 1582 -1.47e-02 -9.07e-04 5.42e-03 -5.62e-04 2.57e-02 1.20e-02 1.67e-02
## 1583 1.80e-03 -3.34e-05 -1.21e-03 -3.23e-05 -1.33e-03 -1.42e-03 -8.19e-04
## 1585 4.53e-03 -1.27e-03 -5.76e-03 -9.83e-04 -1.30e-03 2.03e-03 -6.24e-03
## 1587 -4.85e-03 -2.68e-04 6.01e-03 9.00e-03 2.21e-02 -1.54e-02 4.47e-02
## 1588 4.70e-03 3.27e-03 -3.69e-03 -1.03e-03 3.28e-03 -1.16e-03 -1.09e-02
## 1589 3.57e-02 2.28e-02 -7.28e-02 -1.89e-02 2.14e-03 -3.13e-03 -4.18e-03
## 1590 -1.15e-04 2.20e-03 2.11e-03 -1.13e-03 -4.51e-03 -2.16e-04 -3.19e-03
## 1591 -6.99e-04 2.02e-04 3.47e-04 -1.75e-04 3.79e-04 7.43e-04 4.86e-04
## 1592 3.60e-03 2.09e-03 -2.26e-03 -1.28e-03 -5.68e-03 -1.97e-03 -5.12e-03
## 1593 -2.14e-02 1.03e-02 1.96e-02 -1.02e-02 1.38e-02 1.43e-03 1.93e-02
## 1594 -2.46e-03 1.95e-03 -1.51e-03 -1.48e-03 2.83e-03 3.97e-03 -3.40e-05
## 1595 -1.72e-02 -1.25e-02 -8.01e-03 1.31e-02 1.89e-02 3.49e-02 7.43e-03
## 1596 3.28e-02 -1.42e-02 -1.37e-02 1.24e-02 -3.31e-02 -2.99e-02 -1.73e-02
## 1598 -5.57e-03 -3.59e-05 1.30e-03 4.01e-04 5.16e-03 5.29e-03 6.57e-03
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## 1599 7.58e-03 -5.13e-03 -7.68e-03 3.85e-03 -7.31e-03 -3.41e-03 -2.54e-03
## 1600 -2.42e-03 1.77e-04 7.19e-03 3.42e-04 5.08e-03 -2.17e-03 -1.91e-03
## 1603 2.66e-03 -3.58e-05 -1.38e-03 9.01e-05 -1.60e-03 -1.62e-03 -2.38e-03
## 1604 -7.19e-03 -9.70e-03 2.22e-02 9.62e-03 -1.70e-02 -3.01e-03 -1.64e-02
       4.11e-04 -1.71e-03 5.80e-03 6.06e-03 1.17e-03 -8.30e-03 1.61e-02
## 1606 -1.38e-03 7.75e-03 -1.06e-02 -1.03e-02 1.42e-02 -8.14e-03 3.23e-02
## 1607 3.92e-03 -2.73e-03 4.43e-04 2.33e-03 -9.93e-03 -1.82e-03 -6.26e-03
## 1608 3.12e-03 1.67e-03 5.06e-03 -1.31e-03 -1.79e-03 -8.20e-03 -2.72e-03
## 1609 -2.92e-03 -2.95e-03 7.32e-03 3.28e-03 -1.85e-03 8.02e-04 5.56e-03
## 1610 9.82e-03 -1.74e-02 2.59e-02 1.50e-02 -3.99e-02 -1.65e-02 -2.90e-02
## 1611 -3.64e-03 8.31e-05 8.42e-04 -5.00e-04 4.22e-03 3.15e-03 5.32e-03
## 1612 -5.52e-03 -3.67e-03 6.39e-03 4.73e-03 7.01e-03 6.77e-03 -8.97e-03
## 1614 2.37e-03 6.28e-02 -3.50e-03 -4.40e-02 7.45e-03 -6.18e-03 -1.46e-03
## 1615 -3.50e-03 1.35e-03 1.04e-03 -1.65e-03 5.77e-03 1.61e-03 6.46e-03
## 1616 9.46e-03 -4.30e-03 -1.83e-03 3.48e-03 -1.57e-02 -7.60e-03 -9.50e-03
## 1617 -4.46e-02 -2.06e-02 1.61e-02 1.38e-02 1.50e-02 3.89e-02 8.10e-02
## 1618 7.80e-03 -2.27e-03 5.34e-03 1.37e-03 -9.22e-03 -1.04e-02 -4.74e-03
## 1619
       7.96e-04 -3.16e-03 1.55e-03 2.73e-03 -6.95e-03 -1.08e-03 1.93e-03
## 1620 8.52e-03 -4.31e-03 -2.38e-03 3.44e-03 -8.23e-03 -7.26e-03 -8.59e-03
       5.44e-03 2.87e-03 -9.39e-04 -1.76e-03 -4.42e-04 -5.87e-03 -1.06e-02
## 1625
       6.36e-03 -4.04e-03 5.75e-03 2.98e-03 -1.51e-02 -4.26e-03 -1.67e-02
       1.51e-03 2.79e-02 -1.46e-03 -1.67e-02 6.59e-03 -9.57e-03 1.65e-02
## 1628 -2.56e-03 8.37e-04 8.08e-04 -7.67e-04 1.63e-03 3.11e-03 2.92e-03
## 1629 -3.09e-04 -4.40e-03 2.91e-03 6.91e-03 3.26e-03 5.64e-03 -2.02e-02
## 1631 2.79e-03 -2.02e-03 -5.47e-03 1.93e-03 -3.76e-03 -1.57e-03 -8.29e-03
## 1632 -1.12e-02 -5.54e-03 7.48e-03 5.10e-03 5.05e-03 1.22e-02 -2.94e-03
## 1636
       1.24e-03 1.09e-04 1.36e-03 1.28e-05 1.93e-03 -2.12e-03 -2.20e-03
       1.01e-02 2.53e-03 4.93e-03 -1.70e-03 -1.64e-02 -1.18e-02 -3.61e-03
## 1638
## 1640 -3.82e-03 -2.30e-03 8.22e-03 2.99e-03 -1.90e-03 1.40e-03 1.92e-03
## 1642
       2.24e-03 1.39e-03 4.91e-04 -6.42e-04 -2.43e-03 -2.93e-03 -9.84e-04
## 1643
       4.37e-02 8.27e-03 -5.84e-02 -3.36e-03 -1.14e-02 -3.04e-02 -2.82e-03
       4.01e-02 -9.32e-03 -5.15e-03 7.12e-03 -3.11e-02 -3.95e-02 -2.46e-02
       2.28e-03 5.48e-03 -1.04e-03 -5.11e-03 -8.10e-05 -2.38e-03 -5.43e-04
## 1646 -2.56e-04 -1.72e-04 1.12e-03 2.10e-04 4.20e-04 -4.53e-04 -5.36e-04
## 1648 -2.20e-02 -1.14e-03 -2.43e-04 1.14e-03 2.27e-02 2.35e-02 6.07e-03
## 1649 5.00e-03 -2.70e-03 -8.91e-04 2.93e-03 -8.89e-03 -1.89e-03 -8.23e-03
## 1650 2.44e-03 -7.21e-04 -4.81e-04 6.48e-04 -3.85e-03 -1.70e-03 -1.90e-03
## 1653 -1.90e-04 -5.05e-05 6.05e-06 7.16e-05 1.22e-04 3.07e-04 -1.31e-04
## 1654 -8.34e-05 6.15e-05 -1.29e-05 -6.81e-05 1.58e-04 8.46e-06 1.99e-04
## 1655 5.92e-03 -2.76e-03 9.63e-03 3.74e-03 5.60e-03 -1.26e-02 -1.21e-02
## 1657 5.78e-03 -4.59e-03 1.41e-03 4.07e-03 -1.13e-02 -1.14e-03 -7.16e-03
## 1658 7.10e-03 -1.80e-02 6.25e-03 1.99e-02 -3.24e-02 4.78e-03 -4.45e-02
## 1659 -1.13e-03 -2.19e-03 -6.22e-04 3.07e-03 1.17e-04 6.16e-03 -1.01e-02
## 1661 -2.17e-03 -3.22e-03 6.50e-03 1.83e-03 1.75e-04 -4.30e-03 -7.77e-03
## 1662 1.33e-02 -2.28e-03 -8.56e-04 1.07e-03 -1.13e-02 -1.62e-02 2.45e-04
       1.25e-03 -7.11e-04 6.72e-04 8.64e-04 -2.12e-03 -2.33e-04 -3.25e-03
## 1663
## 1664 -5.42e-03 7.54e-03 4.45e-03 -8.54e-03 1.44e-02 -6.99e-03 1.52e-02
## 1665 3.61e-03 8.84e-05 -8.71e-04 -2.39e-06 -2.65e-03 -3.50e-03 -2.70e-03
## 1666 4.84e-03 -1.47e-03 -1.26e-03 1.15e-03 -3.48e-03 -5.60e-03 -6.70e-03
## 1668 -2.14e-04 2.11e-05 2.30e-04 -6.82e-06 4.01e-04 8.27e-05 7.18e-05
## 1669 -1.20e-02 1.89e-03 3.65e-03 -1.94e-03 4.43e-03 9.73e-03 1.12e-02
## 1670 -5.77e-03 2.05e-03 4.52e-03 -2.21e-03 7.73e-03 2.10e-03 6.83e-03
## 1671 1.82e-03 2.08e-03 -5.89e-04 -1.25e-03 -1.36e-03 -1.98e-03 -7.23e-04
## 1672 9.92e-03 1.33e-02 -1.03e-02 -8.98e-03 -1.08e-02 -6.29e-03 2.03e-03
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## 1673 8.67e-04 1.08e-03 8.53e-04 -7.37e-04 1.34e-04 -1.36e-03 -8.86e-04
## 1674 -9.39e-03 2.21e-03 1.42e-03 -3.51e-03 1.14e-02 4.09e-03 1.56e-02
## 1675 7.03e-04 -1.04e-03 3.55e-04 8.22e-04 -1.60e-03 -5.96e-04 1.22e-05
## 1676 -9.10e-03 2.59e-03 4.64e-03 -2.53e-03 1.27e-02 3.93e-03 1.06e-02
       2.04e-02 2.72e-03 -7.88e-03 -3.33e-03 -1.67e-02 -1.56e-02 -1.16e-03
## 1678 -9.86e-03 -8.93e-03 6.93e-04 7.22e-03 -9.23e-03 1.24e-02 2.38e-02
## 1679 -5.51e-05 -4.19e-04 1.15e-03 4.36e-04 1.49e-04 -1.09e-04 -6.57e-04
       1.15e-03 -8.40e-04 -1.45e-03 1.13e-03 1.06e-04 9.42e-05 -9.91e-04
## 1680
        1.42e-02 -3.40e-03 -7.67e-03 3.24e-03 -1.21e-02 -1.16e-02 -1.27e-02
## 1682
       2.07e-02 -4.83e-03 -1.50e-02 2.54e-03 -1.18e-02 -1.87e-02 4.30e-03
## 1685 -8.57e-03 6.28e-03 -1.32e-03 -4.10e-03 -7.27e-03 9.91e-03 -1.84e-03
       2.39e-02 6.45e-03 -5.95e-03 -6.26e-03 -4.86e-02 -2.18e-02 -5.64e-03
## 1686
## 1687
       2.21e-02 -7.22e-03 -5.00e-02 7.43e-03 -2.77e-03 2.50e-02 -1.14e-02
## 1688 2.62e-02 -3.13e-03 -8.54e-03 2.55e-03 -8.35e-03 -2.30e-02 -1.44e-02
## 1689 -2.17e-03 1.45e-03 -2.84e-03 -1.47e-03 -5.63e-03 1.75e-03 2.11e-03
## 1690 -3.32e-03 -5.45e-03 1.74e-03 3.50e-03 1.10e-02 -4.60e-03 9.60e-03
## 1691 -6.77e-03 -2.35e-03 -5.78e-03 -7.84e-05 4.33e-02 1.78e-04 1.60e-02
## 1692 3.50e-02 1.12e-02 -1.14e-02 -7.28e-03 -1.49e-02 -3.90e-02 -2.25e-02
## 1693 1.78e-04 -1.35e-03 -2.00e-04 9.37e-04 -2.16e-04 1.33e-04 -3.79e-04
## 1694
       1.04e-03 9.11e-04 1.37e-04 -1.15e-03 -6.45e-04 -7.01e-04 -2.98e-03
## 1696 2.58e-03 3.09e-03 -3.97e-03 -1.94e-03 2.09e-03 -6.33e-04 -5.38e-03
## 1697 -8.91e-03 3.89e-03 -5.14e-03 -4.72e-03 1.50e-02 4.79e-03 1.35e-02
## 1699 -7.43e-03 1.78e-03 -7.02e-04 -1.99e-03 1.26e-02 3.25e-03 1.25e-02
## 1700 3.48e-03 1.08e-03 1.23e-03 -9.20e-04 -4.26e-03 -3.98e-03 -1.60e-03
## 1701 5.66e-04 1.08e-02 -2.63e-02 -1.49e-02 2.35e-02 -1.46e-02 5.03e-02
## 1702 -5.59e-03 -1.04e-02 -3.97e-03 5.27e-03 9.14e-03 9.91e-03 1.77e-03
## 1703 -2.18e-03 -2.89e-04 -1.60e-03 1.38e-04 1.04e-03 2.84e-03
                                                                 1.64e-03
## 1704 -1.46e-04 1.17e-04 -2.67e-04 -1.24e-04 2.20e-04 1.65e-04
                                                                  3.08e-04
## 1705 -3.48e-03 1.54e-02 6.28e-03 -1.04e-02 -8.33e-03 1.47e-03
                                                                 6.86e-03
## 1706 -3.39e-04 -2.61e-05 6.88e-04 -1.18e-06 -2.41e-04 1.27e-04 5.65e-04
## 1708 -2.40e-02 3.32e-02 -9.68e-02 -2.87e-02 2.05e-02 5.89e-02 4.47e-02
## 1709 -1.67e-03 5.16e-04 -1.70e-03 -5.47e-04 3.17e-03 1.38e-03 3.21e-03
## 1710 -3.08e-02 9.41e-03 3.80e-03 -4.22e-03 -1.04e-02 4.70e-02 -2.66e-02
## 1711 -1.73e-02 5.36e-03 1.16e-02 -2.92e-03 1.35e-03 9.62e-03 3.60e-02
## 1712 -3.73e-03 4.20e-03 -8.80e-03 -3.05e-03 5.94e-03 7.80e-03 4.14e-03
## 1713 -3.22e-03 3.32e-04 -3.46e-03 -1.04e-03 1.87e-03 2.44e-03 7.99e-03
## 1714 5.24e-03 -2.86e-03 6.16e-03 2.48e-03 4.22e-04 -8.44e-03 -5.02e-03
## 1716 8.52e-04 -1.59e-03 6.06e-03 1.59e-03 -2.48e-03 -3.53e-03 -2.85e-03
## 1717 -4.91e-03 9.42e-05 -6.13e-04 -1.74e-04 7.42e-03 5.61e-03 -3.23e-03
## 1720 -1.76e-04 1.16e-04 -2.44e-04 -1.06e-04 2.84e-04 2.07e-04 2.71e-04
## 1721 2.19e-03 2.49e-03 3.16e-03 -1.85e-03 3.14e-04 -6.17e-03 3.16e-03
## 1723 2.66e-03 -3.08e-05 -3.84e-04 -3.52e-05 -7.62e-04 -2.57e-03 -2.05e-03
## 1724 -9.38e-03 1.08e-03 -5.58e-03 -3.52e-03 1.85e-02 5.01e-03 1.71e-02
## 1725 -1.78e-03 4.59e-03 -2.36e-03 -5.19e-03 8.16e-03 -3.95e-03 1.40e-02
## 1726 1.08e-03 -1.66e-03 4.31e-03 1.42e-03 -3.28e-04 -3.47e-03 -1.83e-03
## 1727 -9.66e-03 2.19e-03 4.61e-03 -2.08e-03 8.58e-03 8.00e-03 9.26e-03
## 1728 -2.59e-02 2.07e-03 1.47e-02 -4.17e-04 4.86e-03 2.30e-02 4.14e-03
## 1729 -1.52e-03 3.04e-03 -7.06e-03 -3.26e-03 5.31e-03 2.89e-03 7.78e-03
## 1730 -1.92e-02 3.53e-03 1.43e-02 -4.41e-03 1.57e-02 7.53e-03 2.16e-02
## 1731 -2.36e-04 -1.20e-04 -9.82e-05 1.08e-04 7.35e-05 3.45e-04 1.59e-06
## 1732 -2.89e-03 -4.55e-03 6.06e-04 4.40e-04 5.78e-03 1.77e-03 2.51e-03
## 1733 8.39e-04 -1.62e-04 9.97e-04 1.16e-04 -1.13e-03 -1.23e-03 -7.64e-04
## 1734 -9.44e-03 1.25e-03 -2.18e-03 -1.71e-03 1.39e-02 9.66e-03 9.80e-03
## 1735 -3.62e-03 -3.00e-03 -2.99e-03 1.83e-03 5.92e-03 7.02e-03 -9.55e-04
```

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## 1737 6.75e-04 1.07e-03 -2.01e-02 -1.00e-03 2.06e-03 1.03e-02 2.44e-03
## 1738 -2.92e-02 6.39e-03 -2.45e-03 -4.03e-03 2.42e-02 3.81e-02 2.04e-02
## 1739 6.14e-04 3.14e-05 1.28e-03 -4.51e-05 -5.53e-04 -1.28e-03 -4.15e-04
## 1740 -6.93e-03 7.38e-03 -2.09e-02 -9.60e-03 3.77e-03 9.48e-03 3.07e-02
## 1741 -1.11e-03 -5.76e-05 1.03e-03 5.27e-04 5.20e-03 1.51e-04 5.45e-04
## 1742 -5.48e-03 2.45e-02 5.90e-03 -1.60e-02 -4.93e-03 1.74e-03 1.60e-02
## 1744 -1.91e-03 -5.17e-03 -1.05e-02 3.70e-03 9.52e-03 6.21e-03 9.97e-04
## 1746 5.07e-03 -3.45e-03 2.77e-03 3.44e-03 -1.13e-02 -3.15e-03 -9.05e-03
## 1747
        9.59e-03 5.94e-02 1.12e-02 -3.29e-02 8.17e-03 -2.97e-02 -9.32e-03
## 1748 2.31e-05 8.16e-03 -1.73e-03 -3.94e-03 3.52e-02 -5.45e-04 -2.84e-03
## 1749 7.23e-03 -3.39e-03 9.81e-04 3.15e-03 -7.56e-03 -7.37e-03 -9.30e-03
## 1750 -6.59e-03 -1.13e-03 -1.65e-03 7.08e-04 7.88e-03 7.21e-03 7.11e-03
## 1751 -3.10e-02 1.30e-02 -1.24e-02 -1.36e-02 2.57e-02 2.78e-02 4.07e-02
## 1752 -1.85e-02 3.44e-03 -1.66e-03 -5.15e-03 2.22e-02 1.28e-02 2.91e-02
## 1753 1.77e-03 1.07e-02 -2.94e-02 -9.08e-03 1.32e-02 6.08e-03 1.48e-02
## 1754 -1.17e-02 3.88e-03 6.69e-03 -3.74e-03 1.55e-02 2.22e-03 1.47e-02
## 1755 3.24e-03 4.51e-03 -1.14e-02 -3.84e-03 -1.02e-03 2.61e-03 1.35e-03
## 1756 -7.68e-02 1.27e-02 2.09e-02 -8.63e-03 5.14e-02 7.30e-02 4.10e-02
## 1757 -3.13e-03 -2.13e-03 8.77e-03 2.22e-03 2.54e-04 1.34e-03 -4.00e-03
## 1759 4.73e-03 5.22e-03 8.76e-03 -4.58e-03 -1.26e-02 -9.18e-03 4.49e-03
## 1760 5.38e-04 -7.69e-05 -1.98e-04 5.10e-05 -4.50e-04 -3.91e-04 -3.71e-04
## 1761 3.21e-03 8.51e-03 1.39e-03 -6.24e-03 -4.35e-03 -2.53e-03 -1.73e-03
## 1762 -1.53e-03 1.49e-03 -3.16e-03 -1.16e-03 3.73e-03 2.60e-03 2.20e-03
## 1763 -4.88e-03 -5.39e-03 -3.62e-03 2.17e-03 9.88e-03 5.13e-03 5.75e-03
## 1766 2.51e-03 -3.37e-03 2.34e-03 -5.96e-04 -5.89e-03 -6.92e-03 1.89e-02
## 1767 -7.91e-03 -1.02e-02 8.53e-04 6.10e-03 3.53e-03 1.08e-02 2.42e-03
## 1768 -9.38e-04 -6.28e-04 2.05e-03 -1.27e-04 -1.63e-04 -5.95e-04 5.10e-03
## 1769 -3.87e-03 -1.48e-05 5.39e-03 1.07e-03 6.50e-04 1.54e-03 6.19e-03
## 1770 -8.17e-04 -1.31e-04 2.78e-03 3.25e-04 7.09e-04 -3.37e-04 -6.52e-04
## 1772 6.70e-03 -2.10e-03 -4.06e-03 1.34e-03 7.05e-04 -7.23e-03 1.80e-03
## 1775 1.33e-02 -8.64e-04 1.37e-03 2.94e-03 -4.49e-03 -1.36e-02 -2.18e-02
## 1776 -2.11e-03 2.97e-03 4.40e-04 -2.41e-03 8.32e-03 1.31e-03 1.77e-03
## 1777 4.33e-02 7.99e-03 -1.76e-02 -3.98e-03 -3.24e-02 -5.25e-02 1.03e-03
## 1778 -1.55e-03 2.80e-04 1.03e-03 -1.87e-03 7.49e-03 -7.97e-03 2.94e-02
        1.12e-02 1.37e-03 -1.12e-02 7.16e-05 -9.32e-03 -5.18e-03 -5.19e-04
## 1780 1.95e-03 -1.68e-03 6.06e-03 -1.24e-03 -5.81e-03 -1.01e-02 -3.94e-03
## 1783 4.94e-03 1.24e-04 -1.45e-03 -2.53e-03 -1.70e-03 -8.39e-03 -6.71e-03
## 1784 -1.56e-02 2.17e-03 -1.08e-03 -5.16e-03 1.11e-02 1.10e-02 1.35e-02
## 1792 3.81e-03 5.42e-05 -8.89e-03 -2.76e-04 -1.82e-03 4.48e-03 -6.08e-03
## 1793 -1.01e-03 1.40e-03 2.64e-03 -1.07e-03 -1.84e-03 -1.73e-03 -1.52e-03
## 1795 -4.69e-04 -1.33e-03 -4.33e-05 1.27e-03 1.29e-03 5.68e-04 -7.94e-04
## 1796 5.10e-02 -1.38e-02 -3.79e-02 1.26e-02 -6.96e-03 -3.65e-02 -3.48e-02
## 1798 1.52e-02 2.12e-03 -7.17e-03 -1.26e-03 -1.78e-02 -1.05e-02 -3.82e-03
## 1799 -4.70e-03 5.51e-04 5.57e-03 -4.19e-04 2.47e-03 1.77e-03 1.67e-03
## 1800 9.51e-04 1.74e-04 -1.88e-03 -2.45e-04 -1.81e-04 2.73e-04 -8.53e-04
## 1801 -5.64e-03 1.14e-03 7.41e-03 -1.43e-03 -4.58e-03 3.01e-03 4.20e-03
## 1802 -8.47e-03 -6.40e-03 1.45e-03 5.93e-03 -5.74e-03 1.40e-02 3.62e-04
## 1803 3.82e-03 9.48e-04 -1.41e-03 -2.56e-04 -1.25e-02 -6.32e-03 1.55e-03
## 1804 -9.06e-03 -4.99e-03 4.16e-03 3.43e-03 1.86e-02 -5.12e-05 3.21e-03
       5.91e-04 2.51e-03 3.51e-03 -2.63e-03 9.91e-04 -7.18e-03 4.03e-03
## 1805
       1.52e-05 5.20e-05 -4.27e-06 -5.50e-05 -1.15e-04 -5.38e-07 1.05e-04
## 1806
## 1807 3.59e-02 5.64e-03 -8.55e-03 -7.79e-03 -4.76e-02 -6.28e-02 -1.14e-02
## 1808 -1.04e-02 6.09e-04 -3.20e-03 2.04e-04 1.49e-02 1.60e-02 3.53e-03
## 1811 -7.70e-03 -7.17e-03 -6.43e-03 5.06e-03 5.94e-04 1.11e-02 2.31e-02
```

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## 1812 -2.40e-02 -9.00e-03 8.09e-03 9.97e-03 4.42e-02 1.69e-02 9.74e-03
## 1813 -1.94e-03 -1.48e-04 8.27e-03 -5.66e-04 -1.38e-02 1.48e-03 2.33e-04
## 1814 -3.14e-04 -4.26e-04 -1.54e-04 3.11e-04 2.73e-04 2.46e-04 5.77e-04
## 1815 -2.12e-03 1.32e-03 1.13e-03 -9.78e-04 4.01e-03 9.65e-04 3.11e-03
## 1817 -2.46e-02 6.95e-03 1.82e-02 -6.40e-03 2.73e-02 1.96e-02 2.02e-02
## 1818 1.29e-03 -5.81e-04 -4.49e-03 1.25e-03 1.86e-03 3.64e-03 -3.73e-03
## 1819 -4.65e-04 1.35e-03 -1.08e-02 -1.22e-03 9.04e-03 6.01e-03 1.76e-03
## 1820 -3.32e-02 2.12e-02 -3.74e-02 -1.84e-02 4.45e-02 5.96e-02 3.99e-02
## 1821 -1.99e-02 7.60e-03 4.00e-03 -5.62e-03 6.27e-03 2.94e-02 1.70e-02
## 1823 -5.10e-02 -6.05e-03 -1.64e-02 1.24e-03 2.66e-02 4.59e-02 4.90e-02
## 1827 7.20e-02 9.81e-04 -4.29e-02 -6.56e-04 6.10e-03 -4.48e-02 -4.12e-02
## 1829 3.29e-02 -2.72e-03 -8.31e-03 2.01e-03 4.24e-03 -3.29e-02 -1.72e-02
## 1831 -7.89e-03 -3.88e-03 3.54e-02 5.91e-03 -2.66e-02 -6.11e-03 -2.13e-02
## 1832 -5.71e-04 -1.99e-03 -1.38e-03 1.98e-03 -3.21e-03 3.49e-03 -1.32e-03
## 1833 -1.45e-03 2.51e-02 2.23e-02 -4.31e-02 -3.94e-02 -1.01e-03 -1.28e-02
## 1834 -6.20e-03 2.33e-03 1.20e-02 3.03e-05 -2.75e-02 8.52e-03 -1.94e-02
## 1835 -6.66e-02 -6.93e-03 6.06e-02 9.93e-03 -1.10e-02 4.29e-02 3.80e-02
## 1838 -4.75e-03 3.93e-03 5.83e-03 -3.07e-03 2.16e-03 8.05e-04 3.77e-03
## 1839 -9.77e-03 5.70e-04 -5.92e-03 -5.62e-04 1.85e-02 1.38e-02 9.13e-03
## 1840 6.23e-03 1.12e-02 3.32e-03 -1.25e-02 -1.01e-03 -9.68e-03 -1.15e-02
       3.53e-03 4.40e-03 9.72e-03 -4.79e-03 -1.08e-02 -1.64e-02 4.21e-03
## 1841
## 1844 6.58e-03 -9.72e-04 -1.21e-02 1.82e-03 -1.01e-03 2.15e-03 -7.47e-03
## 1845 -4.82e-03 -6.09e-03 -5.85e-03 6.93e-03 -2.91e-03 9.08e-03 1.72e-02
## 1846 7.47e-03 1.66e-03 -9.68e-03 -1.02e-03 6.06e-03 -2.52e-03 -4.03e-03
## 1847 -1.52e-02 -3.86e-03 -2.29e-03 1.15e-03 9.11e-03 1.53e-02 2.40e-02
## 1848
       1.16e-02 1.56e-02 8.07e-03 -1.52e-02 1.43e-02 -3.34e-02 2.58e-02
## 1849
        1.48e-02 -1.50e-03 -1.70e-02 1.36e-03 5.45e-04 -8.28e-03 -7.78e-03
## 1852
        7.80e-03 -1.62e-03 -3.45e-03 7.90e-04 1.89e-03 -8.14e-03 -3.06e-03
       6.37e-02 3.29e-03 -5.64e-02 -3.80e-03 -2.00e-02 -3.10e-02 -4.77e-02
## 1853
## 1855
       1.13e-03 4.08e-04 3.34e-03 -6.07e-04 -9.32e-03 -1.06e-03 -7.97e-04
## 1858
        3.06e-02 2.37e-02 -1.91e-02 -2.31e-02 -3.29e-02 -3.79e-02 -1.22e-02
## 1859
       2.06e-03 1.10e-02 6.38e-03 -7.52e-03 -1.91e-02 1.22e-02 -1.58e-02
## 1860 -8.84e-04 -4.72e-03 4.08e-03 5.57e-03 -2.67e-03 4.87e-03 -8.50e-03
       1.32e-03 1.12e-02 -1.27e-03 -1.97e-02 -8.38e-04 -2.61e-03 4.03e-03
## 1861
## 1862 -2.59e-05 -8.50e-06 -2.46e-05 2.28e-06 2.19e-05 5.26e-05 1.29e-05
## 1864 1.74e-03 -3.03e-04 2.38e-03 1.60e-04 -7.62e-03 -3.05e-03 -1.63e-03
## 1865 4.53e-04 -1.25e-03 -1.21e-03 7.92e-04 1.65e-03 -1.09e-03 3.92e-03
## 1869 -4.00e-03 -5.76e-04 1.06e-03 6.47e-04 5.26e-03 2.95e-03 1.56e-03
## 1871 -2.92e-03 -1.75e-03 5.80e-04 1.38e-03 1.57e-03 3.21e-03
## 1874 -4.24e-03 8.71e-04 5.22e-04 -7.32e-04 1.90e-03 5.00e-03 2.89e-03
## 1876 -5.19e-03 -6.99e-04 4.44e-03 5.52e-04 4.71e-03 3.01e-03 2.32e-03
## 1877 -2.41e-02 7.24e-03 8.53e-03 -6.44e-03 1.57e-02 2.18e-02 1.83e-02
## 1878 1.64e-02 1.83e-02 5.38e-04 -2.15e-02 1.81e-02 -5.17e-02 3.11e-02
## 1879 -9.92e-03 5.16e-03 6.98e-03 -6.55e-03 6.03e-03 1.45e-03 2.08e-02
## 1880 5.69e-03 -7.83e-03 -1.46e-02 6.68e-03 6.91e-03 7.01e-03 -6.97e-04
## 1883 1.77e-03 7.05e-04 -1.03e-03 -4.65e-04 1.13e-03 -2.26e-03 -5.80e-04
## 1884 -2.43e-02 -1.28e-02 -2.40e-02 4.40e-03 -1.18e-02 -1.44e-02 3.14e-02
## 1885 -9.18e-03 6.39e-04 1.12e-02 -1.18e-03 -1.12e-03 5.60e-03 7.04e-03
## 1888 -6.02e-03 9.81e-04 2.33e-03 -4.34e-04 -2.40e-03 7.61e-03 4.10e-03
## 1890 -6.74e-04 -2.84e-04 -2.98e-03 -7.54e-04 4.02e-03 1.79e-04 7.18e-03
## 1892 3.09e-03 8.05e-03 -5.77e-02 -9.13e-03 1.61e-02 3.34e-02 9.85e-03
## 1893 -5.59e-03 3.87e-03 1.26e-03 1.61e-03 -9.36e-03 2.00e-02 -2.17e-02
## 1894 4.17e-04 6.57e-05 -1.52e-03 -1.00e-04 1.17e-03 2.92e-04 2.64e-04
## 1895 2.33e-03 3.26e-04 -1.42e-03 -2.53e-04 -2.19e-03 -3.31e-03 1.39e-03
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## 1896 -9.78e-03 -4.48e-04 -1.82e-02 9.39e-04 3.89e-02 1.69e-02 1.17e-02
## 1897 -3.36e-02 -1.38e-02 -2.86e-02 9.72e-03 1.35e-02 6.79e-02 2.68e-02
## 1898 -8.85e-03 -3.51e-03 5.57e-02 4.55e-03 -5.56e-02 9.68e-03 -1.98e-02
## 1899 1.45e-03 6.76e-03 9.08e-03 -8.17e-03 -8.94e-03 -1.73e-02 8.96e-03
## 1900 -3.35e-02 5.46e-03 4.05e-02 -2.42e-03 2.87e-02 1.36e-02 2.27e-02
## 1901 4.30e-02 -1.61e-02 -3.34e-02 1.14e-02 -4.45e-02 -3.69e-02 -2.29e-02
## 1902 1.33e-02 -1.49e-03 -2.14e-02 1.40e-03 -1.99e-02 1.74e-03 -2.41e-02
## 1904 -7.25e-02 1.61e-02 1.01e-01 -1.07e-02 5.72e-02 3.90e-02 1.96e-02
## 1906 -1.70e-02 -3.37e-03 -1.13e-02 7.25e-04 2.20e-02 2.45e-02 2.89e-02
## 1908 -1.66e-03 -3.44e-04 5.75e-03 5.64e-04 -2.30e-04 -1.22e-03 -5.70e-04
## 1909 -1.70e-03 -1.57e-03 -7.59e-04 2.25e-03 1.30e-02 6.48e-03 -2.36e-03
## 1910 2.20e-03 -1.29e-04 -2.18e-03 5.19e-04 3.25e-03 -1.28e-03 -2.15e-04
## 1911 -3.74e-02 2.35e-03 2.18e-02 -8.98e-04 3.44e-03 3.49e-02 3.05e-02
## 1912 -1.59e-02 3.46e-03 -7.96e-03 -2.61e-03 3.08e-02 3.38e-02 -3.24e-03
## 1913 -7.93e-03 2.80e-04 6.63e-03 -8.35e-05 3.08e-03 4.32e-03 3.47e-03
## 1914 5.64e-02 3.73e-04 -1.24e-01 -5.96e-03 -3.51e-03 6.03e-03 9.99e-03
## 1915 7.12e-03 1.31e-03 3.71e-03 -5.26e-04 -1.76e-02 -6.69e-03 -2.99e-03
## 1917 2.44e-03 -6.63e-04 -3.98e-03 5.15e-04 -1.33e-03 -1.28e-03 -4.30e-04
## 1919 -3.54e-03 1.74e-03 2.55e-03 -1.59e-03 2.42e-03 2.87e-03 1.22e-04
## 1920 4.54e-03 -4.24e-03 -1.16e-02 1.09e-03 7.29e-03 2.20e-03 4.25e-03
## 1921 1.76e-02 -9.45e-05 3.03e-02 -1.43e-03 -5.15e-02 -5.31e-02 -1.68e-02
## 1923 -1.47e-02 -1.74e-02 2.53e-03 1.66e-02 1.24e-03 1.44e-02 -5.20e-03
## 1925 3.10e-04 -5.95e-03 -3.96e-03 6.96e-03 1.09e-03 2.39e-03 -8.43e-03
## 1926 -1.20e-02 -1.67e-03 -5.20e-03 2.07e-04 -1.39e-03 1.64e-02 3.45e-06
## 1927 -1.46e-05 -3.68e-04 -7.93e-04 -4.89e-04 4.29e-03 -8.51e-04 2.78e-03
## 1928 -1.46e-02 -2.00e-03 -1.47e-03 1.46e-04 6.79e-03 1.49e-02 2.94e-03
## 1930 6.12e-03 -2.12e-03 -2.33e-03 1.84e-03 -2.43e-03 -6.66e-03 -5.63e-03
## 1931 -1.12e-02 1.73e-03 6.40e-03 -3.24e-03 3.50e-03 1.03e-02 4.82e-03
## 1932 2.24e-02 -1.90e-02 -1.15e-03 1.79e-02 -3.83e-02 -2.23e-02 -3.13e-02
## 1933 -2.58e-02 -1.21e-02 1.63e-02 6.37e-03 1.61e-02 8.74e-03 3.72e-02
## 1935 7.96e-04 1.20e-03 -2.12e-03 -1.04e-03 -2.22e-03 -3.89e-04 8.93e-04
## 1938 -3.74e-02 9.31e-03 2.89e-02 -9.61e-03 9.04e-03 2.25e-02 2.81e-02
## 1939 -1.22e-01 2.23e-04 1.09e-01 -3.67e-03 2.92e-02 7.26e-02 8.46e-02
## 1940 -1.02e-02 -1.82e-03 1.45e-02 1.45e-03 -7.23e-04 6.58e-03 -7.50e-03
## 1941 -5.02e-03 9.60e-04 -9.79e-04 -1.05e-03 -2.67e-03 6.79e-03 5.17e-03
## 1942 -7.00e-02 -3.19e-02 3.35e-01 3.93e-02 -9.06e-02 -5.89e-02 -7.94e-02
## 1944 4.17e-03 -3.11e-03 -1.99e-03 2.40e-03 -3.35e-03 -3.50e-03 3.10e-03
## 1945 -4.59e-02 6.90e-03 6.03e-02 -1.38e-02 1.60e-02 -1.95e-02 6.61e-02
## 1947 6.21e-03 7.74e-04 -7.49e-03 -1.61e-03 7.45e-03 4.77e-03 -9.55e-03
## 1949 2.56e-03 -9.68e-03 2.46e-02 1.02e-02 -6.73e-03 -1.37e-02 -2.28e-02
## 1951 1.68e-03 -5.40e-04 -8.16e-04 4.56e-04 2.24e-03 -1.10e-03 -3.70e-04
## 1952 -6.04e-03 4.47e-04 3.94e-03 -3.21e-04 2.63e-03 4.14e-03 4.98e-03
## 1955 -2.27e-02 -1.70e-03 3.31e-03 6.18e-04 -3.19e-04 3.27e-02 -7.57e-03
## 1956 2.03e-02 -1.23e-02 2.62e-03 1.32e-02 -8.87e-03 -2.78e-02 -2.28e-02
## 1957 -1.11e-02 6.70e-05 1.51e-02 2.06e-06 -5.21e-03 6.21e-03 3.26e-03
## 1958 -3.27e-03 -1.70e-02 -2.00e-02 1.55e-02 2.10e-02 3.15e-02 2.89e-03
## 1960 -2.29e-02 -1.21e-02 -3.10e-02 8.23e-03 3.67e-02 4.83e-02 4.17e-02
## 1961 3.86e-03 -1.32e-03 -1.22e-02 2.31e-05 8.12e-03 -3.15e-03 -5.50e-03
## 1962 3.88e-02 -7.28e-03 -1.54e-01 4.01e-03 1.71e-02 2.78e-02 2.66e-02
## 1964 -2.25e-03 -6.28e-03 3.77e-04 5.61e-03 3.62e-03 2.19e-03 3.12e-03
## 1967 -1.27e-02 -5.77e-03 -2.18e-02 5.87e-03 8.29e-03 2.17e-02 5.48e-03
## 1968 1.07e-02 2.20e-03 1.27e-02 -2.21e-03 -1.18e-02 -2.19e-02 -9.56e-03
## 1969 9.07e-03 3.50e-03 3.79e-02 -3.86e-03 -5.49e-02 -2.36e-02 -1.25e-02
## 1975 -2.15e-02 5.01e-03 2.32e-03 -4.32e-03 5.02e-03 2.53e-02 5.69e-03
```

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## 1976 3.48e-03 2.02e-03 -1.22e-02 -6.81e-04 -1.21e-03 -6.92e-03 1.60e-02
       4.69e-04 4.23e-04 -8.07e-03 -7.14e-04 -1.52e-03 5.03e-03 -4.10e-03
## 1977
## 1978 4.39e-03 -2.48e-03 -4.47e-03 2.49e-03 -4.85e-03 3.03e-04 -6.50e-03
        1.35e-02 -2.11e-03 -2.56e-02 3.83e-03 -5.32e-03 2.53e-04 -1.66e-02
## 1980 -1.32e-02 1.19e-03 1.86e-02 -3.70e-05 -3.82e-03 1.43e-02 -7.47e-04
## 1981 6.33e-03 1.23e-03 3.11e-02 1.79e-04 -3.40e-02 -1.38e-02 -2.12e-02
## 1982 5.67e-03 -1.43e-03 -2.73e-03 1.64e-03 -1.87e-03 -4.29e-03 -5.59e-03
## 1984 -2.07e-02 1.29e-03 -1.21e-02 1.79e-03 -5.72e-02 3.69e-02 -2.20e-04
## 1985 -1.63e-02 1.39e-03 1.45e-02 4.29e-04 9.95e-03 1.09e-02 5.63e-03
## 1986 8.22e-04 2.74e-03 -4.18e-03 -2.74e-03 1.86e-03 -4.89e-04 3.77e-03
## 1988 -3.68e-03 8.09e-04 -1.10e-04 3.66e-05 1.63e-02 -1.33e-03 1.50e-02
## 1989 -1.42e-02 -1.13e-02 1.25e-02 1.29e-02 4.16e-02 9.21e-03 -5.03e-03
## 1993 1.08e-03 1.07e-03 4.72e-03 -1.10e-03 -2.12e-03 -4.42e-03 -6.02e-04
## 1994 -8.87e-03 4.49e-03 1.08e-02 -2.04e-03 -8.33e-05 8.01e-03 -5.68e-03
        1.57e-02 1.29e-02 -6.05e-03 -3.55e-03 -6.06e-03 -1.90e-02 -8.74e-04
       2.21e-02 -8.26e-03 -7.14e-04 1.19e-02 -4.40e-02 -1.49e-02 -2.71e-02
## 2001 -5.61e-02 -8.80e-03 3.59e-03 1.01e-02 6.91e-02 7.26e-02 1.94e-02
## 2002 6.19e-05 1.19e-04 2.45e-04 -1.49e-04 -3.50e-04 -4.55e-04 3.83e-04
## 2004 -3.41e-03 -5.45e-04 -2.35e-03 7.80e-04 6.78e-03 6.42e-03 1.52e-03
## 2005 3.09e-02 -1.25e-02 5.89e-03 1.26e-02 -2.30e-02 -2.73e-02 -4.06e-02
## 2006 -1.18e-04 -1.20e-03 1.20e-03 1.15e-03 -1.41e-03 1.57e-04 -1.69e-03
## 2007 -5.20e-03 -2.55e-03 9.11e-03 2.94e-03 1.03e-02 2.43e-03 -1.30e-03
       1.86e-02 2.26e-03 -7.50e-02 -6.54e-04 3.52e-02 9.15e-03 -7.69e-03
## 2009
## 2012 5.84e-02 5.07e-04 -1.22e-01 -3.43e-03 -3.41e-02 -9.97e-03 -1.86e-02
## 2013 6.03e-05 2.07e-03 -6.57e-03 -1.49e-03 -1.48e-03 3.59e-03 9.80e-05
## 2014 7.66e-03 -1.58e-03 -4.93e-03 1.82e-03 -2.17e-03 -3.40e-03 -7.76e-03
## 2015 -3.76e-03 -7.90e-03 -8.81e-03 6.98e-03 8.03e-03 7.77e-03 -1.77e-03
## 2017
        5.99e-03 -5.32e-03 -8.56e-03 4.13e-03 -5.22e-03 -1.62e-03 -2.45e-03
## 2019 1.44e-02 1.17e-02 -3.25e-02 -1.18e-02 6.31e-03 -1.20e-02 2.20e-02
## 2020 -3.81e-03 -2.43e-03 -6.91e-03 1.01e-03 5.32e-03 2.44e-03 -4.00e-04
       1.02e-02 1.62e-03 -1.26e-02 -2.26e-03 2.40e-02 2.15e-03 -3.53e-02
## 2022 6.34e-02 -5.11e-04 -1.19e-01 2.60e-03 -1.53e-02 5.08e-03 -2.69e-02
## 2025 -1.01e-02 4.94e-03 3.25e-03 -5.01e-03 7.38e-03 2.02e-03 1.10e-02
## 2028 -1.92e-04 2.48e-04 5.15e-05 -2.78e-04 2.41e-04 -1.65e-04 5.37e-04
## 2029 -1.90e-02 -1.37e-02 2.55e-02 1.39e-02 2.62e-02 8.35e-03 -5.38e-04
## 2030 1.14e-03 1.56e-03 8.88e-04 -6.50e-04 -9.34e-03 2.55e-03 -7.08e-03
## 2033 -2.72e-04 -3.28e-04 -2.80e-03 3.09e-04 1.64e-03 3.14e-03 -6.50e-04
## 2034 -2.02e-04 -4.99e-04 8.75e-04 1.75e-04 -9.39e-04 -4.03e-04 3.76e-04
## 2035 -4.52e-02 -2.59e-02 3.82e-02 2.60e-02 5.68e-02 3.22e-03 1.88e-02
## 2036 4.64e-02 -1.16e-02 -6.33e-02 1.47e-02 -4.81e-02 4.73e-03 -6.24e-02
## 2037 -3.12e-03 7.16e-04 -5.02e-04 -5.35e-04 1.28e-03 3.11e-03 2.93e-03
## 2038 -2.52e-04 -5.79e-03 7.64e-03 5.84e-03 -5.21e-03 2.87e-03 -1.24e-02
       3.26e-02 -3.47e-03 -3.81e-02 5.19e-03 -1.71e-02 -2.43e-03 -3.23e-02
## 2045
       3.27e-05 2.42e-02 1.81e-04 -1.67e-02 -5.47e-03 -9.19e-04 4.48e-03
       3.98e-02 -1.11e-02 -2.52e-03 8.64e-03 -1.33e-02 -4.50e-02 -2.36e-02
## 2047 4.29e-03 -5.33e-03 -5.31e-02 8.63e-03 1.93e-02 2.88e-02 -2.47e-02
## 2048
        7.12e-02 -1.03e-02 -9.20e-02 1.04e-02 -8.44e-03 -4.51e-02 -3.56e-02
## 2049 -4.11e-03 -8.65e-04 5.61e-03 1.01e-03 5.94e-03 3.86e-03 -4.33e-03
## 2053 1.28e-03 -1.20e-04 1.63e-03 6.59e-05 -7.04e-04 -3.00e-03 -3.76e-04
## 2055 -3.42e-04 7.39e-04 1.14e-03 -3.85e-04 -1.86e-03 5.69e-04 -1.04e-03
        1.22e-02 -4.03e-03 -9.61e-03 4.68e-03 7.43e-03 -3.98e-03 -1.32e-02
## 2057
## 2059 -2.66e-03 1.00e-03 -4.49e-03 -8.54e-05 1.20e-02 5.60e-03 -6.36e-03
## 2062 8.01e-03 -3.71e-04 -2.05e-02 1.25e-03 6.11e-03 8.73e-03 -6.76e-03
## 2064 1.43e-02 1.17e-02 9.17e-03 -1.59e-02 3.40e-02 -5.39e-02 3.94e-02
```

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## 2065 3.49e-03 1.30e-02 2.06e-02 -1.95e-03 -3.01e-02 -1.54e-02 -5.85e-02
       1.05e-01 -5.79e-03 1.56e-02 2.04e-02 -1.07e-01 -6.22e-02 -1.13e-01
## 2068 -4.03e-03 -2.76e-03 -2.04e-02 2.60e-03 7.33e-03 2.40e-02 5.61e-03
## 2069 9.57e-03 1.11e-02 1.02e-02 -5.99e-03 -1.86e-02 -1.57e-02 -3.45e-02
## 2070 -3.67e-04 8.81e-04 -6.85e-04 -5.92e-04 -6.30e-04 1.11e-03 -1.60e-03
       3.07e-02 9.78e-03 -3.50e-03 -6.28e-03 -5.61e-02 -2.04e-02 -4.35e-02
       7.24e-04 1.16e-03 -2.28e-03 -1.20e-03 -1.11e-03 -1.66e-03 7.79e-04
## 2074 2.93e-02 -6.32e-03 -8.52e-03 6.19e-03 1.18e-03 -2.51e-02 -2.17e-02
        1.52e-02 1.76e-02 -2.76e-02 -1.67e-02 1.69e-02 7.25e-03 4.98e-03
## 2076
       4.76e-02 1.05e-02 -4.25e-02 -6.72e-03 -2.19e-02 -2.56e-02 -4.58e-02
## 2079 -1.29e-01 -2.00e-02 1.03e-01 1.98e-02 1.62e-01 1.18e-01 7.50e-02
## 2080 5.17e-02 1.87e-02 2.89e-02 -1.41e-02 -1.73e-02 -3.77e-02 -5.29e-02
## 2081 -6.44e-05 -5.30e-04 1.00e-03 3.68e-04 9.96e-04 -6.74e-04 6.29e-04
## 2082 -4.16e-02 -1.90e-02 6.60e-03 8.47e-03 1.38e-02 4.50e-02 6.98e-02
## 2083 -6.44e-02 -1.09e-02 3.47e-02 6.53e-03 5.66e-02 5.94e-02 6.16e-02
## 2085 -4.37e-03 1.90e-03 -6.49e-03 -6.55e-04 -5.07e-03 1.08e-02 -2.45e-03
## 2086 7.45e-03 7.08e-03 -1.49e-02 -4.30e-03 1.35e-02 -3.65e-03 -1.28e-02
## 2087 -1.10e-02 -5.55e-02 2.02e-02 -5.13e-03 4.45e-04 -2.88e-03 2.56e-02
## 2088 -3.52e-06 6.24e-07 -7.33e-06 -2.02e-07 5.19e-06 8.15e-06 7.18e-07
## 2089 1.91e-02 -1.94e-02 -2.14e-02 1.21e-02 -8.02e-03 -1.48e-02 -9.40e-03
## 2091 -8.37e-03 1.35e-03 -1.02e-02 -7.29e-04 5.03e-03 1.76e-02 5.71e-03
## 2092 -2.02e-03 -1.44e-03 1.12e-02 5.40e-04 -9.93e-03 -3.30e-03 1.10e-02
## 2094 -1.47e-02 5.03e-03 -2.09e-03 -2.43e-03 1.74e-02 1.56e-02 1.02e-02
## 2095 -9.12e-03 6.19e-03 -1.38e-02 -5.43e-03 7.47e-03 1.45e-02
## 2096 -3.11e-02 1.45e-02 -2.21e-02 -1.16e-02 2.59e-02 4.93e-02 2.42e-02
## 2097 -1.80e-03 8.23e-04 -2.51e-03 -9.24e-04 1.81e-03 3.98e-03 2.73e-03
## 2098 -2.03e-03 -2.21e-02 -2.94e-03 1.33e-02 4.30e-03 2.37e-03 5.50e-03
## 2100 7.06e-03 1.22e-02 -2.70e-02 -9.76e-03 1.63e-02 2.09e-03 1.10e-03
## 2101 -1.43e-02 5.35e-03 -6.10e-03 -1.26e-03 -4.32e-03 2.94e-02 -1.59e-02
## 2104 4.71e-05 -1.20e-04 4.94e-04 8.64e-05 -3.02e-04 -2.74e-04 -1.70e-04
## 2105 -2.33e-03 4.18e-03 -1.53e-02 -4.06e-03 1.16e-02 6.86e-03 8.50e-03
## 2106 6.42e-03 -4.16e-02 -2.35e-03 2.63e-02 6.63e-03 -6.16e-03 -1.14e-02
## 2107 -5.45e-03 1.92e-02 -6.91e-02 -1.78e-02 3.79e-02 2.92e-02 3.78e-02
## 2108 4.54e-04 4.69e-03 -9.12e-03 -3.93e-03 2.85e-03 3.18e-03 2.94e-03
        1.27e-03 -4.78e-04 -1.18e-03 6.65e-04 -1.93e-03 -1.51e-03 -9.33e-04
## 2110 -1.14e-02 3.83e-03 -1.17e-04 -3.43e-03 9.35e-03 7.54e-03 1.52e-02
## 2111 8.47e-02 4.46e-03 -1.89e-02 -5.18e-03 -6.52e-02 -9.26e-02 -3.99e-02
## 2114 5.92e-03 4.75e-03 6.40e-03 -4.55e-03 -2.84e-02 -9.23e-03 -2.72e-03
## 2115 1.01e-02 1.03e-03 -1.38e-02 6.61e-04 2.43e-04 -6.86e-03 1.12e-03
## 2118 -3.10e-04 3.30e-05 -1.15e-04 -5.58e-05 6.48e-05 4.14e-04 2.50e-04
## 2119 -1.98e-04 -4.43e-04 -9.06e-04 5.61e-04 -2.46e-04 1.47e-03 -2.82e-03
## 2121 6.93e-03 2.16e-03 -4.96e-03 -1.48e-03 2.11e-03 -6.20e-03 -5.15e-03
## 2122 5.24e-04 -4.66e-04 2.00e-04 1.68e-04 -2.61e-03 -2.04e-03 -1.66e-03
## 2123 -1.91e-02 8.44e-03 3.85e-02 -1.05e-03 5.55e-02 -2.81e-02 1.92e-02
## 2124 -7.39e-03 -1.50e-03 8.49e-03 3.53e-04 -2.92e-04 4.14e-03 6.34e-03
## 2125 2.44e-03 2.85e-03 -8.78e-03 -1.24e-03 5.09e-03 -1.11e-03 1.50e-02
## 2126 1.71e-04 -2.05e-05 -1.55e-04 5.64e-05 2.22e-04 -5.65e-05 3.87e-04
## 2127 2.52e-02 2.94e-03 7.80e-03 1.53e-03 -5.06e-03 -3.38e-02 -2.73e-02
## 2128 5.64e-03 1.03e-04 -2.37e-03 -4.91e-05 -1.09e-02 -6.78e-03 -2.95e-03
## 2129 -2.62e-03 -1.23e-04 -4.03e-04 -4.26e-04 2.09e-03 2.10e-03 2.03e-03
       4.67e-03 -1.35e-03 -2.50e-03 1.70e-03 -1.62e-03 -5.14e-03 1.21e-03
## 2131
## 2132 1.87e-03 6.22e-04 -2.49e-03 -6.90e-04 2.39e-03 -8.51e-04 -2.19e-03
## 2133 4.13e-04 3.60e-05 -3.48e-05 2.66e-05 7.84e-05 -4.19e-04 -2.50e-04
## 2134 -6.83e-04 -1.47e-03 -1.06e-03 1.44e-03 -2.79e-03 2.84e-04 1.86e-03
```

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## 2135 -2.80e-03 -1.37e-02 -3.62e-02 1.03e-02 -8.79e-03 4.40e-02 1.05e-02
## 2137 1.90e-02 -2.68e-03 -8.75e-03 2.60e-03 -3.01e-03 -2.03e-02 -5.18e-03
## 2138 9.31e-03 3.82e-03 -9.00e-03 -2.72e-03 -3.17e-03 -6.13e-03 -7.38e-03
## 2141 -4.31e-03 1.52e-03 2.36e-03 -1.34e-03 4.26e-03 2.48e-03 5.80e-03
## 2142 1.08e-03 9.91e-04 -7.04e-04 -1.83e-04 2.51e-03 -2.73e-03 5.58e-04
## 2143 -5.49e-04 6.54e-04 1.11e-03 -7.03e-04 -2.39e-03 3.15e-04 -4.76e-04
## 2146 -2.81e-03 3.26e-03 -1.01e-02 -1.53e-03 7.92e-03 7.66e-03 5.71e-03
## 2147 -4.61e-04 -7.78e-04 3.22e-03 3.14e-03 -1.87e-02 1.02e-02 4.06e-03
## 2150 9.28e-03 1.59e-03 -2.82e-03 -1.03e-03 -5.36e-03 -8.69e-03 -4.58e-03
## 2151 6.94e-03 2.08e-03 -3.37e-03 -1.14e-03 -7.23e-03 -1.02e-02 -7.44e-03
## 2152 1.73e-02 -1.91e-04 -1.03e-02 6.05e-04 -9.53e-03 -1.47e-02 -1.80e-02
## 2154 -1.59e-02 -4.42e-03 -7.37e-03 1.65e-04 3.21e-03 1.59e-02 1.72e-02
## 2156 -1.81e-02 -3.15e-03 6.62e-04 6.67e-03 3.50e-02 3.27e-02 -1.35e-02
## 2158 -2.34e-03 -1.81e-03 1.04e-02 2.12e-03 -2.56e-04 -9.63e-04 -2.84e-03
## 2162 -3.70e-03 -4.70e-04 3.86e-03 3.33e-05 6.16e-03 -1.43e-04 8.60e-03
## 2163 2.58e-02 7.24e-03 -2.85e-02 -7.95e-03 -1.21e-02 -1.70e-02 3.58e-03
## 2165 1.83e-02 -1.26e-02 2.31e-02 2.94e-03 -4.25e-02 -3.00e-02 -4.76e-03
## 2169 -5.76e-03 -4.80e-03 1.31e-02 5.32e-03 1.86e-03 1.45e-03 -6.78e-03
## 2171 -2.90e-02 -5.20e-03 3.74e-02 7.95e-03 2.25e-02 2.14e-02 -1.26e-02
## 2174 4.73e-02 -1.29e-02 -3.17e-02 1.74e-02 -3.23e-02 -1.42e-03 -7.81e-02
## 2175 -6.65e-03 -3.66e-03 1.14e-02 2.94e-03 -5.07e-03 5.20e-03 -3.38e-03
## 2177 -8.75e-04 8.91e-04 -2.44e-03 -7.88e-04 -8.57e-05 1.60e-03 2.03e-03
## 2178 -1.06e-01 -1.65e-02 8.69e-02 2.16e-02 8.04e-02 7.18e-02 5.20e-03
## 2180 -2.78e-02 -1.40e-02 6.22e-02 1.62e-02 1.78e-02 1.03e-02 -2.14e-02
## 2182 -2.02e-04 -6.20e-04 2.15e-03 8.14e-04 4.32e-04 9.83e-05 -2.12e-03
## 2183 8.33e-03 -1.06e-02 -5.15e-04 1.02e-02 -2.06e-02 5.28e-04 -2.62e-02
## 2184 3.91e-03 -6.38e-03 -2.19e-02 6.33e-03 -9.92e-03 2.26e-02 -8.50e-03
## 2185
        1.32e-02 -1.27e-02 1.13e-02 1.31e-02 -2.16e-02 -1.16e-02 -3.10e-02
       3.77e-03 -3.68e-04 5.42e-03 1.31e-04 2.44e-03 -6.77e-03 -3.40e-03
## 2187
## 2188 7.94e-03 -2.89e-03 -1.60e-03 3.62e-03 -4.59e-03 -1.57e-03 -1.47e-02
## 2189 -5.62e-02 -4.11e-02 -1.46e-02 3.19e-02 1.78e-02 5.73e-02 1.37e-01
## 2190 1.99e-02 -1.33e-02 -3.24e-04 9.35e-03 -3.63e-02 -1.51e-02 -1.75e-03
## 2191 5.32e-03 -1.06e-03 -1.73e-03 8.70e-04 -6.15e-03 -3.55e-03 -4.54e-03
## 2192 -3.39e-03 -1.16e-02 3.36e-03 8.75e-03 -1.34e-02 3.75e-03 2.00e-02
## 2193 2.63e-04 -6.07e-05 1.82e-05 3.43e-05 -3.17e-04 -2.76e-04 -2.21e-04
## 2194 -1.06e-03 4.17e-04 1.80e-03 -3.08e-04 6.10e-04 5.71e-04 2.35e-04
## 2196 -4.89e-03 -1.58e-02 3.12e-02 1.62e-02 -1.15e-02 -3.16e-03 -2.40e-02
## 2197 1.60e-02 -1.27e-02 9.47e-03 1.27e-02 -3.35e-02 -1.18e-02 -3.12e-02
## 2200 6.03e-06 -3.40e-03 5.96e-03 3.65e-03 -3.46e-03 -6.80e-04 -9.90e-03
## 2202 -8.90e-03 3.13e-03 -6.99e-03 -3.11e-03 1.10e-03 1.10e-02 1.07e-02
## 2203 -5.46e-03 -7.19e-03 2.99e-03 7.30e-03 -5.83e-03 8.56e-03 -1.46e-03
## 2204 -7.94e-03 4.86e-03 6.05e-03 -6.24e-03 1.33e-02 1.83e-03 1.78e-02
## 2205 3.33e-03 8.80e-03 7.64e-04 -5.66e-03 -4.97e-03 -5.03e-03 -3.95e-03
## 2206 -1.08e-04 -4.89e-05 -2.79e-04 1.03e-04 4.85e-04 4.07e-05 7.29e-04
## 2207 5.79e-03 -4.43e-03 3.99e-03 5.32e-03 -1.07e-02 -1.51e-03 -1.63e-02
## 2208 6.11e-03 1.38e-05 2.54e-03 2.34e-05 -5.12e-03 -8.80e-03 -4.10e-03
## 2210 -1.49e-02 7.42e-03 3.04e-03 -6.26e-03 2.76e-02 8.89e-03 1.63e-02
## 2211 -1.01e-02 6.60e-03 -1.37e-02 -6.64e-03 1.37e-02 1.48e-02 1.95e-02
## 2212 -3.53e-03 5.49e-04 1.84e-03 -5.21e-04 2.49e-03 2.57e-03 3.57e-03
## 2213 5.56e-03 -1.89e-03 -1.79e-03 8.22e-05 9.65e-03 -1.19e-02 1.21e-02
## 2214 -5.33e-03 1.55e-03 2.55e-03 -1.38e-03 5.57e-03 4.03e-03 4.52e-03
## 2215 2.80e-03 -5.37e-03 9.47e-03 5.95e-03 -1.39e-02 -1.59e-04 -1.43e-02
## 2216 1.76e-02 -3.89e-03 -6.86e-03 3.71e-03 -2.22e-02 -1.21e-02 -2.01e-02
## 2217 1.23e-02 -5.21e-03 -9.17e-03 4.82e-03 -2.15e-02 -5.46e-03 -1.41e-02
```

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## 2218 -8.95e-04 3.61e-03 -7.74e-03 -3.32e-03 7.09e-03 2.11e-03 6.55e-03
## 2219 -2.10e-03 -3.47e-03 7.05e-03 4.27e-03 3.11e-03 1.08e-03 -8.93e-03
## 2220 -4.25e-03 -7.79e-03 1.76e-02 9.52e-03 -7.63e-03 5.32e-03 -2.48e-02
## 2221 -1.51e-02 2.88e-03 6.74e-03 -2.35e-03 5.93e-03 1.25e-02 1.22e-02
        1.98e-02 -7.12e-03 1.08e-03 9.38e-03 -1.20e-02 -1.29e-02 -3.71e-02
## 2223 -2.63e-03 1.07e-03 1.86e-03 -1.37e-03 3.09e-03 1.38e-04 4.86e-03
## 2224 2.79e-03 -1.86e-03 2.25e-03 1.62e-03 -6.98e-03 -3.66e-03 -4.16e-04
## 2225 6.04e-04 1.28e-03 -5.54e-04 -1.16e-03 9.66e-04 -1.37e-03 3.34e-04
## 2226 -6.92e-03 2.78e-03 -9.43e-04 -3.19e-03 6.01e-03 6.79e-04 1.35e-02
       3.17e-02 -4.36e-03 -6.33e-03 3.45e-03 -2.50e-02 -3.00e-02 -2.37e-02
## 2227
## 2228 -2.12e-04 -2.76e-04 7.69e-04 3.31e-04 -9.36e-05 2.24e-04 -8.16e-04
## 2230 5.50e-03 -1.68e-02 2.39e-02 1.74e-02 -1.85e-02 -4.80e-03 -3.76e-02
## 2231
       3.15e-04 6.16e-04 -1.24e-04 -5.93e-04 -6.41e-05 -7.87e-04 1.27e-03
## 2233 -8.39e-03 3.75e-03 -3.53e-03 -3.39e-03 1.39e-02 9.14e-03 1.11e-02
## 2234 -3.85e-03 2.51e-03 1.07e-03 -2.85e-03 7.46e-03 -6.78e-04 8.46e-03
## 2235 -2.47e-03 -1.30e-02 2.33e-02 1.13e-02 -3.04e-02 -6.86e-03 -2.48e-02
## 2236 4.79e-03 -1.29e-03 -4.58e-03 8.67e-04 -3.51e-03 -1.37e-03 -1.95e-03
## 2237 2.15e-02 -8.77e-03 -1.76e-03 8.16e-03 -8.49e-03 -2.25e-02 -2.29e-02
## 2238 -2.00e-02 -1.13e-02 2.17e-02 1.39e-02 3.68e-03 3.43e-02 -3.55e-02
## 2239 -1.28e-04 1.73e-04 -9.58e-05 -1.18e-04 -4.97e-04 4.84e-04 -5.38e-04
## 2240 -1.24e-02 5.52e-03 6.57e-03 -4.31e-03 1.71e-02 5.78e-03 9.18e-03
## 2241 -3.98e-04 -3.58e-03 4.33e-03 2.88e-03 -2.75e-03 1.46e-03 -2.56e-03
## 2242 7.17e-03 1.15e-03 -5.70e-03 -1.42e-03 1.55e-03 -4.89e-03 -2.75e-04
        1.85e-02 -6.26e-03 1.10e-02 5.48e-03 -1.53e-02 -1.80e-02 -2.14e-02
## 2244 1.03e-02 -2.28e-03 8.96e-03 4.76e-04 3.20e-03 -2.34e-02 3.15e-03
       1.21e-03 -8.02e-04 1.49e-04 7.62e-04 -6.56e-04 -3.17e-04 -1.90e-03
## 2246 -5.85e-04 -2.59e-03 1.43e-03 2.41e-03 -3.35e-03 1.24e-03 -2.04e-03
## 2247 -1.72e-04 -3.70e-04 8.23e-05 3.23e-04 -4.43e-04 5.14e-04 1.28e-04
## 2248 4.32e-06 -5.08e-04 1.32e-03 5.28e-04 -9.34e-04 -3.10e-04 -1.49e-03
## 2249 6.32e-03 -2.71e-03 7.42e-03 2.20e-03 -4.92e-03 -1.30e-02 -7.64e-03
## 2250 -1.12e-02 5.10e-03 8.09e-03 -5.38e-03 1.03e-02 1.85e-03 1.25e-02
## 2251
       9.86e-03 -1.39e-02 7.84e-03 1.42e-02 -2.76e-02 -1.37e-03 -2.99e-02
## 2252
        6.87e-04 -4.89e-04 1.55e-04 4.85e-04 -1.23e-03 -2.43e-04 -1.11e-03
        7.33e-03 -3.13e-03 -1.12e-03 3.02e-03 -6.17e-03 -4.19e-03 -7.53e-03
## 2253
        3.79e-02 1.55e-02 -4.27e-02 -1.71e-02 -1.41e-02 -2.99e-02 2.90e-03
        1.53e-02 1.50e-02 1.65e-03 -1.52e-02 6.07e-03 -2.57e-02 8.37e-03
## 2255
       1.24e-02 3.98e-03 -1.12e-02 -3.59e-03 -1.14e-02 -9.70e-03 -4.90e-03
## 2257 -1.01e-03 3.49e-03 -4.42e-03 -3.97e-03 1.77e-03 -1.63e-03 7.43e-03
       4.62e-04 6.09e-04 -1.85e-04 -5.22e-04 4.62e-04 -8.44e-04 -2.26e-04
## 2259 -4.49e-03 1.92e-03 -4.67e-03 -9.69e-05 5.39e-03 8.36e-03 -1.86e-03
## 2261 -1.56e-02 1.60e-02 9.87e-03 -9.79e-03 2.34e-02 3.46e-03 -1.41e-02
## 2262 -3.25e-03 -8.14e-03 1.12e-02 7.89e-03 -4.71e-03 2.34e-03 -5.36e-03
       5.25e-03 4.79e-03 -1.27e-02 -4.47e-03 -2.26e-03 -8.54e-04 8.01e-04
## 2268 7.08e-03 2.27e-02 -3.58e-02 -2.06e-02 1.97e-02 -9.01e-03 9.99e-03
## 2270 -4.98e-02 1.79e-02 1.29e-02 -1.44e-02 4.18e-02 2.82e-02 3.20e-02
## 2271 1.44e-03 1.10e-02 -1.04e-02 -1.14e-02 1.20e-02 -3.24e-03 1.44e-02
## 2274 -1.80e-03 3.95e-03 -2.17e-03 -3.93e-03 4.40e-03 -6.08e-04 5.54e-03
## 2275 7.97e-03 -5.11e-03 8.32e-03 4.29e-03 -6.06e-03 -9.98e-03 -6.25e-03
## 2276 -1.61e-02 2.05e-02 -1.34e-02 -2.03e-02 3.04e-02 1.65e-02 3.46e-02
## 2277 -6.41e-03 -3.66e-03 1.45e-03 2.04e-03 2.95e-03 5.01e-03 1.38e-02
## 2278 1.08e-02 5.50e-03 -1.69e-03 -6.08e-03 -1.12e-02 -1.29e-02 -9.35e-04
## 2279 -2.19e-02 -8.78e-03 1.59e-02 4.75e-03 4.91e-02 8.01e-03 2.83e-02
## 2280 -3.25e-02 1.53e-02 -1.05e-04 -1.63e-02 4.07e-02 1.80e-02 4.67e-02
## 2281 2.02e-03 7.78e-03 -2.32e-02 -5.93e-03 -1.98e-03 9.97e-03 -4.72e-04
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## 2288 3.58e-03 3.52e-05 -6.71e-03 8.18e-04 -6.30e-03 8.38e-04 7.82e-04
## 2289 -2.96e-03 7.15e-05 1.22e-03 -6.23e-04 5.30e-03 1.56e-03 1.14e-03
        1.04e-02 4.69e-04 -2.24e-02 -4.58e-04 -5.20e-02 4.87e-03 3.27e-03
## 2292
       5.95e-03 1.47e-03 -5.94e-03 -1.09e-03 -2.72e-03 -3.05e-03 -3.07e-03
        1.04e-02 -7.59e-05 -1.91e-02 -7.15e-04 -4.53e-02 -3.68e-03 1.40e-02
        3.81e-02 5.85e-03 -1.21e-02 -2.23e-03 5.25e-03 -5.13e-02 -1.35e-02
## 2297
       2.67e-02 -8.68e-04 -1.27e-02 9.10e-04 -3.01e-02 -2.52e-02 8.11e-04
## 2300 -9.78e-03 -2.01e-03 4.12e-03 1.93e-03 2.52e-03 1.27e-02 -2.01e-04
## 2303
       1.52e-02 -1.95e-03 -5.74e-03 4.67e-03 -3.51e-02 -4.81e-03 -1.11e-02
## 2304 -8.79e-04 -8.44e-06 5.37e-04 -3.86e-05 1.09e-03 7.05e-04 -4.05e-05
## 2308 4.79e-05 6.87e-05
                           2.06e-04 -1.04e-04 -2.15e-04 -1.31e-04 1.16e-04
                           1.31e-02 1.86e-04 -6.78e-03 1.02e-02 -1.44e-02
## 2313 -7.77e-03 3.44e-04
## 2314 -1.53e-02 -1.20e-02 9.87e-03 -1.99e-03 1.31e-02 1.51e-02 -1.42e-03
## 2315 -6.06e-03 1.69e-03 5.95e-03 -7.44e-04 2.67e-03 4.24e-03 -2.47e-03
## 2316 -2.17e-02 7.80e-03 1.45e-02 -5.80e-03 1.64e-02 2.35e-02 -8.46e-03
## 2318
       3.57e-02 2.88e-02
                           6.11e-03 -1.71e-02 3.27e-02 -2.07e-02 -3.24e-02
## 2319 -1.89e-03 1.67e-03 7.34e-03 -8.47e-04 -4.04e-03 2.38e-04 -6.27e-03
        1.43e-02 -1.23e-02 8.77e-03 1.06e-02 -2.97e-02 -1.20e-02 -3.34e-02
                           2.63e-03 -6.50e-03 -5.88e-03 -1.55e-02 -3.58e-03
## 2322
        1.10e-02 6.54e-03
## 2323
        5.19e-02 1.94e-02
                           2.21e-02 -4.81e-03 -4.54e-02 -4.65e-02 -1.25e-01
## 2325 -3.44e-03 -8.82e-04 1.52e-03 8.09e-04 3.09e-03 3.18e-03 2.18e-03
       2.32e-02 1.09e-02 5.26e-04 -9.16e-03 -2.53e-02 -1.94e-02 -3.41e-02
## 2327 4.73e-03 1.82e-03 6.78e-03 -3.07e-03 -1.11e-02 -1.39e-02 3.16e-03
## 2328 -6.54e-02 6.41e-03 1.17e-01 -4.95e-03 1.85e-02 -9.42e-03 3.63e-02
## 2330 -2.59e-02 -1.11e-02 4.18e-03 1.29e-02 2.54e-02 4.46e-02 4.68e-03
        1.01e-03 5.14e-03 3.76e-02 -5.66e-03 -1.32e-02 -2.16e-02 -3.60e-03
## 2333
        6.87e-03 1.27e-03 -1.97e-03 -1.10e-03 -7.91e-03 -8.03e-03 -5.54e-03
## 2336
        3.01e-02 4.76e-03 1.26e-02 -4.93e-03 -2.69e-02 -4.55e-02 -2.00e-02
        1.42e-02 6.26e-03 -1.96e-02 -3.57e-03 8.39e-03 -6.17e-03 -4.22e-03
## 2337
       2.73e-02 1.41e-02 -2.47e-02 -1.91e-02 -4.03e-02 -3.33e-02 1.99e-02
## 2339 -1.37e-03 -4.75e-04 -3.96e-03 2.77e-04 3.36e-03 3.95e-03 2.56e-03
## 2340
        1.37e-02 1.27e-02 1.47e-02 -1.10e-02 8.09e-04 -2.87e-02 -1.14e-02
## 2342
       6.36e-04 3.17e-04 -7.10e-04 -3.08e-04 2.67e-04 -2.85e-04 -4.97e-04
## 2343 -2.91e-03 -1.66e-03 -4.34e-03 -1.27e-03 1.16e-02 -6.38e-04 2.11e-02
        4.18e-02 8.26e-03 -6.59e-03 -6.13e-03 -5.32e-02 -4.48e-02 -3.64e-02
       8.43e-03 8.47e-03 -2.33e-02 -7.83e-03 1.70e-03 -3.23e-03 6.13e-03
## 2345
        1.45e-02 2.19e-02 -2.04e-02 -2.53e-02 5.15e-03 -2.80e-02 4.27e-02
## 2347
       8.46e-02 3.51e-03 1.27e-02 4.30e-03 -1.15e-01 -7.12e-02 -1.19e-01
        3.87e-03 2.34e-03 5.97e-03 -4.02e-03 -1.12e-02 -1.39e-02 6.46e-03
        1.76e-03 -3.70e-03 4.02e-03 2.14e-03 -4.46e-04 -6.08e-03 4.30e-03
## 2349
## 2350 -1.14e-02 3.25e-03 4.25e-02 -4.42e-03 4.59e-03 -2.09e-02 1.55e-02
       4.04e-02 1.03e-02 -1.42e-02 -9.45e-03 -4.27e-02 -1.84e-02 -2.97e-03
## 2351
        7.00e-03 8.53e-03 -5.50e-03 -6.68e-03 1.18e-02 -3.20e-03 1.06e-03
## 2353 -7.09e-03 2.76e-02 5.21e-02 -2.31e-02 4.35e-02 1.35e-02 1.73e-02
## 2354 -5.65e-02 -1.48e-02 4.39e-02 1.22e-02 1.63e-02 3.43e-02 1.42e-02
        1.13e-02 9.46e-03 1.71e-02 3.15e-04 -4.35e-03 -3.84e-03 -5.94e-02
## 2355
## 2356
       6.21e-03 7.45e-03 -1.16e-02 -8.01e-03 -3.23e-04 -1.01e-03 3.29e-03
## 2357 -3.09e-02 9.92e-03 2.50e-02 -1.18e-03 1.25e-02 1.95e-02 -2.29e-02
## 2358 1.72e-02 8.16e-03 -1.63e-02 -6.99e-03 -4.32e-03 -7.66e-03 -1.67e-03
                  3.35e-03 -4.73e-03 -2.59e-03 2.99e-03 4.09e-03 2.83e-04
## 2359 -1.70e-03
## 2361 -2.17e-02 1.08e-02 -1.71e-02 -8.86e-03 1.30e-02 3.26e-02 2.10e-02
## 2362 -9.84e-03 7.73e-03 2.98e-03 -5.88e-03 2.76e-02 5.88e-03 9.36e-03
## 2364 1.75e-03 6.72e-03 -1.20e-02 -6.12e-03 9.87e-03 -1.75e-05 8.32e-03
## 2365 6.17e-02 2.30e-02 -4.82e-02 -2.63e-02 -1.45e-02 -6.95e-02 1.15e-02
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## 2366 -1.36e-03 -2.42e-03 4.83e-03 2.12e-03 -3.26e-03 9.85e-04 -2.51e-03
## 2367 1.61e-02 -4.93e-03 -3.06e-03 3.79e-03 -1.82e-02 -1.32e-02 -1.49e-02
## 2368 -3.15e-03 4.51e-03 8.81e-04 -2.53e-05 -3.08e-02 1.48e-02 -3.45e-02
## 2369 -1.92e-03 1.95e-03 -6.81e-03 -2.01e-03 2.14e-03 3.62e-03 5.33e-03
## 2370 -1.03e-02 -8.74e-03 9.36e-03 7.27e-03 -5.09e-03 1.14e-02 -1.12e-03
## 2371 1.76e-03 1.47e-03 -3.74e-03 -1.39e-03 3.87e-04 -7.88e-04 9.16e-04
## 2372 -1.03e-02 5.47e-03 -3.70e-03 -4.18e-03 1.20e-02 9.46e-03 6.00e-03
## 2373 -3.76e-03 1.60e-03 -3.12e-03 4.08e-04 -8.93e-03 1.17e-02 -7.16e-03
        2.87e-03 3.06e-03 -1.02e-02 -2.68e-03 -4.95e-04 -1.32e-05 1.73e-03
## 2376 8.29e-04 -8.84e-03 1.20e-02 8.27e-03 -1.46e-02 -2.30e-03 -1.36e-02
## 2380 -1.05e-02 7.47e-03 2.69e-03 -1.38e-04 1.56e-04 8.49e-03 2.15e-02
       4.72e-05 5.26e-03 -9.29e-03 -4.91e-03 1.04e-02 4.10e-03 8.21e-03
## 2382
## 2383
        3.54e-02 1.47e-02 -1.57e-02 -1.07e-02 -8.22e-03 -2.91e-02 -5.03e-02
       7.77e-03 4.01e-04 -4.86e-03 -5.20e-04 -8.39e-03 -6.86e-03 -2.25e-04
## 2384
## 2385 -3.27e-03 -4.47e-03 3.35e-03 8.00e-03 4.80e-03 -5.94e-03 2.31e-02
       6.52e-02 4.26e-03 1.55e-02 -5.22e-03 -5.82e-02 -8.27e-02 -3.13e-02
## 2387 -6.00e-04 -1.48e-03 5.50e-03 2.57e-03 5.18e-03 4.65e-03 -1.04e-02
## 2388
       6.65e-03 5.46e-04 4.11e-04 1.43e-03 -6.91e-03 -5.66e-03 -9.65e-03
       4.88e-04 5.10e-04 -1.07e-03 -6.06e-04 -2.34e-04 -2.57e-04 9.72e-04
## 2389
## 2390 -5.80e-04 2.76e-04 -5.73e-04 -3.15e-04 2.23e-03 1.17e-03 -4.75e-04
       1.92e-02 5.75e-04 -6.87e-03 -1.44e-06 -2.55e-02 -1.74e-02 -1.00e-02
## 2392 1.38e-02 2.69e-02 6.38e-05 -3.42e-02 -1.76e-03 -1.67e-02 -2.00e-02
## 2393 -2.31e-04 3.16e-03 -5.06e-03 -3.14e-03 2.76e-03 1.18e-03 5.28e-03
## 2394 1.84e-02 1.13e-02 -2.69e-02 -1.35e-02 -1.52e-02 -3.35e-03 -1.18e-02
## 2396 -2.33e-02 -5.68e-03 1.93e-02 5.29e-03 5.17e-03 1.78e-02 4.01e-04
## 2397 -1.12e-02 1.17e-02 2.82e-02 -4.84e-03 4.85e-02 -1.50e-02 7.90e-03
## 2398 9.67e-03 1.27e-03 5.20e-03 -2.09e-03 -2.32e-02 -1.60e-02 1.13e-02
        1.46e-02 5.45e-03 -8.48e-03 -3.39e-03 1.07e-02 -2.24e-02 2.45e-02
## 2399
       2.35e-03 1.42e-03 1.70e-03 -1.01e-03 -1.39e-04 -3.93e-03 -1.59e-03
## 2401
## 2402 -1.98e-03 -4.13e-04 1.78e-03 -1.45e-05 -8.00e-03 -2.19e-04 7.89e-03
## 2403 -2.08e-02 -1.43e-02 2.93e-02 1.33e-02 -3.37e-03 2.08e-02 -1.58e-04
## 2405
       1.86e-02 -3.61e-03 1.15e-02 2.27e-04 -4.64e-02 -3.89e-02 1.52e-02
## 2409
       5.95e-04 8.73e-03 -3.92e-03 -3.62e-03 2.52e-02 -1.34e-02 1.59e-02
## 2410 1.13e-03 2.70e-04 -1.06e-03 1.44e-04 3.08e-04 -5.13e-04 -5.22e-04
## 2411 -1.06e-02 -2.29e-05 -7.20e-03 -2.31e-03 5.34e-03 1.25e-02 -1.15e-04
## 2412 -8.76e-03 -3.74e-03 1.56e-04 2.65e-03 -4.45e-02 5.53e-03 2.45e-02
## 2413 -1.45e-03 -9.76e-04 2.09e-03 7.33e-04 -1.01e-03 1.48e-03 -4.57e-04
## 2414 1.03e-02 3.93e-03 3.54e-03 -2.08e-03 3.49e-03 -1.06e-02 -5.37e-03
        3.74e-04 1.58e-04 -3.69e-03 -6.71e-04 -6.57e-04 8.93e-04 5.52e-04
## 2417 8.78e-03 2.78e-03 -8.75e-03 1.06e-03 -1.12e-02 4.78e-03 -1.50e-02
## 2418 3.38e-02 1.71e-02 -6.23e-02 -8.29e-03 -3.60e-02 3.24e-03 -4.76e-02
## 2419 -3.52e-02 1.52e-03 1.33e-02 -2.41e-03 5.66e-02 3.11e-02 1.15e-02
## 2422 -2.15e-02 -1.10e-02 4.71e-02 1.08e-02 1.64e-02 2.24e-03 -8.26e-03
## 2423 -3.98e-03 -3.81e-04 3.88e-02 5.67e-03 -2.23e-03 1.19e-02 1.98e-03
## 2425 -1.82e-03 4.53e-04 1.45e-04 -3.12e-04 8.37e-03 4.09e-03 -2.01e-03
## 2427 -1.03e-02 1.46e-02 6.33e-03 -3.45e-03 5.83e-02 -9.18e-03 2.64e-02
## 2428 -2.60e-02 3.62e-03 1.03e-02 -1.43e-03 -1.36e-02 2.49e-02 3.16e-02
## 2429 4.74e-03 3.95e-03 -3.91e-03 -1.90e-03 2.63e-05 -1.04e-02 1.93e-03
## 2430 -1.89e-03 -1.74e-03 5.63e-04 2.32e-03 -2.89e-04 5.76e-03 -8.08e-03
        2.00e-04 3.67e-04 -3.51e-03 2.28e-04 -6.90e-04 4.21e-03 -2.15e-03
## 2431
       1.94e-02 1.32e-02 -1.04e-02 -8.68e-03 4.68e-04 -2.35e-02 -2.81e-02
## 2433
## 2434 -1.43e-02 1.31e-02 -2.27e-03 -1.12e-02 1.18e-02 1.01e-03 4.39e-02
## 2435 1.13e-02 8.41e-03 -9.49e-03 -7.52e-03 1.17e-02 -1.68e-02 1.06e-03
## 2436 -9.57e-03 -3.52e-03 1.35e-02 -3.67e-03 1.40e-02 3.49e-03 1.08e-02
```

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## 2437 1.23e-02 2.90e-03 -8.49e-03 -2.43e-03 -3.12e-03 -1.13e-02 -5.86e-03
## 2439 -1.03e-02 -9.52e-03 3.75e-03 6.26e-03 -3.35e-02 3.60e-02 -3.08e-02
## 2440 -1.71e-01 -1.91e-02 1.57e-01 2.16e-02 9.48e-03 1.05e-01 1.13e-01
## 2443 1.70e-02 2.31e-03 -7.93e-03 -1.43e-03 -2.08e-02 -1.40e-02 -1.45e-02
## 2446 -8.96e-04 3.49e-03 6.76e-03 1.03e-03 6.05e-03 2.65e-03 -1.24e-02
        1.50e-03 -2.88e-03 5.23e-02 6.36e-03 6.91e-04 -3.07e-02 4.33e-03
## 2450 2.12e-02 -1.12e-03 -1.63e-02 2.42e-03 -2.46e-02 -1.21e-02 -8.83e-03
## 2451 -2.91e-02 -2.44e-03 1.19e-02 2.01e-03 1.56e-02 2.98e-02 -7.19e-04
## 2454 -1.46e-02 3.96e-02 1.37e-03 -3.54e-02 1.53e-02 2.00e-02 7.98e-04
## 2455 -6.03e-03 -2.36e-02 2.10e-03 2.40e-02 -1.01e-02 1.21e-02 -1.23e-02
## 2456 -3.23e-03 -8.19e-03 1.16e-03 7.70e-03 2.42e-03 2.33e-03 2.19e-03
## 2458 -3.56e-02 4.24e-02 2.60e-03 -4.59e-02 1.31e-02 3.27e-02 6.98e-02
## 2459
       4.43e-04 -7.07e-04 -4.10e-05 6.51e-04 -3.47e-04 -4.53e-04 -2.22e-04
## 2461 -1.85e-02 -4.32e-02 8.94e-03 4.09e-02 2.90e-02 9.67e-03 1.37e-02
## 2463 -9.89e-03 3.06e-02 1.01e-04 -2.80e-02 1.22e-02 1.01e-02 1.50e-03
## 2464 4.07e-02 -7.95e-02 1.20e-03 7.72e-02 -3.88e-02 -5.58e-02 -4.59e-02
## 2466 2.38e-03 3.14e-02 -2.95e-03 -2.94e-02 -4.17e-03 -2.58e-04 -9.39e-04
## 2468 -2.82e-04 -1.03e-02 7.92e-04 9.81e-03 1.58e-03 -7.69e-04 -5.28e-04
## 2469 -8.28e-04 5.36e-03 -2.41e-04 -5.07e-03 1.93e-04 1.32e-03 9.02e-04
## 2470 -2.01e-03 -4.59e-02 4.19e-03 4.17e-02 -8.27e-03 -6.97e-03 7.71e-03
## 2471 1.73e-03 -4.87e-02 3.04e-03 4.46e-02 -3.66e-03 -8.88e-03 5.46e-03
## 2472 -1.39e-02 -3.24e-02 4.80e-03 2.98e-02 7.40e-03 1.12e-02 1.35e-02
## 2474 1.06e-03 -1.05e-02 1.85e-04 9.72e-03 -4.31e-04 -1.64e-03 5.35e-04
## 2475 -5.79e-03 -3.67e-02 5.90e-03 3.91e-02 1.13e-03 1.65e-03
                                                                  1.53e-02
## 2476 -1.99e-02 -8.10e-02 1.38e-02 7.60e-02 2.31e-02 -4.63e-06 1.89e-02
## 2479 -1.15e-02 3.00e-02 -2.26e-04 -2.79e-02 1.02e-02 1.30e-02 7.20e-03
## 2481 -1.62e-02 -7.95e-02 1.45e-02 7.30e-02 2.29e-02 1.41e-03 3.45e-02
## 2483 6.85e-03 2.51e-02 -2.41e-03 -2.41e-02 -3.26e-03 -6.66e-03 -1.97e-03
## 2484 2.17e-04 -4.41e-03 4.95e-04 4.16e-03 -7.12e-04 -7.70e-04 -6.27e-05
## 2485 6.11e-03 -6.65e-02 2.61e-03 6.05e-02 -2.83e-03 -1.59e-02 8.83e-03
## 2486 -1.75e-03 5.82e-03 -6.63e-05 -5.40e-03 7.82e-04 2.42e-03 5.66e-04
## 2488 6.88e-04 9.95e-03 -9.24e-04 -9.40e-03 -2.56e-03 1.23e-04 -8.89e-04
## 2489 -1.18e-03 -5.14e-02 3.31e-03 4.78e-02 -3.26e-03 -5.75e-03 2.85e-03
## 2490 1.76e-03 6.60e-03 -8.61e-04 -6.57e-03 -8.19e-04 -2.13e-03 8.47e-04
        1.01e-02 2.11e-02 -3.44e-03 -1.95e-02 -1.23e-02 -7.74e-03 -1.02e-02
## 2492 2.69e-02 1.18e-01 -1.23e-02 -1.13e-01 3.44e-03 -4.61e-02 -1.91e-02
## 2493 -1.76e-03 -5.62e-02 4.98e-03 5.23e-02 6.82e-03 -6.22e-03 7.22e-03
## 2494 -7.81e-04 -5.89e-03 3.10e-04 5.53e-03 -1.74e-04 9.23e-04 4.01e-04
       1.34e-03 -5.08e-02 3.74e-03 4.64e-02 3.80e-03 -1.01e-02 8.42e-03
## 2496 1.76e-02 3.66e-02 -7.03e-03 -3.42e-02 -1.82e-02 -1.53e-02 -1.82e-02
## 2497 -1.43e-03 -1.27e-02 1.36e-03 1.15e-02 1.60e-03 -5.70e-04 3.75e-03
## 2498 -1.25e-02 -4.57e-02 6.37e-03 4.33e-02 1.08e-02 1.10e-02 8.31e-03
## 2500 -1.69e-02 -5.85e-02 7.46e-03 5.98e-02 5.10e-03 2.25e-02 -1.98e-02
## 2501 -3.04e-02 -1.24e-01 1.44e-02 1.14e-01 3.20e-02 2.68e-02 4.66e-02
## 2502 -3.70e-04 -6.24e-03 4.73e-04 5.76e-03 -3.43e-04 -1.21e-04 1.05e-03
## 2504 2.62e-03 -8.04e-03 -1.77e-04 7.46e-03 -1.78e-03 -2.88e-03 -1.97e-03
## 2505
       6.38e-03 6.97e-03 -1.63e-03 -6.53e-03 -4.41e-03 -5.85e-03 -4.84e-03
## 2506 -1.68e-02 -7.40e-02 9.47e-03 6.75e-02 -4.68e-03 1.16e-02 2.37e-02
## 2508 9.84e-03 6.39e-02 -4.09e-03 -6.14e-02 -2.93e-04 -1.60e-02 2.79e-03
       6.63e-03 -1.74e-02 -4.86e-04 1.61e-02 -3.49e-03 -7.86e-03 -2.85e-03
## 2509
## 2510 -7.94e-04 -4.31e-03 5.52e-04 4.73e-03 2.60e-03 -2.98e-03 1.06e-02
## 2511 -7.93e-03 -3.01e-02 2.03e-03 2.75e-02 1.06e-02 7.73e-03 1.24e-02
## 2512 9.93e-03 3.34e-02 -3.86e-03 -3.10e-02 -2.58e-03 -7.33e-03 -9.09e-03
## 2513 2.69e-03 1.59e-02 -1.78e-03 -1.46e-02 -2.15e-03 -4.03e-04 -4.61e-03
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## 2515 7.73e-03 -3.92e-02 -1.28e-03 3.63e-02 1.20e-03 -5.83e-03 -3.46e-04
## 2516 -2.20e-03 -1.99e-02 1.46e-03 1.82e-02 1.82e-03 -9.25e-04 4.54e-03
## 2518 -1.80e-02 2.97e-02 7.66e-04 -3.10e-02 7.01e-05 1.60e-02 4.06e-02
## 2520 7.51e-03 3.76e-02 -5.25e-03 -3.48e-02 -1.18e-02 -6.36e-04 -1.18e-02
## 2522 -1.88e-03 -3.98e-02 3.22e-03 3.88e-02 4.15e-04 2.35e-03 -8.05e-03
## 2523 -2.04e-03 -3.53e-02 1.49e-03 3.49e-02 -1.14e-02 6.35e-03 -1.19e-02
## 2524 -1.60e-03 -1.46e-02 6.08e-04 1.35e-02 2.15e-03 1.67e-03 3.66e-03
## 2525 3.44e-02 -9.09e-02 -4.69e-03 8.05e-02 -5.09e-02 -3.67e-02 -1.95e-03
## 2528 7.56e-03 2.36e-02 -2.83e-03 -2.12e-02 4.90e-05 -5.51e-03 -1.04e-02
## 2529 -5.56e-04 -4.21e-03 4.08e-04 3.98e-03 6.18e-04 2.51e-04 3.95e-04
## 2531 -1.79e-02 -4.01e-02 6.87e-03 3.67e-02 7.61e-03 8.61e-03 1.79e-02
## 2534 -3.26e-03 2.40e-02 -1.67e-03 -2.28e-02 -1.01e-02 6.35e-03 7.84e-03
## 2535 -3.79e-03 -5.46e-02 2.63e-03 4.93e-02 1.63e-03 -1.36e-03 1.51e-02
## 2537
       1.09e-03 -8.01e-05 3.75e-04 1.80e-04 -2.00e-03 -1.87e-03 1.69e-04
## 2543 1.55e-03 1.68e-04 -5.49e-03 -5.25e-04 -2.94e-03 3.31e-03 -4.18e-03
## 2545 -2.30e-02 -1.07e-02 7.84e-02 1.59e-02 -2.93e-03 -1.00e-02 8.32e-03
       4.47e-03 5.91e-04 -1.61e-03 1.86e-04 -3.14e-03 -3.48e-03 -7.46e-04
## 2547
## 2550
       2.13e-02 6.69e-04 -1.83e-02 2.87e-03 -1.82e-02 -1.02e-02 -9.74e-03
## 2552 2.66e-02 -1.18e-02 -2.02e-02 9.40e-03 -4.45e-02 -8.84e-03 -1.64e-02
## 2553 -9.01e-03 -7.63e-04 1.09e-02 -1.68e-03 1.10e-02 -8.85e-04 1.14e-02
## 2556 -8.21e-03 -3.58e-03 8.03e-03 2.56e-03 2.14e-03 4.88e-03 6.47e-03
## 2557 -1.13e-01 -5.27e-03 7.61e-02 1.38e-02 1.24e-01 1.02e-01 8.34e-03
## 2558 2.95e-03 -9.39e-03 1.95e-02 5.88e-03 -2.53e-03 -2.64e-02 2.23e-02
## 2561 -4.52e-03 5.06e-03 -1.24e-02 -4.86e-03 5.98e-03 8.77e-03 1.49e-02
## 2562 -1.53e-02 -8.99e-04 1.30e-02 1.45e-03 1.21e-02 1.02e-02 2.54e-03
       2.92e-02 1.90e-03 -2.13e-02 -2.96e-03 -2.99e-02 -1.98e-02 -7.88e-03
## 2569 8.68e-03 3.70e-03 -1.72e-02 -4.97e-03 -9.23e-04 -9.84e-03 1.09e-02
## 2570 -1.06e-03 -1.26e-03 4.76e-03 1.31e-03 3.95e-06 -3.36e-04 -2.31e-03
## 2571 1.54e-02 -4.00e-03 3.43e-03 2.79e-03 -1.07e-02 -1.59e-02 -1.24e-02
## 2572 9.88e-04 2.11e-03 -1.15e-02 -1.29e-04 -5.91e-03 1.34e-03 4.06e-03
## 2574 -2.26e-02 -7.02e-03 2.44e-02 8.53e-03 7.17e-03 1.91e-02 -8.76e-03
## 2575 -9.15e-03 -7.59e-03 2.86e-02 4.04e-03 1.51e-02 -1.29e-02 1.97e-02
## 2577 7.58e-03 3.40e-03 -1.30e-02 -3.29e-03 -8.23e-03 -4.81e-04 1.50e-03
## 2583 -1.39e-02 -3.21e-03 1.32e-02 2.70e-03 4.04e-03 9.69e-03 3.65e-03
## 2588 -7.21e-03 -7.80e-04 4.83e-03 1.74e-03 6.81e-03 7.76e-03 -4.61e-03
       1.32e-02 1.28e-02 -3.77e-02 -1.18e-02 2.03e-02 4.77e-04 1.27e-02
## 2589
## 2590 -7.81e-02 -3.16e-02 1.42e-01 3.74e-02 5.39e-02 4.49e-02 -5.16e-02
## 2592 -1.96e-04 -2.72e-04 4.42e-04 1.83e-04 -2.32e-04 3.96e-05 4.00e-04
       3.54e-02 2.13e-02 -6.48e-02 -2.17e-02 -1.13e-02 -2.16e-02 2.56e-02
## 2595 9.40e-04 4.58e-03 -9.98e-03 -5.30e-03 1.38e-03 -7.39e-04 1.17e-02
## 2600 -1.22e-01 -2.12e-02 1.47e-01 2.48e-02 1.86e-01 1.01e-01 1.86e-02
## 2602 3.41e-03 -1.54e-02 6.83e-02 1.16e-02 4.34e-02 -5.07e-02 -2.38e-03
## 2604 -1.06e-03 -1.30e-03 2.18e-03 9.92e-04 -8.10e-04 3.30e-04 9.49e-04
## 2605 7.94e-03 1.52e-02 -2.39e-02 -1.35e-02 4.06e-03 -2.74e-03 1.08e-03
## 2606 -1.62e-02 -1.19e-02 4.28e-02 9.96e-03 -7.16e-03 6.75e-03 -1.74e-02
       1.13e-02 5.94e-03 -1.35e-02 -5.80e-03 3.56e-03 -1.07e-02 1.29e-03
## 2607
## 2608
       4.36e-03 6.50e-04 -7.40e-03 -6.40e-04 -8.88e-03 -4.12e-04 -7.33e-04
## 2609 1.02e-03 2.81e-03 -2.56e-03 -3.48e-03 -3.02e-03 -1.98e-03 9.25e-03
## 2610 -9.78e-03 -9.22e-03 1.01e-02 9.54e-03 1.26e-04 1.99e-02 -1.67e-02
## 2611 -4.53e-02 -1.03e-02 3.79e-02 1.00e-02 -3.88e-03 4.14e-02 -3.91e-03
## 2612 -4.97e-03 7.19e-04 8.22e-04 -6.26e-04 2.76e-03 2.87e-03 8.56e-03
## 2613 -5.56e-03 -3.52e-03 7.00e-03 1.42e-03 6.14e-03 1.02e-03 9.10e-03
## 2614 -1.84e-03 3.96e-03 -6.53e-03 -5.31e-03 -9.56e-03 1.06e-03 1.47e-02
## 2616 -5.96e-03 -4.45e-03 1.44e-02 5.97e-03 2.92e-03 6.60e-03 -1.47e-02
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## 2619 -1.44e-02 -1.13e-02 1.71e-02 7.47e-03 5.21e-03 8.96e-03 2.14e-02
## 2620 -1.23e-02 -3.86e-03 2.27e-02 2.98e-03 9.81e-03 2.37e-03 -2.05e-02
## 2621 3.96e-03 -2.51e-04 -9.03e-04 -2.68e-05 -8.95e-04 -4.15e-03 -4.08e-03
## 2622 5.54e-03 2.77e-03 -3.82e-03 -1.96e-03 -1.47e-03 -4.73e-03 -4.74e-03
## 2625 -7.33e-03 -1.14e-03 3.07e-03 1.39e-03 1.10e-02 1.31e-02 -3.74e-03
## 2627 -4.20e-02 1.49e-02 1.38e-02 -1.08e-02 2.74e-02 5.84e-02 8.47e-03
## 2629 1.56e-03 5.41e-04 -4.83e-04 -7.75e-04 -7.51e-04 -1.22e-03 -2.57e-03
## 2632 -7.32e-04 -1.42e-03 -2.19e-03 8.50e-04 -1.82e-03 2.51e-03 2.66e-03
## 2634 -1.50e-04 -5.83e-05 2.44e-05 4.56e-05 8.62e-06 1.86e-04 1.04e-04
## 2635 -5.29e-04 2.40e-04 1.99e-05 1.93e-04 6.19e-04 -1.44e-03 3.41e-03
## 2637 3.40e-03 -1.43e-02 -2.36e-02 1.77e-02 3.17e-02 4.28e-02 -3.55e-02
## 2638 -1.66e-02 -8.51e-03 1.00e-02 4.81e-03 -4.80e-04 1.09e-02 2.06e-02
## 2640
       2.56e-03 4.25e-03 -1.43e-03 -6.66e-03 -6.09e-03 8.66e-03 -2.30e-02
## 2644 -1.05e-03 2.07e-03 1.55e-04 -1.09e-03 4.74e-03 1.75e-03 -1.15e-03
       5.84e-04 -4.28e-04 -2.70e-03 1.07e-03 -1.08e-02 2.65e-03 3.63e-04
## 2645
        2.21e-01 1.49e-02 -2.09e-01 -2.37e-02 -2.84e-01 -1.80e-01 -2.86e-02
       3.31e-03 -7.49e-03 8.03e-03 6.66e-03 -1.71e-02 1.78e-03 -1.66e-02
## 2647
## 2648 -4.43e-03 2.56e-03 1.78e-03 -1.30e-03 5.69e-03 2.05e-03 3.10e-02
       1.57e-02 3.63e-03 -7.47e-04 3.35e-05 1.37e-03 -1.89e-02 -2.47e-02
## 2652
## 2654 -2.40e-03 -1.53e-04 1.00e-03 2.22e-04 1.28e-03 2.61e-03 2.70e-05
## 2655
       5.42e-02 3.99e-03 -6.86e-02 -6.99e-03 -3.40e-02 -2.36e-02 -4.43e-02
        1.83e-03 -1.52e-03 1.08e-02 1.44e-03 -1.60e-02 -8.04e-03 2.91e-03
       6.66e-02 2.30e-03 -8.42e-02 -1.07e-02 -1.89e-01 -5.75e-02 8.93e-02
## 2660 -1.97e-02 -3.07e-03 5.37e-03 4.92e-03 -2.13e-02 2.45e-02 7.51e-03
## 2661
       1.42e-03 1.16e-02 1.34e-02 -1.61e-02 -2.32e-03 -3.87e-02 5.17e-02
## 2662
       2.54e-03 -2.20e-03 -1.11e-03 1.48e-03 -8.32e-03 -2.21e-04 -4.71e-03
       2.79e-02 -3.70e-03 7.07e-03 4.59e-03 -3.06e-02 -3.57e-02 -5.97e-03
## 2665
## 2666 -3.27e-03 1.43e-03 2.64e-03 -2.29e-03 8.64e-03 -1.83e-03 6.47e-03
## 2667 -4.79e-02 -2.47e-03 3.13e-02 4.40e-03 -1.11e-02 3.61e-02 2.70e-02
## 2668 2.62e-03 -5.97e-04 -1.44e-02 2.52e-03 8.68e-03 9.43e-03 -2.06e-02
## 2670 -7.17e-02 -2.22e-02 3.27e-02 9.63e-03 2.88e-03 7.24e-02 6.05e-02
## 2673 -7.45e-03 -8.64e-03 3.48e-02 5.61e-03 -8.78e-05 -5.24e-03 -3.31e-02
## 2676 -2.28e-04 2.21e-03 1.57e-03 -1.49e-03 5.76e-03 -2.05e-03 2.18e-03
## 2679 -6.18e-03 2.51e-03 8.29e-03 -2.26e-03 7.94e-03 9.00e-04 4.26e-03
## 2680 -5.32e-03 -8.88e-03
                           4.05e-02 9.69e-03 -2.34e-02 -1.31e-02 3.47e-03
## 2681 -2.08e-03 4.46e-04 6.81e-04 2.08e-04 1.06e-03 4.45e-03 -4.18e-03
## 2683 -9.07e-04 9.59e-05 -1.68e-04 -4.61e-05 4.32e-04 4.75e-04 2.53e-03
## 2685 4.78e-03 1.15e-03 1.84e-04 -1.95e-03 -4.10e-03 -7.16e-03 2.13e-03
## 2686 -1.33e-02 -5.50e-03 -1.83e-02 4.78e-04 6.54e-02 9.19e-03 5.22e-02
## 2687 8.18e-03 6.12e-03 -3.24e-04 -3.74e-03 7.39e-03 -1.61e-02 -1.73e-03
## 2690 -5.99e-03 -7.40e-04 -2.92e-03 -3.31e-05 2.40e-03 5.30e-03 1.77e-02
## 2692 5.23e-03 3.15e-04 -1.89e-03 -7.59e-04 -4.68e-03 -6.68e-03 8.54e-04
## 2693 -9.84e-03 -2.12e-04 1.52e-03 1.23e-03 1.84e-02 8.80e-03 4.64e-03
## 2694 -7.67e-04 1.39e-02 4.27e-03 -8.75e-03 4.78e-03 -4.52e-03 1.23e-03
       2.13e-02 -2.20e-03 7.43e-03 7.39e-03 2.11e-03 -1.93e-02 -1.04e-02
       6.25e-03 1.46e-03 -6.53e-03 -4.53e-03 1.72e-02 -1.75e-02 2.39e-02
## 2697
## 2698
       1.88e-05 2.78e-06 -1.15e-05 4.22e-06 3.52e-05 -2.89e-05 -1.43e-06
## 2702 1.66e-02 1.52e-03 -5.01e-03 -4.97e-04 -1.01e-02 -1.98e-02 1.51e-03
## 2703 -2.88e-04 -3.27e-03 9.03e-03 7.93e-04 -2.16e-03 -7.06e-03 -3.78e-03
## 2705 -5.46e-03 -1.81e-03 6.03e-04 9.45e-04 1.48e-03 6.21e-03 8.92e-03
## 2707 2.06e-03 -8.72e-04 -1.30e-04 1.25e-03 -4.11e-04 -2.54e-03 1.95e-03
## 2708 -8.54e-03 7.87e-05 1.17e-03 -1.13e-03 1.17e-02 1.00e-02 1.36e-03
## 2709 -1.39e-03 6.39e-04 -8.37e-04 -2.81e-04 2.93e-04 2.79e-03 -9.08e-04
## 2710 -3.59e-02 1.08e-03 3.42e-02 1.85e-03 3.65e-02 2.11e-02 -5.26e-03
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## 2711 -8.54e-03 -1.00e-03 -1.79e-03 -8.77e-04 -1.24e-02 1.13e-02 -2.74e-03
## 2713 -2.41e-03 -1.93e-03 2.70e-03 2.49e-03 4.32e-03 2.80e-03 -7.66e-03
## 2714 5.85e-01 5.40e-03 -4.46e-01 -1.56e-02 -3.09e-01 -4.21e-01 -2.71e-01
## 2716 9.60e-02 -8.35e-04 -1.13e-01 -1.23e-02 -6.69e-02 -1.03e-01 -1.68e-02
        3.01e-03 -1.02e-03 -1.42e-03 1.34e-03 -6.08e-04 -3.15e-03 5.77e-04
## 2718 9.15e-02 -2.25e-02 -4.16e-02 7.52e-03 -9.40e-02 -1.33e-01 -2.32e-02
## 2719 2.68e-02 -1.78e-02 -1.22e-02 1.13e-02 -3.90e-02 -3.31e-02 1.06e-02
## 2720 -4.67e-03 1.22e-02 9.67e-03 -5.41e-03 -1.21e-03 3.53e-03 -3.20e-02
## 2721 5.30e-02 -1.76e-02 -3.65e-02 5.14e-03 -4.56e-02 -5.33e-02 2.85e-02
## 2722 -6.35e-03 2.92e-03 2.14e-03 -1.74e-03 1.02e-02 6.31e-03 1.78e-03
       3.10e-02 -1.83e-02 1.07e-02 1.01e-02 -3.88e-02 -4.32e-02 -3.64e-03
       3.02e-03 -2.78e-03 7.20e-04 2.24e-03 -7.34e-03 -3.05e-03 -2.00e-03
## 2726 -5.12e-03 -4.19e-02 9.24e-02 9.57e-03 -1.26e-02 -1.78e-01 6.74e-02
## 2727
       1.06e-01 -6.85e-02 6.60e-02 5.06e-02 -1.96e-01 -1.86e-01 -9.31e-02
       2.44e-02 -2.85e-03 -2.67e-02 -3.21e-03 -3.56e-02 -3.78e-02 -2.57e-03
## 2730 5.25e-02 -3.23e-03 -5.13e-02 -6.71e-04 -2.94e-02 -3.01e-02 -8.07e-03
## 2732 6.08e-02 -1.99e-02 -3.42e-02 3.57e-03 -8.15e-02 -6.70e-02 1.72e-02
## 2733 6.35e-05 -2.86e-05 3.72e-05 -1.17e-05 -7.57e-05 -2.19e-04 2.24e-06
## 2735 -3.62e-03 -4.39e-04 8.11e-03 5.43e-04 -1.47e-03 1.19e-03 -1.93e-03
## 2736 -5.50e-02 1.12e-02 7.07e-02 -1.98e-03 -2.05e-02 5.87e-02 -5.04e-02
## 2737 5.27e-04 -2.39e-03 1.45e-02 2.53e-03 -8.34e-03 -4.88e-03 -4.20e-03
## 2738 -9.80e-03 2.29e-03 1.02e-02 -8.44e-04 1.05e-02 1.20e-02 4.54e-03
## 2739 -1.10e-02 -6.64e-04 4.94e-04 1.95e-03 1.05e-02 1.68e-02 -1.43e-03
## 2740 -3.15e-02 4.18e-03 2.14e-02 -2.67e-03 3.46e-02 2.46e-02 2.15e-02
## 2742 -5.68e-05 2.44e-03 7.36e-04 -9.58e-03 -1.31e-03 -1.05e-03 2.80e-03
## 2743 2.27e-04 4.48e-03 -1.43e-03 -3.41e-03 9.35e-05 3.73e-04 -2.62e-03
## 2744
       7.42e-03 -6.26e-03 7.31e-02 1.05e-02 -2.29e-02 -1.05e-02 -3.74e-02
        7.63e-03 -3.22e-03 5.18e-02 5.48e-03 -3.44e-02 -2.28e-02 -3.29e-02
## 2748 -5.10e-04 -3.33e-03 5.99e-03 2.87e-03 -5.90e-05 -1.78e-03 -3.25e-03
## 2749 3.45e-02 -2.54e-03 8.47e-02 -6.28e-03 -5.25e-02 -7.44e-02 -2.43e-02
       4.80e-03 -1.45e-04 -1.20e-03 1.98e-03 -4.03e-03 -2.23e-03 -7.50e-03
## 2752 2.64e-03 -2.60e-03 -1.15e-03 1.86e-03 -2.04e-03 -3.01e-03 -1.31e-03
## 2758 -1.12e-04 -3.01e-04 -9.74e-04 3.11e-04 -4.28e-04 7.30e-04 9.99e-04
## 2759 4.32e-02 -3.11e-03 1.52e-02 9.55e-03 -3.63e-02 -4.60e-02 -3.13e-02
## 2762 -1.36e-03 7.76e-05 1.17e-03 1.80e-04 8.42e-04 9.91e-04 9.33e-04
## 2765 -4.37e-03 2.36e-03 -8.86e-03 -1.50e-03 -8.60e-03 1.35e-02 -4.41e-03
## 2767 -3.28e-02 -3.49e-03 4.22e-02 5.54e-03 3.61e-03 7.37e-03 2.66e-02
## 2768 -1.43e-04 1.28e-04 4.77e-06 -6.16e-05 7.65e-05 1.61e-04 6.03e-05
## 2770 4.23e-03 -5.88e-04 -6.29e-04 -3.65e-04 -6.27e-03 -3.94e-03 -7.09e-03
## 2772 -2.11e-02 -5.61e-03 -5.84e-04 4.22e-03 5.40e-03 2.43e-02 2.60e-02
## 2775 1.77e-02 -2.61e-03 4.99e-03 5.47e-03 -3.96e-02 -8.05e-03 -3.06e-02
## 2776 -2.07e-02 7.29e-03 9.71e-03 -6.21e-03 9.51e-04 2.58e-02 6.43e-03
## 2778 3.26e-03 -2.14e-03 -3.34e-03 1.18e-03 1.03e-03 -2.07e-03 4.31e-03
## 2779 -8.74e-03 -5.67e-03 5.30e-03 4.99e-03 1.30e-02 7.60e-03 7.81e-03
## 2780 -1.97e-03 -8.08e-03 5.35e-03 7.21e-03 2.68e-02 1.01e-02 4.81e-03
## 2787 4.87e-03 9.93e-03 -1.30e-02 -6.61e-03 -6.46e-03 1.96e-03 -1.56e-02
## 2788 2.43e-02 1.71e-02 -3.01e-02 -1.65e-02 -2.91e-02 -1.09e-02 -5.21e-03
## 2789 2.68e-02 2.05e-02 2.71e-02 -1.91e-02 -1.54e-02 -6.35e-02 -1.95e-02
## 2792 -8.33e-04 4.07e-03 -2.83e-03 -3.71e-03 -3.22e-04 -1.60e-03 1.41e-03
## 2793 -7.47e-03 -4.47e-03 1.27e-02 3.39e-03 9.76e-03 8.75e-04 6.83e-03
## 2794 -1.82e-03 6.44e-03 -2.91e-03 -5.06e-03 -8.85e-04 1.07e-02 -4.40e-03
## 2796 3.08e-02 1.07e-02 -3.39e-02 -1.09e-02 -3.18e-02 -1.36e-02 -1.23e-02
## 2797 3.02e-02 8.07e-03 -2.57e-02 -8.27e-03 -2.03e-02 -3.10e-02 -1.07e-02
## 2798 9.36e-03 5.20e-03 1.20e-03 -5.22e-03 -3.81e-03 -1.17e-02 -4.13e-03
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## 2799 -2.33e-02 4.68e-03 3.22e-02 -3.38e-03 4.91e-03 7.89e-04 3.34e-03
## 2800 1.06e-02 1.28e-02 -2.05e-02 -1.09e-02 -2.10e-03 -9.29e-03 -7.40e-03
        1.83e-03 1.66e-03 -3.07e-03 -1.08e-03 -9.39e-04 2.14e-06 -3.19e-03
## 2802
        1.55e-02 1.55e-02 -2.64e-03 -1.09e-02 -2.44e-02 -1.33e-02 -3.25e-02
        1.26e-02 6.53e-03 -8.88e-03 -7.82e-03 -1.49e-02 -1.19e-02 1.14e-03
       5.52e-02 2.07e-02 -6.58e-02 -1.94e-02 -2.38e-02 -3.89e-02 -1.99e-02
## 2806 -1.74e-04 -2.75e-03 -2.27e-04 1.19e-03 -3.94e-04 7.65e-05 7.25e-03
## 2809 4.52e-02 1.29e-02 -4.19e-02 -6.03e-03 -1.22e-01 -3.74e-03 -5.93e-02
## 2810 -1.11e-02 -3.07e-02 1.60e-02 2.63e-02 1.97e-03 1.51e-02 1.27e-02
## 2811 -6.42e-02 1.24e-02 1.31e-01 -5.15e-03 1.97e-02 5.87e-02 -1.09e-02
## 2812 5.93e-02 -1.69e-02 -1.78e-02 1.26e-02 -1.79e-02 -5.80e-02 -1.82e-02
## 2813 1.90e-03 2.40e-03 9.27e-04 -2.14e-03 -1.04e-03 -2.62e-03 -2.43e-03
## 2815 -3.39e-02 -1.98e-02 5.38e-03 1.55e-02 1.90e-02 2.76e-02 3.52e-02
## 2817 -2.63e-03 -9.02e-03 -6.75e-03 5.54e-03 -3.89e-03 -1.82e-03 1.48e-02
## 2818 -2.48e-03 1.76e-03 5.97e-05 -1.20e-03 -1.41e-04 3.81e-03 -2.67e-03
## 2819 -4.81e-02 -2.58e-02 9.05e-03 2.46e-02 4.20e-02 4.26e-02 2.32e-02
## 2821 2.26e-02 -1.48e-03 -2.14e-02 -1.76e-04 -1.52e-05 -2.08e-02 -4.77e-03
## 2824 2.37e-02 2.31e-02 -5.02e-02 -2.14e-02 3.23e-03 -3.21e-03 -9.82e-04
## 2825 -3.20e-03 -3.93e-02 -1.95e-03 2.95e-02 -3.54e-02 -1.51e-02 3.40e-02
## 2827 -3.71e-03 -1.09e-03 -2.99e-04 8.13e-04 1.03e-02 3.36e-03 5.89e-03
## 2829 2.02e-03 6.91e-03 -1.11e-02 -5.73e-03 7.37e-03 1.23e-03 -2.42e-05
## 2831 -1.58e-02 7.80e-03 1.30e-02 -3.69e-03 -2.64e-03 1.65e-02 -1.41e-02
## 2833 2.15e-03 1.01e-03 -1.92e-03 -1.26e-03 -3.50e-03 -2.42e-03 1.10e-03
## 2834 -4.41e-02 -8.45e-03 4.90e-02 7.50e-03 1.14e-02 2.62e-02 -4.22e-03
## 2835 4.77e-02 3.35e-03 -2.41e-02 -5.75e-03 -7.48e-02 -2.73e-02 -1.25e-02
## 2839 -5.99e-03 -9.44e-03 8.51e-03 5.85e-03 -1.91e-02 -1.26e-03 -2.84e-03
## 2840 -5.58e-03 -2.70e-04 2.71e-03 -4.37e-04 2.43e-03 7.18e-03 -3.16e-03
## 2841 -1.44e-02 3.12e-03 -6.60e-03 -1.73e-03 3.78e-02 2.02e-02 1.02e-02
## 2847 -3.92e-03 -2.18e-03 4.74e-03 1.96e-03 2.09e-03 3.56e-03 -7.28e-05
## 2848 -2.72e-03 3.72e-04 2.53e-03 -1.24e-04 5.97e-05 7.69e-05 4.51e-03
## 2849 6.91e-03 1.37e-04 -4.92e-03 -3.78e-04 -3.40e-03 -6.97e-03 -8.48e-04
## 2850 -2.74e-05 1.66e-03 -3.34e-03 -1.36e-03 1.36e-03 8.87e-04 5.45e-04
## 2853 -1.21e-02 -4.01e-03 2.34e-02 3.23e-03 1.02e-02 1.92e-03 -9.48e-04
## 2854 2.42e-05 -3.69e-04 1.13e-03 2.87e-04 -1.55e-04 -5.84e-04 -3.16e-04
## 2855 -6.80e-03 -7.25e-03 1.75e-02 8.50e-03 3.27e-03 5.57e-03 -1.79e-02
       5.86e-04 -3.22e-03 6.15e-03 2.65e-03 -7.44e-03 -1.98e-03 -2.73e-03
## 2857
## 2858 -5.27e-02 -2.63e-02 7.75e-02 3.20e-02 2.57e-02 5.75e-02 -3.74e-02
## 2859 3.31e-03 2.70e-03 -2.96e-03 -2.17e-03 1.39e-03 -3.65e-03 -1.21e-03
## 2860 -1.37e-03 -8.89e-04 -4.81e-03 -4.91e-04 -5.27e-03 1.01e-03 1.12e-03
## 2861 5.33e-03 -1.86e-03 -5.15e-03 1.63e-03 -6.04e-03 1.54e-04 -5.50e-03
## 2862 -3.66e-03 -4.73e-03 1.02e-02 4.15e-03 -4.18e-03 1.85e-03 -7.41e-04
## 2863 2.16e-03 1.43e-03 -3.50e-03 -1.45e-03 -4.48e-04 -1.41e-03 1.35e-03
        2.03e-02 -1.65e-03 -8.71e-03 7.26e-03 -5.15e-02 -4.35e-03 -4.10e-02
       4.68e-03 6.43e-03 -1.04e-02 -6.07e-03 4.56e-03 -4.55e-03 4.44e-03
## 2865
       3.79e-03 1.56e-03 -8.07e-03 -1.36e-03 -2.92e-03 -1.74e-04 3.14e-04
## 2867 -3.93e-03 1.37e-03 1.71e-03 -1.08e-03 5.18e-03 1.39e-03 3.80e-03
## 2869 -2.98e-03 8.09e-03 -1.25e-02 -5.18e-03 1.22e-02 8.48e-03 5.50e-03
## 2870 5.68e-04 1.92e-03 -1.58e-04 -2.83e-03 1.70e-03 -3.81e-04 -2.58e-03
## 2871 -2.76e-03 3.31e-04 -8.48e-04 5.90e-06 4.68e-03 2.71e-03 3.30e-03
## 2873 -9.60e-03
                 1.28e-03 -2.45e-03 -5.59e-04 7.14e-04 1.41e-02 4.40e-03
## 2874 -9.28e-03 2.77e-04 3.57e-03 3.77e-03 -7.77e-04 6.58e-03 1.81e-02
## 2875 -1.77e-03 5.04e-04 -5.99e-03 -4.88e-04 6.47e-03 4.11e-03 4.30e-03
## 2877 1.11e-02 -4.23e-03 3.39e-03 3.40e-03 -1.59e-02 -1.24e-02 -1.09e-02
## 2879 -3.95e-03 1.93e-03 -2.55e-03 -1.05e-03 7.04e-03 5.48e-03 4.19e-03
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## 2880 -2.77e-04 7.24e-04 -1.47e-03 6.06e-04 -5.88e-03 4.05e-03 -6.83e-03
## 2882 -1.83e-02 -1.26e-02 1.63e-02 4.26e-03 2.72e-02 -6.07e-03 7.44e-02
## 2883 8.33e-04 -1.78e-05 -1.49e-03 1.68e-04 2.51e-04 -1.20e-04 -3.46e-04
## 2884
       8.50e-04 1.25e-03 -2.83e-03 -9.60e-04 2.88e-03 -2.96e-04 9.17e-04
        1.72e-03 3.05e-03 7.83e-03 -2.02e-03 -8.55e-03 -7.22e-03 2.25e-03
## 2886 -1.86e-02 -7.12e-03 3.49e-02 6.52e-03 6.69e-03 2.68e-03 -2.79e-03
## 2888 -9.57e-04 -2.71e-03 7.33e-03 2.28e-03 -3.79e-03 -1.16e-03 -3.73e-03
        1.42e-02 6.17e-03 -1.81e-02 -4.51e-03 -2.31e-02 -5.06e-03 -5.96e-03
## 2891 -3.75e-04 6.06e-04 -2.05e-04 -6.23e-04 1.44e-03 -4.96e-04 1.43e-03
## 2892 8.41e-03 1.13e-02 -1.25e-02 -8.75e-03 1.70e-02 -1.04e-02 -5.89e-03
## 2893
        1.22e-03 -8.87e-03 2.04e-02 1.00e-02 1.40e-03 -1.15e-02 -1.92e-02
## 2896 -3.96e-03 2.09e-03 2.22e-03 -1.62e-03 7.18e-03 2.13e-03 3.02e-03
## 2899
        1.35e-02 7.42e-03 -1.34e-02 -5.87e-03 4.85e-03 -1.15e-02 -6.98e-03
## 2900
       9.06e-04 1.77e-03 -1.78e-03 -1.76e-03 -1.26e-03 -1.42e-03 1.48e-03
## 2903 4.96e-03 -6.50e-03 1.45e-03 6.05e-03 -2.47e-02 1.19e-03 -1.69e-02
## 2904 -3.85e-02 4.59e-03 3.33e-03 -2.94e-03 3.55e-02 2.79e-02 4.29e-02
## 2905 1.06e-03 1.65e-03 -3.77e-03 -1.21e-03 -9.25e-04 5.02e-04 -1.08e-03
## 2906 -1.07e-03 -1.28e-03 -2.89e-03 1.82e-03 2.73e-03 2.59e-03 1.17e-03
## 2907 -1.59e-03 2.06e-03 3.16e-03 -1.87e-03 2.44e-03 -7.56e-04 2.60e-03
## 2908 7.09e-03 2.21e-03 -8.55e-03 -1.20e-03 -2.59e-03 -1.22e-03 -2.42e-03
## 2909 -5.71e-03 1.15e-03 7.88e-03 -2.25e-03 1.87e-03 1.03e-03 9.04e-03
## 2910 4.15e-02 -1.70e-02 4.41e-03 1.55e-02 -3.33e-02 -3.70e-02 -4.39e-02
## 2911 -2.30e-02 9.54e-03 2.31e-03 -7.92e-03 3.77e-02 1.20e-02 3.11e-02
## 2912 3.07e-03 6.97e-03 -4.16e-03 -7.58e-03 7.68e-03 -1.36e-02 1.29e-02
## 2914 3.97e-03 -2.79e-05 -4.67e-03 -4.74e-04 -5.11e-03 -4.57e-04 -3.44e-03
## 2915 -7.89e-03 -4.87e-03 2.39e-02 4.46e-03 -1.25e-02 8.34e-04 4.65e-03
        1.57e-04 1.83e-05 -3.06e-03 2.42e-04 1.41e-03 1.10e-03 2.18e-03
## 2917
## 2918 -5.63e-03 -3.06e-03 7.88e-03 2.66e-03 -1.60e-05 4.13e-03 -3.98e-04
## 2921 3.40e-03 1.77e-03 -3.21e-03 -2.07e-03 -2.06e-03 -3.87e-03 1.70e-03
## 2922 -3.57e-02 -1.62e-02 4.34e-02 1.76e-02 -6.62e-03 4.43e-02 -2.58e-02
## 2923 4.40e-03 -1.91e-03 1.99e-03 1.69e-03 -7.96e-03 -4.57e-03 -5.85e-03
## 2924 -4.85e-03 -1.62e-03 4.78e-03 5.29e-03 -9.96e-03 6.10e-03 3.05e-03
## 2925 -1.15e-02 -6.96e-03 2.45e-02 6.82e-03 5.98e-03 2.83e-03 -8.52e-04
## 2926 -9.25e-04 3.16e-03 -1.95e-04 -2.63e-03 -3.75e-03 8.81e-04 -6.53e-05
        8.73e-03 8.05e-03 -1.85e-03 -9.08e-03 -3.50e-03 -9.44e-03 6.59e-03
       5.22e-03 -1.02e-02 1.68e-03 7.23e-03 -6.51e-03 -5.90e-03 1.17e-02
## 2930
## 2931 5.95e-03 -1.74e-03 -2.61e-03 1.35e-03 -4.36e-03 -5.27e-03 -3.58e-03
## 2933 -5.09e-02 -3.80e-02 1.87e-03 2.42e-02 6.39e-03 5.14e-02 1.07e-01
        1.63e-02 -4.57e-03 -8.70e-03 4.16e-03 -1.21e-02 -5.05e-03 -1.55e-02
## 2935 -4.95e-03 2.67e-03 4.99e-03 -2.21e-03 9.35e-03 5.41e-04 5.35e-03
       2.50e-02 -6.44e-03 7.49e-04 5.00e-03 -2.77e-02 -2.83e-02 -1.31e-02
## 2938 8.00e-04 5.29e-04 -9.72e-04 -5.42e-04 1.82e-04 -5.53e-04 4.32e-04
## 2940 -6.66e-03 2.32e-03 -6.97e-04 -3.12e-03 1.01e-03 4.11e-03 1.35e-02
## 2941 -4.93e-04 5.20e-04 5.79e-04 -7.15e-04 4.51e-04 -6.04e-04 1.88e-03
## 2943 9.99e-03 -3.37e-03 -3.71e-03 3.17e-03 -8.30e-03 -5.27e-03 -9.99e-03
        3.63e-03 -1.17e-03 -1.04e-04 9.67e-04 -4.79e-03 -2.70e-03 -3.35e-03
## 2944
## 2946
        1.33e-02 -6.97e-03 -4.08e-03 6.95e-03 -1.75e-02 -7.18e-03 -1.38e-02
## 2947 -3.87e-03 2.04e-03 5.48e-04 -2.69e-03 4.73e-03 4.19e-03 3.50e-03
## 2948
       4.57e-02 -4.50e-03 -1.98e-02 2.66e-03 -4.82e-02 -2.95e-02 -4.79e-02
        3.59e-03 -1.97e-03 1.36e-03 1.21e-03 -4.93e-03 -4.80e-03 -2.13e-04
## 2949
## 2950 9.38e-05 8.18e-04 -1.66e-03 -6.06e-04 2.49e-04 7.99e-04 -1.08e-03
## 2951 -2.37e-02 6.09e-03 8.38e-03 -5.09e-03 1.78e-02 1.62e-02 1.72e-02
## 2952 -1.01e-02 1.51e-02 -1.65e-02 -1.30e-02 6.88e-03 1.99e-02 1.17e-02
## 2954 -2.41e-03 1.08e-02 -1.75e-02 -1.11e-02 3.81e-03 -6.79e-03 1.85e-02
```

```
## 2956 -1.70e-02 -6.67e-03 1.53e-02 6.13e-03 5.49e-03 1.11e-02 5.98e-03
## 2958 7.38e-04 1.08e-03 4.69e-05 -9.83e-04 -9.85e-05 -2.01e-03 1.23e-04
## 2959 -9.88e-03 9.32e-03 5.24e-04 -8.49e-03 1.22e-02 -6.02e-03 1.18e-02
## 2960 -4.69e-04 4.54e-03 -6.43e-03 -4.61e-03 3.73e-03 -1.66e-04 5.34e-03
## 2961 -3.77e-03 7.32e-03 -1.05e-02 -6.44e-03 7.62e-03 3.94e-03
## 2962 -3.95e-04 4.04e-04 -4.22e-04 -3.71e-04 4.12e-04 2.47e-04 5.48e-04
## 2963 1.50e-03 -2.66e-03 3.68e-03 2.05e-03 -1.53e-03 -3.24e-03 -6.62e-04
## 2964 -1.70e-02 1.19e-02 -9.16e-03 -1.39e-02 1.71e-02 1.13e-02 3.75e-02
## 2965 -3.41e-02 1.71e-02 3.01e-02 -1.46e-02 3.73e-02 5.57e-03 2.55e-02
## 2966 5.75e-02 2.43e-02 -6.65e-02 -2.29e-02 -1.58e-02 -3.58e-02 -1.63e-02
## 2967 -3.40e-03 5.98e-03 -3.82e-03 -6.19e-03 7.86e-03 -1.18e-03 9.02e-03
       1.70e-03 2.71e-03 -7.57e-03 -2.81e-03 1.93e-03 -1.05e-04 3.74e-03
## 2968
## 2969
       4.41e-03 -4.89e-03 3.62e-03 3.90e-03 -7.91e-03 -6.19e-03 -2.83e-03
## 2970 -4.26e-03 1.15e-03 2.60e-03 -3.73e-05 -1.49e-03 3.99e-03 -3.05e-03
## 2973 2.13e-04 6.56e-03 -6.91e-03 -6.54e-03 1.71e-03 -2.08e-03 8.30e-03
## 2974
       9.65e-03 2.53e-02 -3.41e-02 -2.43e-02 7.80e-03 -9.44e-03 1.09e-02
       4.46e-03 5.23e-03 -1.74e-02 -4.04e-03 -1.02e-03 5.62e-03 1.35e-03
## 2975
## 2976 4.82e-03 -3.44e-03 4.37e-03 2.71e-03 -7.53e-03 -9.20e-03 6.45e-03
## 2977 -2.39e-02 2.56e-02 -2.37e-02 -2.58e-02 4.40e-02 2.19e-02 5.37e-02
       1.89e-03 -3.25e-03 -3.54e-03 2.97e-03 4.34e-03 3.00e-03 -2.72e-03
## 2979 1.97e-02 1.44e-02 -1.89e-02 -1.42e-02 1.06e-03 -2.50e-02 -3.59e-04
## 2980 -1.00e-03 -5.20e-03 -1.72e-03 4.01e-03 -6.63e-03 6.24e-03 1.57e-03
## 2981 -2.68e-03 -7.14e-03 9.07e-03 4.08e-03 -5.21e-03 3.76e-05 7.45e-03
## 2982 -3.19e-03 -4.50e-03 5.34e-03 3.57e-03 1.06e-03 3.71e-03 4.01e-03
## 2983 -1.16e-03 -3.10e-03 3.48e-03 2.60e-03 -2.06e-03 -5.45e-04 7.43e-05
## 2988 7.01e-02 1.68e-02 -4.67e-02 -1.45e-02 -4.76e-02 -5.25e-02 -2.45e-02
## 2989 -4.40e-04 4.33e-03 -5.75e-03 -4.06e-03 3.77e-03 1.39e-03 3.15e-03
## 2990 -2.69e-03 -3.83e-03 3.56e-03 3.89e-03 -3.52e-04 4.20e-03 -1.86e-03
## 2991 -7.77e-04 2.74e-03 5.21e-04 -2.66e-03 2.79e-03 -2.12e-03 2.62e-03
## 2993 -3.32e-03 8.12e-03 -8.86e-04 -7.25e-03 -5.13e-04 -3.49e-03 2.64e-03
## 2994 -1.32e-03 9.12e-03 -6.78e-03 -8.00e-03 1.18e-02 -2.15e-03 3.65e-03
## 2997 3.23e-03 -1.73e-03 3.52e-03 1.49e-03 -3.26e-03 -5.00e-03 -1.96e-03
## 2999 -6.31e-03 -2.37e-03 1.53e-03 2.13e-03 7.15e-03 5.78e-03 4.37e-03
## 3000 -2.40e-03 -4.26e-03 3.23e-03 3.75e-03 -1.43e-03 2.11e-03 3.75e-04
## 3001 -1.86e-03 -4.96e-03 1.74e-02 3.40e-03 -1.17e-03 -9.45e-03 1.50e-02
## 3002 -1.95e-02 1.64e-02 1.69e-04 -1.34e-02 1.64e-02 5.07e-03 9.25e-03
## 3004 -7.98e-06 1.13e-03 -6.18e-04 -1.44e-04 -3.93e-03 2.55e-03 -6.80e-03
## 3005 9.50e-03 8.60e-03 -1.70e-02 -8.71e-03 1.52e-03 -7.74e-03 6.97e-03
       1.94e-03
                 1.09e-03 -1.85e-03 -1.30e-03 -9.70e-04 -2.91e-03
## 3007 -8.28e-04 2.87e-04 1.98e-04 -2.34e-04 6.91e-04 8.32e-04 5.87e-04
## 3009 7.36e-03 5.55e-03 -1.85e-02 -4.92e-03 -1.76e-03 6.32e-04 2.21e-03
## 3010 3.45e-04 -2.95e-03 3.46e-03 2.03e-03 -4.71e-03 -1.02e-03 1.85e-03
## 3011 4.38e-03 1.06e-02 -1.34e-02 -9.66e-03 8.68e-03 9.52e-04
                                                                  3.07e-03
## 3012 -1.26e-02 5.99e-03 1.59e-02 -7.14e-03 -8.78e-03 1.89e-03 1.59e-02
## 3013 -1.46e-02 7.64e-03 -1.16e-02 -4.08e-03 1.26e-02 2.87e-02 2.86e-03
## 3014 5.59e-04 5.25e-04 -2.80e-04 -4.15e-04 3.63e-04 -3.51e-04 -3.97e-04
## 3015 -3.97e-02 1.40e-02 1.28e-02 -1.03e-02 2.77e-02 2.52e-02 1.47e-02
## 3017 -1.62e-02 3.19e-02 -2.72e-02 -2.95e-02 4.31e-02 2.31e-02 3.80e-02
## 3018 -3.95e-03 9.62e-03 -3.89e-03 -8.76e-03 1.16e-02 6.36e-04 1.08e-02
## 3019
       1.14e-03
                 7.41e-02 -2.72e-03 -7.00e-02 1.66e-02 -1.22e-02 2.44e-04
## 3020 -6.31e-04 3.03e-03 -1.97e-05 -2.72e-03 5.11e-04 8.08e-04 -4.33e-04
## 3021 4.99e-03 1.22e-02 -1.82e-03 -1.18e-02 -3.88e-04 -6.27e-03 -1.80e-03
## 3022 -1.45e-02 9.59e-02 9.97e-04 -8.52e-02 1.78e-02 2.30e-02 -1.75e-02
## 3023 -2.49e-03 1.35e-02 -2.00e-04 -1.25e-02 5.04e-03 2.02e-03 8.59e-04
```

```
## 3024 -7.75e-04 3.30e-03 3.58e-04 -3.05e-03 1.88e-03 -1.61e-04 6.06e-04
## 3025 -9.57e-03 4.22e-02 1.15e-03 -3.82e-02 1.99e-02 8.68e-03 8.69e-04
## 3028 -2.36e-02 7.73e-02 -2.54e-03 -7.02e-02 4.14e-02 3.95e-02 5.72e-03
## 3029 7.20e-03 -1.76e-02 -1.82e-03 1.63e-02 -6.67e-03 -5.84e-03 -4.31e-03
## 3030 -8.90e-03 2.21e-02 1.46e-03 -2.18e-02 1.47e-02 6.73e-03 1.52e-02
## 3031 -7.49e-03 2.95e-02 5.71e-04 -2.69e-02 9.24e-03 1.11e-02 2.18e-03
## 3032 1.67e-03 3.35e-03 -5.63e-04 -3.17e-03 -1.07e-03 -1.76e-03 -1.36e-03
## 3033 -3.87e-03 4.26e-02 -2.02e-03 -4.03e-02 1.26e-04 5.53e-03 1.90e-03
## 3034 -3.94e-02 1.61e-01 -8.57e-03 -1.53e-01 3.17e-02 6.10e-02 3.31e-02
## 3035 5.16e-03 3.50e-02 -3.15e-03 -3.29e-02 -9.91e-04 -7.06e-03 -3.93e-03
## 3036 -1.86e-02 1.85e-01 -2.80e-03 -1.80e-01 5.94e-02 2.59e-03 5.49e-02
## 3038 -3.95e-03 -5.58e-02 5.40e-03 5.12e-02 -6.95e-03 -3.01e-03 1.11e-02
## 3040 -4.21e-03 1.49e-01 -8.77e-03 -1.36e-01 2.63e-02 3.70e-02 -1.53e-02
## 3041 -5.24e-02 1.49e-01 -2.48e-03 -1.33e-01 8.70e-02 8.29e-02 5.50e-03
## 3042 -1.74e-02 -3.41e-02 6.02e-03 3.53e-02 1.52e-03 2.22e-02 -9.55e-03
## 3043 -1.82e-02 -5.16e-02 5.49e-03 4.98e-02 7.40e-03 2.26e-02 6.23e-03
## 3044 7.52e-03 -7.31e-02 -1.65e-03 6.65e-02 -3.65e-02 4.19e-04 -2.01e-03
        2.90e-03 -5.60e-02 2.21e-03 5.19e-02 -7.07e-03 -1.18e-03 2.08e-03
## 3047 -6.83e-02 1.29e-01 -8.86e-03 -1.24e-01 9.72e-03 8.27e-02 1.59e-02
         dfb.p_16 dfb.brt_ dfb.bl__
                                         dffit cov.r
                                                      cook.d
## 2
        6.31e-04 -2.07e-03 -7.74e-03 1.87e-02 1.009 3.49e-05 0.004788
## 3
        5.96e-03 -2.65e-02 -9.58e-03 5.98e-02 1.003 3.58e-04 0.003166
         1.90e-02 -5.70e-03 -8.85e-03 2.57e-02 1.007 6.63e-05 0.002835
## 4
        2.08e-03 -1.95e-03 1.56e-04 -1.65e-02 1.007 2.74e-05 0.002620
## 5
        -4.60e-02 1.06e-03 2.40e-02 -5.95e-02 1.005 3.55e-04 0.003965
## 6
## 7
        -6.05e-04 9.55e-03 8.93e-03 -3.25e-02 1.007 1.06e-04 0.003808
        5.85e-03 1.14e-04 -6.94e-03 1.75e-02 1.005 3.07e-05 0.001284
## 8
## 9
        5.47e-03 -6.48e-04 -4.64e-03 1.77e-02 1.008 3.15e-05 0.003871
        2.24e-02 -1.18e-02 -1.22e-02 4.98e-02 1.000 2.48e-04 0.001898
## 13
## 14
        -8.12e-04 2.38e-04 1.19e-03 -3.61e-03 1.008 1.30e-06 0.003591
        2.31e-03 -1.42e-05 -5.80e-03 1.11e-02 1.006 1.23e-05 0.001850
## 15
## 16
        -4.69e-03 8.35e-03 3.27e-03 -1.67e-02 1.007 2.79e-05 0.002893
## 17
        -9.52e-04 -6.16e-05 8.14e-04 -2.04e-03 1.007 4.18e-07 0.002463
## 18
        -5.55e-02 1.07e-01 3.02e-02 -1.42e-01 0.993 2.03e-03 0.005491
## 19
        5.04e-03 5.82e-03
                            9.58e-03 -2.10e-02 1.006 4.42e-05 0.002196
## 20
        -3.78e-03 1.78e-03 1.05e-02 -2.12e-02 1.007 4.50e-05 0.002967
## 21
        7.10e-03 1.02e-02 2.81e-02 -7.73e-02 1.018 5.97e-04 0.014930
## 22
        -5.81e-04 -4.34e-03 1.02e-02 -2.18e-02 1.006 4.77e-05 0.001932
        2.70e-04 5.77e-03 2.35e-03 -8.30e-03 1.008 6.89e-06 0.003366
## 23
        -7.97e-04 -3.07e-02 -2.21e-02 9.92e-02 0.997 9.83e-04 0.003935
## 25
        9.09e-04 4.87e-04 1.15e-03 -3.06e-03 1.006 9.38e-07 0.001662
## 27
        -1.18e-02 -3.71e-03 -1.39e-02 2.95e-02 1.008 8.72e-05 0.003805
## 28
## 31
        -2.91e-02 -9.50e-03 -2.33e-02 2.25e-01 0.999 5.04e-03 0.012840
## 32
        3.52e-03 1.11e-02 -2.51e-02 5.63e-02 0.998 3.17e-04 0.001740
        3.46e-02 7.21e-02 2.34e-02 -1.65e-01 0.983 2.70e-03 0.004801
## 34
        -2.16e-03 -2.26e-03 -2.56e-03 7.89e-03 1.007 6.23e-06 0.002721
## 35
## 36
        -1.23e-02 -1.69e-02 -1.60e-02 4.31e-02 1.011 1.86e-04 0.007208
## 37
        -2.51e-04 -3.03e-04 1.39e-03 -3.75e-03 1.006 1.41e-06 0.001659
## 39
        3.28e-03 -3.58e-03 -1.61e-02 3.92e-02 1.001 1.53e-04 0.001483
## 40
        -3.02e-03 -5.21e-03 -5.33e-03 1.60e-02 1.005 2.56e-05 0.001219
        2.24e-02 -3.15e-03 -1.17e-02 4.14e-02 1.004 1.71e-04 0.002506
## 41
## 42
        -1.03e-02 -1.33e-02 -2.18e-02 4.68e-02 1.002 2.19e-04 0.002250
## 43
        -1.02e-02 -7.06e-03 -1.17e-02 3.81e-02 1.007 1.45e-04 0.004075
## 44
        -1.45e-03 -2.77e-02 -1.80e-02 5.82e-02 1.007 3.39e-04 0.005099
```

```
2.49e-02 -2.41e-02 -2.85e-02 9.30e-02 0.998 8.64e-04 0.003789
        -6.67e-06 -3.72e-03 -8.01e-04 5.43e-03 1.007 2.95e-06 0.002044
## 48
         8.66e-03 -1.64e-02 -1.35e-02 3.44e-02 1.005 1.19e-04 0.002333
         1.39e-03 1.05e-02 -1.12e-02 3.10e-02 1.008 9.59e-05 0.004469
## 51
## 53
         2.13e-02 5.97e-03 2.26e-02 -5.55e-02 1.011 3.08e-04 0.008014
        -2.02e-03 -4.68e-04 -2.93e-03 1.62e-02 1.006 2.63e-05 0.001777
## 54
         3.98e-02 -2.18e-02 4.45e-03 -9.20e-02 0.994 8.45e-04 0.002941
## 58
         2.19e-03 -3.46e-02 -1.06e-02 5.33e-02 1.002 2.85e-04 0.002606
## 59
## 60
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## 61
         7.25e-03 1.60e-02 8.07e-03 -2.96e-02 1.004 8.78e-05 0.001616
## 62
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        -9.61e-03 -1.46e-02 -1.06e-02 2.72e-02 1.004 7.42e-05 0.001568
## 63
## 64
         6.84e-03 8.35e-03 5.14e-03 -1.95e-02 1.006 3.82e-05 0.002334
         1.03e-02 5.27e-03 -1.23e-02 3.14e-02 1.006 9.89e-05 0.003018
## 65
        -7.64e-05 -4.33e-05 5.73e-05 -1.55e-04 1.007 2.40e-09 0.001694
## 68
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## 70
        -4.08e-04 -4.65e-04 -1.32e-03 2.98e-03 1.006 8.86e-07 0.001303
## 71
## 72
        -2.53e-03 6.07e-03 6.71e-03 -1.55e-02 1.006 2.40e-05 0.002165
         6.24e-04 -5.57e-04 1.69e-03 -5.39e-03 1.008 2.90e-06 0.002741
## 74
## 75
         6.66e-04 -2.60e-04 4.07e-03 -1.05e-02 1.006 1.10e-05 0.001538
## 77
         1.80e-02 -3.82e-03 -2.45e-02 1.13e-01 0.990 1.28e-03 0.003293
        9.51e-03 -1.19e-02 -1.16e-02 2.76e-02 1.005 7.62e-05 0.002017
## 78
         8.41e-03 3.00e-02 -4.92e-02 1.08e-01 0.986 1.16e-03 0.002566
## 79
         1.40e-03 5.19e-04 1.15e-03 -8.12e-03 1.006 6.60e-06 0.001296
## 80
## 82
        -1.16e-05 -3.32e-03 7.05e-03 -1.73e-02 1.006 3.00e-05 0.001784
## 83
        -4.73e-03 2.99e-03 9.58e-04 1.54e-02 1.007 2.38e-05 0.002502
         7.72e-04 1.83e-03 -2.45e-04 -7.14e-03 1.008 5.10e-06 0.003352
## 85
         8.37e-03 1.75e-03 6.67e-03 -3.78e-02 1.002 1.43e-04 0.001553
## 86
         2.39e-02 -4.94e-02 2.44e-03 -7.44e-02 1.001 5.53e-04 0.003671
## 87
## 88
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         4.26e-03 2.28e-03 5.83e-03 -1.81e-02 1.005 3.26e-05 0.001380
## 89
## 91
        -6.33e-04 -1.64e-03 -1.37e-03 7.58e-03 1.008 5.74e-06 0.003500
## 93
         3.19e-03 1.08e-02 -3.18e-02 1.21e-01 0.991 1.46e-03 0.003985
         2.50e-03 1.35e-03 5.45e-03 -1.64e-02 1.007 2.70e-05 0.002701
## 94
## 95
         2.50e-05 2.00e-05
                            4.91e-05 -1.17e-04 1.008 1.37e-09 0.002744
         1.30e-02 -3.39e-02 1.61e-03 7.70e-02 1.006 5.92e-04 0.005977
## 96
## 97
         4.80e-03 9.70e-03 6.98e-03 -3.46e-02 1.003 1.20e-04 0.001690
        -3.06e-02 -2.75e-02 2.50e-02 -6.88e-02 0.997 4.73e-04 0.002282
## 98
         8.00e-03 1.71e-03
                            4.16e-03 -1.43e-02 1.007 2.05e-05 0.002357
## 99
         2.41e-03 -1.37e-02 5.40e-04 -1.93e-02 1.008 3.74e-05 0.003867
## 101
       -2.53e-02 1.72e-02 6.64e-03 5.76e-02 1.003 3.32e-04 0.003009
## 103
       -9.76e-03 -1.01e-02 9.42e-03 6.98e-02 1.015 4.88e-04 0.011619
## 104
## 108
        -1.24e-02 -1.56e-03 3.98e-03 4.09e-02 1.007 1.67e-04 0.004008
       -3.88e-03 9.20e-04 -1.92e-03 1.41e-02 1.010 1.99e-05 0.005186
## 109
## 110
        1.86e-02 2.77e-02 6.00e-03 -5.40e-02 1.001 2.92e-04 0.002372
        -2.37e-02 9.69e-03 -7.72e-04 4.67e-02 1.004 2.18e-04 0.002935
## 111
## 113
       -1.23e-03 -2.27e-02 -1.38e-02 -3.76e-01 1.088 1.41e-02 0.083090
        -3.34e-02 9.27e-03 5.10e-03 -7.88e-02 1.005 6.20e-04 0.005581
## 114
## 115
         4.04e-03 -7.21e-03 2.61e-03 -9.77e-02 1.000 9.54e-04 0.004613
         1.66e-01 -5.06e-02 -1.10e-01 4.22e-01 0.932 1.76e-02 0.009896
## 116
        -1.09e-03 -2.64e-02 4.98e-03 5.27e-02 1.012 2.78e-04 0.008781
## 117
## 118
        5.32e-03 -3.18e-03 -4.61e-03 4.58e-02 1.011 2.10e-04 0.007648
## 119
       -1.73e-01 -2.01e-01 3.03e-02 -4.03e-01 0.970 1.61e-02 0.015090
       -1.16e-01 3.39e-02 2.91e-02 -2.11e-01 0.989 4.42e-03 0.008689
```

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4.04e-02 -7.42e-03 -1.32e-02 6.28e-02 1.012 3.95e-04 0.008827
## 122
         1.91e-01 1.47e-01 -1.06e-01 3.93e-01 0.971 1.53e-02 0.014764
## 123
        8.09e-02 5.50e-03 -2.29e-02 1.31e-01 1.003 1.72e-03 0.008090
        -3.72e-02 -3.06e-01 6.70e-02 -4.15e-01 0.976 1.71e-02 0.017413
## 124
## 125
        -9.11e-02 1.10e-01 2.50e-02 -2.29e-01 0.993 5.25e-03 0.011082
         3.43e-03 -2.84e-04 -3.00e-03 1.37e-02 1.015 1.88e-05 0.009814
## 127
        1.51e-02 -8.96e-03 -1.66e-02 5.07e-02 1.010 2.58e-04 0.006639
## 128
## 130
         2.29e-03 4.83e-03 -1.46e-03 1.23e-02 1.007 1.52e-05 0.002813
## 131
         1.38e-03 1.68e-03 9.44e-03 -2.35e-02 1.006 5.52e-05 0.002547
## 132
        -5.69e-05 5.65e-05 -2.09e-04 4.84e-04 1.006 2.35e-08 0.001056
## 133
        1.73e-03 -1.64e-03 3.04e-03 -9.22e-03 1.007 8.50e-06 0.002683
         9.60e-04 -1.50e-06 -3.06e-03 9.58e-03 1.008 9.18e-06 0.002907
## 134
## 135
        -7.60e-04 -2.52e-03 -3.24e-03 1.10e-02 1.008 1.20e-05 0.002992
        -1.35e-04 -3.34e-03 -6.57e-03 1.62e-02 1.008 2.64e-05 0.003586
## 137
## 138
        6.51e-04 2.80e-03 2.23e-03 -7.60e-03 1.007 5.78e-06 0.002422
## 139
        -1.57e-02 2.50e-05 -1.05e-02 -2.82e-02 1.008 7.98e-05 0.004227
         6.18e-03 -4.11e-03 -5.68e-03 3.14e-02 1.013 9.87e-05 0.008697
## 140
## 141
        -9.09e-04 -7.21e-05 -1.41e-03 -3.23e-03 1.011 1.04e-06 0.006565
        -8.49e-04 -3.84e-04 -1.16e-03 -3.25e-03 1.010 1.05e-06 0.005045
## 142
         1.45e-02 2.73e-03 -9.06e-03 2.94e-02 1.009 8.64e-05 0.005136
## 143
## 144
        -3.27e-03 -8.15e-03 -1.47e-02 -4.63e-02 1.007 2.14e-04 0.004165
        -1.88e-02 -3.54e-03 -8.34e-03 -4.42e-02 1.009 1.96e-04 0.005906
## 145
        1.33e-02 7.17e-04 1.88e-02 3.96e-02 1.009 1.57e-04 0.005812
## 146
        -5.28e-04 -8.12e-04 -2.53e-03 -8.88e-03 1.010 7.90e-06 0.005478
## 147
## 148
       -5.84e-03 1.52e-03 2.53e-03 -1.84e-02 1.011 3.39e-05 0.006763
## 149
        -1.50e-02 2.15e-04 -2.53e-02 -5.26e-02 1.005 2.77e-04 0.003898
        -1.38e-04 -5.57e-06 -4.30e-04 -8.75e-04 1.011 7.66e-08 0.005790
## 150
         1.09e-02 -1.58e-03 -7.97e-03 3.39e-02 1.011 1.15e-04 0.007171
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        -7.43e-04 -2.22e-04 5.38e-04 -2.83e-03 1.013 7.99e-07 0.007763
## 153
## 154
        6.55e-03 6.00e-03 -2.40e-02 -4.38e-02 1.004 1.92e-04 0.002633
         2.19e-03 1.07e-03 2.90e-03 5.67e-03 1.009 3.22e-06 0.004066
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## 156
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## 157
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        -1.59e-02 -7.10e-03 -2.22e-02 -4.90e-02 1.007 2.41e-04 0.004438
## 158
         1.01e-02 -6.24e-04 -4.30e-03 1.63e-02 1.008 2.67e-05 0.003535
## 159
         1.24e-03 1.43e-04 2.20e-02 -4.58e-02 1.006 2.09e-04 0.003814
## 160
## 162
         1.91e-03 -4.60e-03 3.16e-03 -1.04e-02 1.009 1.08e-05 0.004103
## 163
        -7.36e-02 -3.20e-02 8.33e-02 -1.83e-01 0.995 3.35e-03 0.008506
        -1.63e-02 -1.59e-03
                            2.79e-02 -6.70e-02 1.000 4.49e-04 0.002796
## 164
       -9.22e-03 -1.19e-02 1.48e-02 -5.06e-02 1.006 2.56e-04 0.003859
## 165
        -1.30e-02 -3.19e-03 2.54e-02 -6.89e-02 1.009 4.74e-04 0.007301
## 167
       -1.87e-03 7.19e-03 -1.94e-03 1.17e-02 1.009 1.36e-05 0.004349
## 168
## 171
       -1.13e-02 1.61e-03 1.25e-02 -3.25e-02 1.008 1.06e-04 0.004673
        1.30e-03 -1.15e-03 5.36e-04 -5.04e-03 1.008 2.54e-06 0.003335
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## 173
       -4.84e-03 -3.97e-02
                            2.06e-02 -9.44e-02 1.002 8.92e-04 0.005326
       -1.18e-02 1.75e-02
                            2.83e-02 -7.03e-02 1.007 4.94e-04 0.005795
## 180
## 181
        -6.58e-04 3.91e-03
                            6.89e-03 -1.77e-02 1.009 3.13e-05 0.004418
                            3.73e-02 -1.08e-01 0.993 1.16e-03 0.003589
## 183
       -2.77e-03 -3.56e-03
## 188
       -2.47e-02 7.21e-03 3.20e-02 -8.56e-02 1.006 7.32e-04 0.006342
## 189
        -1.34e-02 6.21e-02
                            7.51e-02 -2.34e-01 0.985 5.44e-03 0.008927
        1.33e-02 6.65e-03 2.48e-03 -2.27e-02 1.016 5.17e-05 0.011449
## 190
## 191
       -2.45e-02 -6.75e-03 2.14e-02 -5.25e-02 1.005 2.75e-04 0.003887
## 192
        3.07e-03 1.54e-03 -3.90e-03 -1.07e-02 1.010 1.15e-05 0.005210
       -3.94e-03 5.29e-03 2.14e-02 -4.05e-02 1.003 1.64e-04 0.001940
## 193
```

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## 195
        7.21e-03 9.49e-03 3.00e-02 -5.69e-02 1.002 3.24e-04 0.002829
        9.02e-04 -2.75e-03 2.49e-02 -6.79e-02 1.001 4.61e-04 0.003036
## 197
## 199
        7.95e-03 1.15e-03 5.44e-03 -1.45e-02 1.007 2.11e-05 0.002659
## 200
        9.29e-03 4.36e-03 1.48e-02 -3.95e-02 1.003 1.56e-04 0.002139
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        5.66e-02 -6.72e-02 -1.71e-02 -1.38e-01 1.002 1.91e-03 0.008051
        2.68e-02 -2.72e-02 6.56e-02 9.49e-02 1.001 9.01e-04 0.004921
## 203
        8.87e-04 -1.10e-03 9.16e-03 1.49e-02 1.012 2.23e-05 0.006855
## 204
        -1.29e-02 2.67e-02 3.73e-02 5.46e-02 1.008 2.98e-04 0.005448
## 205
## 206
         2.00e-02 1.28e-02 5.26e-02 8.23e-02 1.004 6.77e-04 0.005388
## 207
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## 210
        2.69e-02 1.46e-02 -5.60e-03 1.40e-01 1.009 1.97e-03 0.012130
                            2.17e-02 2.81e-02 1.007 7.88e-05 0.003658
## 211
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## 212
        -6.86e-03 4.31e-03 8.98e-03 1.62e-02 1.009 2.62e-05 0.004435
## 213
        -5.10e-04 -2.64e-03 3.97e-03 -1.11e-02 1.006 1.22e-05 0.001372
        1.73e-02 3.28e-02 -4.34e-02 -6.45e-02 1.011 4.16e-04 0.008671
## 214
        -3.81e-02 -1.22e-02 4.00e-02 7.08e-02 1.002 5.01e-04 0.003661
## 215
       -1.12e-02 -2.27e-02 3.37e-02 5.35e-02 1.007 2.86e-04 0.004839
## 216
## 217
        2.95e-03 1.82e-03 2.87e-03 -8.61e-03 1.016 7.42e-06 0.010628
       -2.66e-03 7.59e-04 5.07e-03 7.98e-03 1.009 6.37e-06 0.004006
## 218
## 219
        1.12e-02 -5.13e-02
                            8.55e-02 1.28e-01 1.001 1.65e-03 0.007151
## 220
       -4.52e-03 2.37e-02 4.15e-02 9.11e-02 0.998 8.29e-04 0.003774
        1.89e-02 1.50e-02 4.56e-02 6.85e-02 1.007 4.70e-04 0.005839
## 221
        1.69e-04 -2.43e-03 -2.23e-03 -6.06e-03 1.009 3.68e-06 0.003967
## 222
       -4.10e-03 1.97e-02 -2.46e-02 -4.00e-02 1.009 1.60e-04 0.005167
## 223
        1.01e-02 7.17e-04 -9.76e-03 2.83e-02 1.004 8.02e-05 0.001504
## 224
## 225
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## 227
        -1.74e-03 7.43e-04
                            2.52e-02 3.40e-02 1.009 1.16e-04 0.005004
## 229
       -1.12e-02 1.26e-03 -1.35e-02 -2.67e-02 1.010 7.11e-05 0.005504
        8.42e-04 6.49e-03 1.86e-02 3.43e-02 1.012 1.18e-04 0.007720
## 230
## 232
       -7.36e-04 -7.70e-04 4.49e-04 4.15e-03 1.008 1.72e-06 0.003419
## 233
        6.87e-03 -2.82e-02 -2.77e-02 -4.96e-02 1.006 2.46e-04 0.003969
## 235
        -7.24e-03 8.58e-04 -8.38e-04 2.36e-02 1.007 5.58e-05 0.003407
## 236
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## 238
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## 241
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## 242
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## 243
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        1.30e-02 -2.05e-03 1.59e-02 2.54e-02 1.008 6.47e-05 0.004191
## 244
       -3.10e-04 -4.24e-03 -1.73e-02 8.02e-02 0.992 6.43e-04 0.002081
## 246
        1.27e-02 5.32e-04 -2.19e-02 7.44e-02 0.994 5.53e-04 0.002110
## 247
## 248
        8.05e-04 -3.01e-03 -4.38e-03 1.17e-02 1.005 1.37e-05 0.000858
## 249
        -3.98e-03 8.28e-03 -1.60e-02 -2.68e-02 1.007 7.16e-05 0.003507
## 250
        3.79e-02 -5.78e-02 -5.30e-02  1.49e-01  0.982  2.21e-03  0.003959
## 251
        -7.92e-03 1.33e-02 5.71e-03 -2.10e-02 1.006 4.41e-05 0.002473
        -1.23e-02 1.52e-01 -4.66e-02 2.04e-01 0.997 4.17e-03 0.010578
## 255
        1.64e-01
## 256
                  1.91e-02 -5.35e-03 -3.71e-01 1.011 1.37e-02 0.028334
## 257
         6.15e-03 3.96e-03 2.74e-02 3.93e-02 1.006 1.55e-04 0.003601
## 258
        -4.60e-03 2.43e-02 -5.71e-02 -1.08e-01 0.997 1.17e-03 0.004614
        5.46e-03 -5.89e-03 -3.94e-03 3.31e-02 1.015 1.09e-04 0.010220
## 260
         4.27e-02 9.89e-03 1.52e-02 1.24e-01 0.998 1.55e-03 0.005890
## 261
## 262
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## 263
        1.05e-04 8.74e-07 4.52e-04 1.21e-03 1.009 1.47e-07 0.004184
        1.33e-01 4.18e-02 1.44e-01 -3.69e-01 0.993 1.36e-02 0.019925
## 264
```

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1.98e-02 2.39e-02 1.83e-02 1.27e-01 1.004 1.61e-03 0.008273
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        7.99e-04
                                      4.53e-03 1.011 2.06e-06 0.006027
## 267
                  8.56e-04
                            2.75e-03
## 268
       -1.21e-03
                  1.61e-03
                            1.16e-02 2.68e-02 1.007 7.19e-05 0.003496
## 269
        -6.89e-04 3.55e-03
                            1.88e-03
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## 274
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        -3.28e-02 -5.56e-02 1.05e-02 -1.04e-01 1.000 1.08e-03 0.005246
## 284
## 285
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## 286
## 290
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## 291
## 292
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## 293
       -1.54e-02 4.15e-03 1.19e-02 -3.26e-02 1.008 1.06e-04 0.004351
        -5.37e-03 -2.88e-03 3.35e-03 -9.21e-03 1.007 8.49e-06 0.001961
## 296
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## 301
## 302
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         3.11e-03 -3.25e-03 -1.79e-03  1.48e-02  1.009  2.21e-05  0.003953
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## 304
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## 306
## 307
         1.55e-02 3.07e-03 -1.06e-02 4.11e-02 1.004 1.69e-04 0.002652
## 308
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         4.64e-03 2.30e-02 2.33e-02 -5.47e-02 1.001 2.99e-04 0.002413
## 313
## 314
         9.60e-03 2.25e-03 -7.30e-03 2.60e-02 1.004 6.78e-05 0.001636
       -7.51e-04 8.15e-04 8.51e-04 -3.62e-03 1.006 1.31e-06 0.001300
## 316
        -6.96e-03 -3.81e-03 4.73e-03 -1.30e-02 1.007 1.68e-05 0.002662
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## 319
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## 320
## 321
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## 322
         1.30e-02 -8.20e-04 -1.32e-02 2.44e-02 1.005 5.95e-05 0.002051
        -1.08e-04 4.58e-04 -2.37e-03 -5.38e-03 1.008 2.89e-06 0.003289
## 323
## 325
         6.66e-04 -3.58e-03 -1.16e-02 -2.14e-02 1.008 4.56e-05 0.003625
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## 326
## 328
        -6.65e-04 1.97e-05 1.90e-04 -9.54e-04 1.008 9.10e-08 0.003354
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## 330
## 331
         1.05e-02 -6.54e-03 -2.90e-03 3.21e-02 1.007 1.03e-04 0.003213
        -1.77e-03 2.23e-03 -9.97e-03 -2.44e-02 1.012 5.96e-05 0.007696
## 334
        -2.11e-02 7.94e-03 1.40e-02 -3.21e-02 1.006 1.03e-04 0.002733
## 335
## 337
        5.32e-02 -1.07e-04 -1.78e-02 8.84e-02 0.998 7.81e-04 0.003672
## 339
        2.48e-02 -1.04e-02 -1.34e-02 1.08e-01 0.999 1.16e-03 0.005096
       -1.07e-02 -1.18e-03 4.05e-03 -1.74e-02 1.007 3.05e-05 0.002381
## 340
```

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1.44e-02 -5.18e-03 -4.46e-03 2.17e-02 1.007 4.72e-05 0.002791
         2.29e-02 2.59e-03 -8.96e-03 6.41e-02 1.003 4.11e-04 0.003786
## 342
## 344
         1.35e-02 -3.99e-03 -4.64e-03 1.68e-02 1.013 2.83e-05 0.008322
        -7.71e-03 6.48e-04 -1.07e-02 -2.00e-02 1.007 4.00e-05 0.002766
## 345
## 346
         1.86e-02 -4.98e-03 -1.23e-02 5.36e-02 1.003 2.87e-04 0.002773
         1.17e-03 2.20e-05 5.73e-03 1.71e-02 1.017 2.92e-05 0.012235
## 347
## 348
        -7.79e-03 1.27e-02 6.69e-03 -4.67e-02 1.005 2.18e-04 0.003158
## 349
        -1.29e-02 -1.92e-03 5.57e-03 -2.10e-02 1.008 4.40e-05 0.003625
##
  350
        -2.05e-02 9.82e-03
                            5.20e-03 -2.72e-02 1.010 7.41e-05 0.006172
##
  351
        -8.35e-03 9.28e-03 1.65e-02 -4.40e-02 1.006 1.93e-04 0.003645
  353
        1.33e-02 -2.24e-02 -7.90e-03 3.63e-02 1.004 1.32e-04 0.001977
        -2.50e-02 1.29e-02 4.74e-03 -3.38e-02 1.010 1.14e-04 0.006195
##
  355
##
   356
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  357
        -1.20e-02 -2.59e-03 -1.95e-02 -3.48e-02 1.005 1.21e-04 0.002564
        -1.09e-04 3.36e-05 5.96e-05 -1.76e-04 1.007 3.10e-09 0.002351
## 358
         6.06e-04 9.26e-04 -9.49e-04 3.27e-03 1.006 1.07e-06 0.001580
## 359
        -4.30e-03 -1.19e-03 2.46e-03 -8.52e-03 1.006 7.26e-06 0.001498
## 363
  364
         4.21e-03 -6.23e-03 -9.62e-03 1.87e-02 1.004 3.49e-05 0.001049
        7.69e-04 1.42e-03 -6.56e-03 -1.65e-02 1.009 2.72e-05 0.004524
## 365
##
  366
         5.44e-03 8.45e-04 2.53e-03 4.38e-02 1.038 1.92e-04 0.032689
## 367
         9.99e-04 -1.67e-04 -1.36e-03 4.17e-03 1.008 1.74e-06 0.003102
        -5.85e-03 -7.81e-03 -4.32e-04 -4.33e-02 1.010 1.87e-04 0.006519
## 368
        -9.69e-03 -5.34e-03 1.12e-02 -3.32e-02 1.011 1.10e-04 0.007259
## 371
         1.18e-02 7.66e-03 1.84e-02 -4.47e-02 1.005 2.00e-04 0.003307
## 373
         6.60e-04
## 374
                  8.37e-03 6.84e-03 -2.07e-02 1.007 4.30e-05 0.002611
## 375
         1.23e-02 1.21e-02 1.60e-02 -4.67e-02 1.009 2.18e-04 0.006095
        -7.77e-03
                            1.38e-02 -4.19e-02 1.004 1.75e-04 0.002507
## 379
                  1.97e-02
## 381
        -5.04e-03 5.62e-03
                            1.71e-02 -3.72e-02 1.004 1.38e-04 0.002107
        2.86e-04 -3.09e-03 6.13e-03 -2.21e-02 1.006 4.88e-05 0.002358
## 382
## 384
         3.34e-04 -9.47e-06 -5.07e-04 1.40e-03 1.012 1.96e-07 0.007047
## 386
        -2.05e-02 -1.74e-02 1.16e-02 -3.49e-02 1.006 1.22e-04 0.003078
## 387
         1.30e-02 -3.85e-04 -7.60e-03 -1.06e-01 1.031 1.13e-03 0.027516
  388
        -8.88e-03 3.43e-03 7.55e-03 -3.24e-02 1.003 1.05e-04 0.001608
         8.70e-03 1.92e-03 7.24e-03 -2.00e-02 1.006 4.01e-05 0.002452
## 389
                  1.13e-02
  390
         1.08e-02
                            1.03e-02 -3.46e-02 1.008 1.19e-04 0.004200
         2.60e-03 -1.41e-02 3.96e-02 -7.94e-02 0.998 6.31e-04 0.003072
## 392
## 393
        -4.58e-04 8.91e-03 -2.92e-02 -1.01e-01 1.025 1.03e-03 0.021679
         1.58e-03 6.58e-04 -5.20e-04 -9.60e-03 1.024 9.22e-06 0.018471
## 394
        -2.21e-05 1.52e-03 1.09e-02 -2.57e-02 1.006 6.63e-05 0.002727
## 395
        7.60e-03 -2.62e-03 1.75e-02 -3.51e-02 1.006 1.23e-04 0.002953
## 396
         2.18e-03 1.64e-04 -3.93e-03 -9.04e-03 1.009 8.17e-06 0.004362
## 397
        -5.05e-04 -7.24e-04 9.39e-03 -2.34e-02 1.005 5.46e-05 0.001682
## 398
## 400
        -4.45e-03 5.74e-03
                            1.24e-02 -2.91e-02 1.006 8.48e-05 0.002476
         4.51e-03 6.71e-03 5.54e-03 1.83e-02 1.009 3.34e-05 0.004678
## 401
## 402
         3.91e-03 -7.49e-04 -6.10e-03 -9.24e-03 -1.008 -8.54e-06 -0.003537
        -1.79e-03 -1.55e-03 -1.68e-03 4.67e-03 1.010 2.18e-06 0.005535
## 403
## 404
         2.09e-03 -5.18e-04
                            9.08e-03 1.13e-02 1.007 1.27e-05 0.002592
## 405
         4.55e-03 -9.79e-04 1.09e-02 1.77e-02 1.008 3.13e-05 0.003460
## 406
        -1.60e-03 -3.86e-06 -3.90e-03 -5.67e-03 1.007 3.21e-06 0.002325
## 410
        -1.91e-03 4.35e-03 4.68e-03 -2.65e-02 1.006 7.03e-05 0.002427
        -6.23e-02 2.25e-02 -3.62e-02 -9.70e-02 1.000 9.41e-04 0.004794
## 412
## 413
        2.72e-03 2.91e-03 6.27e-03 2.59e-02 1.012 6.70e-05 0.007899
## 414
       -1.13e-03 4.15e-03 2.20e-03 -8.31e-03 1.007 6.92e-06 0.002157
## 415
       -1.37e-02 -2.73e-03 -6.51e-02 -9.31e-02 0.990 8.66e-04 0.002378
```

```
-5.17e-03 1.44e-02 -3.26e-02 -5.33e-02 1.007 2.84e-04 0.004797
         4.36e-03 2.17e-03 4.74e-03 9.36e-03 1.008 8.76e-06 0.002941
## 417
## 418
         1.24e-03 1.99e-04 4.52e-03 1.17e-02 1.010 1.38e-05 0.004841
       -1.02e-02 -1.15e-02 -1.01e-02 -2.07e-02 1.011 4.27e-05 0.006232
## 420
## 421
        -3.14e-04 -2.34e-04 1.07e-03 2.49e-03 1.010 6.18e-07 0.005067
        -2.57e-02 9.55e-03 -8.89e-02 -1.34e-01 0.986 1.78e-03 0.003803
## 422
        3.96e-03 -1.43e-03 1.95e-02 2.86e-02 1.005 8.20e-05 0.002154
## 423
       -3.85e-02 -1.87e-02 -3.48e-02 -6.52e-02 1.008 4.26e-04 0.006481
## 425
## 426
         4.07e-03 1.82e-03 5.15e-03 9.06e-03 1.008 8.21e-06 0.002832
## 427
        -7.08e-03 2.86e-03 -6.95e-03 -3.09e-02 1.008 9.57e-05 0.004537
## 428
        -8.63e-03 2.98e-03 4.35e-03 -1.65e-02 1.007 2.72e-05 0.002445
                  4.53e-03 1.35e-02 -3.22e-02 1.003 1.04e-04 0.001632
## 429
        -8.26e-03
## 432
        -3.75e-03 1.38e-03 -1.76e-02 -2.94e-02 1.006 8.64e-05 0.003028
## 433
        -8.76e-03 1.19e-03 -1.28e-02 -2.22e-02 1.007 4.92e-05 0.002930
        -1.94e-02 -3.68e-03 -2.74e-02 -4.58e-02 1.005 2.10e-04 0.003204
## 434
## 438
        -1.12e-03 4.23e-04 5.36e-04 -2.06e-03 1.007 4.23e-07 0.001736
        -8.35e-03 1.61e-03 -1.96e-02 4.54e-02 1.003 2.06e-04 0.002301
## 440
## 441
        -6.16e-03
                  1.49e-02 9.26e-03 -5.40e-02 1.001 2.91e-04 0.002335
        6.32e-03 1.49e-03 1.35e-02 2.33e-02 1.011 5.41e-05 0.006706
## 443
## 445
        5.86e-04 2.11e-03
                            1.93e-02 5.89e-02 1.013 3.47e-04 0.009726
## 449
         1.09e-03 3.14e-04
                           1.40e-03 3.06e-03 1.008 9.39e-07 0.003015
        -2.25e-03 -2.26e-03 1.37e-02 2.63e-02 1.006 6.91e-05 0.002788
## 451
        -1.46e-03 -2.76e-03 4.68e-03 -1.27e-02 1.005 1.62e-05 0.001242
## 452
         1.72e-02 1.65e-02 -7.51e-03 -4.48e-02 1.008 2.01e-04 0.005412
## 454
        -1.20e-02 1.41e-02 -1.56e-03 3.05e-02 1.007 9.29e-05 0.003318
## 455
## 456
        4.32e-02 -4.07e-02 2.84e-02 -9.66e-02 1.011 9.34e-04 0.010654
        -4.57e-02 1.05e-01 1.58e-02 1.70e-01 0.983 2.89e-03 0.005116
## 458
## 460
        7.58e-03 -3.03e-03
                            2.81e-03 -2.14e-02 1.008 4.59e-05 0.003421
         9.81e-03 -7.40e-03 8.82e-03 -3.16e-02 1.010 9.97e-05 0.005556
## 461
## 463
         1.74e-03 -4.75e-03 -4.83e-04 -7.48e-03 1.014 5.59e-06 0.009553
## 464
         3.78e-02 -1.57e-01 -2.46e-02 -2.08e-01 1.002 4.31e-03 0.013121
## 466
        -9.80e-02 8.80e-02 -3.18e-02 2.03e-01 0.978 4.12e-03 0.005966
## 467
        -1.29e-02 -2.02e-03 3.29e-03 3.85e-02 1.006 1.48e-04 0.003046
         3.21e-03 -5.66e-04 -2.38e-04 -6.24e-03 1.009 3.90e-06 0.004119
## 468
        -1.07e-01 1.53e-02 -6.61e-04 1.53e-01 0.974 2.35e-03 0.003291
## 469
        1.62e-03 -1.37e-04 1.03e-03 -3.15e-03 1.009 9.94e-07 0.004571
## 470
## 471
        1.36e-02 -4.53e-03 -2.97e-03 -3.59e-02 1.007 1.29e-04 0.003838
## 473
         1.45e-02 -4.62e-02 -5.34e-03 -5.70e-02 1.018 3.25e-04 0.014458
## 474
         5.68e-02 4.96e-03 -3.95e-02 -1.93e-01 1.000 3.71e-03 0.010892
         8.38e-02 6.94e-02 -2.62e-02 -1.78e-01 0.977 3.16e-03 0.004664
## 476
         1.08e-02 -4.09e-02 -5.90e-04 -4.80e-02 1.010 2.30e-04 0.006503
## 477
## 478
         8.12e-02 3.87e-02 -1.37e-02 -1.23e-01 0.990 1.52e-03 0.003947
## 480
         3.89e-02 -7.11e-04 -7.95e-03 -8.62e-02 1.002 7.43e-04 0.004734
         1.48e-02 4.01e-02 -4.89e-03 -7.08e-02 1.003 5.01e-04 0.004178
## 481
         2.29e-04 -7.63e-05 7.58e-05 -7.33e-04 1.007 5.37e-08 0.002466
## 482
        -9.47e-02 1.14e-01 7.28e-03 1.75e-01 0.983 3.05e-03 0.005424
## 484
## 485
        -6.61e-04 -1.09e-02 -2.39e-03 -1.51e-02 1.022 2.28e-05 0.016568
        -3.68e-03 -2.37e-03 -8.07e-04 5.45e-03 1.011 2.97e-06 0.005786
## 488
## 489
        -2.37e-02 3.25e-02 -2.49e-04 5.68e-02 1.006 3.22e-04 0.004407
## 491
         3.31e-02 -1.58e-02 8.90e-03 -6.97e-02 0.997 4.86e-04 0.002337
        7.26e-02 3.81e-02 -1.64e-02 -1.34e-01 0.994 1.79e-03 0.005282
## 494
## 496
        1.74e-02 -6.21e-02 2.78e-03 -8.67e-02 1.004 7.51e-04 0.005485
## 497
        -2.36e-03 -1.11e-02 -9.87e-03 -8.64e-02 1.001 7.47e-04 0.004328
       -1.16e-02 -6.41e-04 -4.14e-03 1.94e-02 1.007 3.77e-05 0.003072
## 498
```

```
## 499
         2.83e-03 -2.93e-02 -1.59e-03 -3.47e-02 1.024 1.20e-04 0.018914
         8.81e-03 5.27e-03 2.56e-03 -2.00e-02 1.007 4.00e-05 0.002831
## 500
## 502
         1.65e-03 -1.88e-05 1.28e-02 1.65e-02 1.007 2.73e-05 0.002998
        -3.92e-03 4.76e-03 1.17e-02 1.66e-02 1.007 2.76e-05 0.003046
## 504
## 506
         4.29e-03 -6.17e-03 -5.05e-03 2.18e-02 1.005 4.76e-05 0.001673
        -6.67e-03 -1.19e-03 -1.75e-03 4.24e-02 1.004 1.80e-04 0.002565
## 507
         1.40e-02 3.40e-02 -7.42e-03 5.28e-02 1.002 2.79e-04 0.002567
## 508
        -1.83e-02 -4.51e-02 6.35e-02 9.93e-02 1.005 9.85e-04 0.006715
## 510
## 511
         4.04e-04 -1.15e-05 2.08e-04 -1.68e-03 1.007 2.84e-07 0.001892
## 513
         5.24e-03 6.41e-03 -1.00e-02 -2.06e-02 1.008 4.25e-05 0.003794
## 514
        -7.28e-02 4.47e-02 -8.75e-02 -1.96e-01 0.972 3.84e-03 0.004889
         3.41e-03 -2.12e-03 -1.34e-03 5.61e-03 1.007 3.15e-06 0.002341
## 516
## 517
        -2.07e-02 3.56e-02 -6.59e-02 -9.77e-02 1.000 9.53e-04 0.004929
        1.48e-03 2.12e-02 4.91e-02 9.43e-02 0.997 8.88e-04 0.003651
## 518
## 519
         4.20e-03 5.61e-04 -4.10e-02 -4.93e-02 1.004 2.43e-04 0.002883
        -2.12e-02 -8.76e-03 4.38e-02 7.89e-02 1.002 6.22e-04 0.004312
## 520
         5.52e-03 -7.16e-04 -5.24e-03 2.82e-02 1.003 7.93e-05 0.001395
## 521
## 522
        -4.41e-02 8.92e-02 7.78e-02 2.47e-01 0.961 6.08e-03 0.005758
        -2.41e-02 -5.09e-02 8.79e-02 1.35e-01 0.989 1.83e-03 0.004266
## 523
## 527
         4.25e-04 -1.06e-04 2.91e-04 8.04e-04 1.011 6.46e-08 0.006172
## 531
        6.63e-03 -1.19e-02 -1.35e-02 2.67e-02 1.004 7.14e-05 0.001565
         4.21e-04 -4.20e-06 -1.66e-04 7.85e-04 1.007 6.16e-08 0.002556
## 532
        -9.88e-03 -1.53e-02 2.95e-02 4.00e-02 1.007 1.60e-04 0.003775
## 535
         1.93e-03 4.18e-03 -2.75e-02 -3.94e-02 1.006 1.55e-04 0.003545
## 536
## 538
         6.79e-03 1.05e-02 7.43e-03 -2.31e-02 1.004 5.32e-05 0.001410
## 541
        -1.84e-04 -6.09e-05 5.29e-04 1.88e-03 1.009 3.54e-07 0.004174
        -5.45e-03 1.14e-02 -3.81e-03 2.23e-02 1.007 4.97e-05 0.002684
## 542
        -3.10e-02 -1.18e-03 -2.32e-02 6.63e-02 0.999 4.39e-04 0.002642
## 544
       -1.43e-03 -2.74e-03 -1.44e-03 -7.46e-03 1.012 5.57e-06 0.006782
## 546
## 548
        -7.36e-03 -3.41e-02 3.86e-02 6.88e-02 1.006 4.73e-04 0.005447
## 549
        -6.62e-03 6.96e-02 -3.60e-02 1.09e-01 0.986 1.19e-03 0.002611
## 550
        -4.91e-04 1.88e-02 -7.70e-03 5.43e-02 0.999 2.94e-04 0.001771
## 551
        -5.73e-04 -3.14e-02 1.25e-03 5.78e-02 1.006 3.34e-04 0.004859
        -3.33e-03 2.80e-02 4.43e-02 7.44e-02 0.999 5.54e-04 0.003031
## 553
## 556
         5.40e-02 4.56e-02 -2.10e-03 -1.13e-01 0.997 1.27e-03 0.004933
        8.37e-04 6.13e-04 -3.20e-03 -3.89e-03 1.007 1.52e-06 0.002511
## 558
## 559
        -5.09e-02 -4.87e-02 -4.86e-03 9.73e-02 0.999 9.46e-04 0.004296
        -1.06e-02 1.77e-03 2.25e-02 3.43e-02 1.006 1.17e-04 0.003098
## 560
        -8.81e-03 -2.10e-02 -6.20e-03 3.42e-02 1.006 1.17e-04 0.003137
## 561
         1.15e-02 6.31e-02 -5.62e-02 1.36e-01 0.980 1.83e-03 0.003137
## 564
        -6.83e-03 2.50e-03 1.46e-02 1.94e-02 1.009 3.77e-05 0.004703
## 567
        -3.53e-02 1.87e-02 -8.28e-03 7.70e-02 0.993 5.92e-04 0.002023
## 570
## 572
        1.34e-04
                  4.95e-04 6.30e-04 -3.94e-03 1.007 1.55e-06 0.001779
       -1.57e-02 3.80e-03 -1.12e-02 3.46e-02 1.005 1.20e-04 0.002739
## 575
        -1.50e-03 2.07e-03 3.42e-03 -1.61e-02 1.007 2.59e-05 0.002831
## 576
        -5.68e-03 -8.03e-04 -7.30e-03 1.77e-02 1.007 3.13e-05 0.002476
## 581
## 584
         3.95e-03 -1.10e-02 -1.51e-02 \ 3.81e-02 \ 1.000 \ 1.45e-04 \ 0.001137
        -1.28e-04 -1.97e-05 -9.78e-04 -3.65e-03 1.016 1.33e-06 0.010829
## 585
## 587
        -5.37e-03 -1.66e-03 7.48e-03 -1.35e-02 1.009 1.83e-05 0.004816
## 588
        -3.97e-02 2.26e-02 1.17e-02 -5.22e-02 1.007 2.73e-04 0.004785
         1.69e-03 3.93e-05 -1.46e-03 5.10e-03 1.012 2.60e-06 0.006798
## 591
## 592
       -7.55e-04 -2.00e-03 1.50e-03 -3.46e-03 1.011 1.20e-06 0.006054
## 594
       -2.79e-02 -1.05e-02 5.14e-02 -1.23e-01 1.005 1.51e-03 0.008601
       -4.60e-02 -7.93e-03 2.19e-02 -5.58e-02 1.003 3.11e-04 0.003044
## 595
```

```
-1.94e-01 -5.47e-02 1.00e-01 -2.53e-01 0.980 6.36e-03 0.008860
         6.67e-03 1.56e-02 2.88e-02 -8.21e-02 0.996 6.74e-04 0.002862
## 598
## 599
        -2.50e-02 -1.52e-02 3.73e-02 -9.20e-02 1.005 8.45e-04 0.006635
        -1.43e-02 -1.44e-02 1.43e-02 -5.25e-02 1.007 2.76e-04 0.004748
## 600
## 601
        -2.31e-03 6.40e-05 -7.71e-03 2.86e-02 1.007 8.17e-05 0.003150
        2.56e-02 1.53e-02 8.21e-03 -8.63e-02 1.002 7.45e-04 0.004826
## 602
         2.81e-02 -1.34e-02 -9.79e-03 -6.37e-02 1.010 4.06e-04 0.007919
## 604
         1.00e-02 3.36e-02 7.31e-03 -6.27e-02 1.001 3.93e-04 0.002969
## 605
## 606
        -1.58e-02 -7.69e-03 -7.24e-03 4.56e-02 1.012 2.08e-04 0.008288
## 607
        -2.57e-02 1.65e-02 2.86e-02 -6.54e-02 1.005 4.28e-04 0.004736
## 609
         1.18e-02 -8.44e-03
                            3.56e-03 -3.66e-02 1.013 1.34e-04 0.008468
                            1.62e-02 -6.03e-02 1.004 3.63e-04 0.003833
## 610
         7.02e-03 2.12e-02
## 611
        -4.28e-03 -3.62e-02 3.81e-03 -5.95e-02 1.005 3.54e-04 0.004108
## 612
        -4.70e-03 -1.94e-03 -4.87e-03 1.47e-02 1.007 2.16e-05 0.002918
         6.92e-02 -5.74e-03 2.10e-02 -8.88e-02 1.006 7.88e-04 0.006958
## 613
                            2.38e-05 3.15e-03 1.010 9.90e-07 0.005127
## 615
        -1.15e-03 1.54e-03
         3.09e-02 -1.38e-02 2.92e-02 -7.16e-02 1.008 5.12e-04 0.006763
## 616
## 619
        -1.16e-02 -1.23e-02 -7.71e-04 2.55e-02 1.007 6.52e-05 0.002874
        1.21e-03 7.55e-04 2.37e-03 -4.81e-03 1.008 2.32e-06 0.002750
## 620
## 621
         2.70e-02 6.86e-02 -1.42e-02 -1.90e-01 0.975 3.62e-03 0.004915
## 623
        6.01e-05 -3.59e-04 5.93e-05 -5.79e-04 1.007 3.35e-08 0.002420
## 624
         2.36e-02 -3.63e-03 4.55e-03 -3.01e-02 1.007 9.05e-05 0.003153
         5.10e-02 1.18e-02 -6.29e-03 -8.56e-02 0.991 7.31e-04 0.002228
## 625
         2.17e-02 9.31e-03 1.22e-03 -4.07e-02 1.008 1.65e-04 0.004446
## 626
        -4.99e-02 4.90e-01 -2.87e-03 5.25e-01 0.960 2.74e-02 0.019705
## 627
## 628
        -3.25e-03 -2.77e-04 -2.51e-03 7.66e-03 1.007 5.87e-06 0.002280
## 629
         1.10e-02 -1.44e-04 1.44e-02 -4.24e-02 1.001 1.80e-04 0.001537
        6.32e-02 -3.06e-02 -1.70e-02 -1.35e-01 0.996 1.82e-03 0.005893
## 630
         3.61e-02 1.55e-02 -3.20e-03 -5.91e-02 1.007 3.49e-04 0.005131
## 631
## 632
         1.08e-02 -8.38e-04 -2.52e-03 -2.97e-02 1.005 8.81e-05 0.001962
## 633
         3.33e-02 -2.47e-02 -1.01e-02 -6.86e-02 1.007 4.70e-04 0.005752
## 634
         1.64e-02 2.42e-02 -4.67e-03 -3.44e-02 1.016 1.19e-04 0.011048
## 636
        -2.38e-02 1.75e-02 2.50e-03 6.13e-02 1.001 3.76e-04 0.002676
        -1.37e-03 1.61e-02 1.49e-03 2.20e-02 1.010 4.84e-05 0.005771
## 637
## 640
        -1.07e-02
                  3.84e-03
                            4.00e-03 2.18e-02 1.009 4.77e-05 0.004756
         1.16e-02 1.52e-02 -6.56e-03 -4.02e-02 1.010 1.62e-04 0.006251
## 641
## 642
         4.95e-02 -1.15e-01 4.45e-03 -1.48e-01 0.998 2.19e-03 0.007269
## 644
        -1.79e-03 -1.55e-03 7.70e-04 -2.10e-02 1.007 4.43e-05 0.003060
         1.50e-02 -1.25e-02 -8.16e-03 -6.85e-02 1.000 4.70e-04 0.003015
## 645
         5.98e-03 -1.50e-03 -1.08e-03 -1.12e-02 1.008 1.26e-05 0.003082
## 646
         6.84e-02 1.21e-01 9.32e-03 -1.98e-01 0.955 3.89e-03 0.003439
## 650
## 651
         2.14e-03 -2.50e-03 2.94e-04 -8.39e-03 1.006 7.04e-06 0.001658
## 652
         9.11e-04 -1.38e-03 6.20e-04 -3.28e-03 1.006 1.08e-06 0.001612
        -1.52e-02 9.88e-03 2.92e-02 5.87e-02 1.005 3.45e-04 0.004331
## 653
## 654
         9.38e-03 3.71e-03 -2.44e-03 -2.94e-02 1.006 8.67e-05 0.002419
## 655
         1.60e-02 3.75e-04 1.78e-05 -3.58e-02 1.004 1.28e-04 0.001921
## 656
         1.96e-02 -2.12e-02 -1.24e-02 -9.62e-02 1.000 9.26e-04 0.004658
         4.85e-03 -2.41e-03 1.11e-03 -1.44e-02 1.006 2.08e-05 0.001401
## 659
## 660
         4.31e-02 3.12e-02 -6.12e-03 -1.13e-01 0.995 1.29e-03 0.004442
## 661
         6.05e-02 6.81e-02 5.94e-03 -1.22e-01 0.985 1.49e-03 0.003142
         1.73e-03 -4.48e-02 4.73e-03 6.26e-02 1.007 3.92e-04 0.005480
## 662
## 663
         3.52e-02 -1.35e-03 -5.23e-03 -5.16e-02 1.004 2.66e-04 0.003147
## 664
         8.18e-03 -3.43e-02 1.20e-02 -4.62e-02 1.003 2.13e-04 0.002503
       -1.40e-03 -2.95e-03 6.53e-04 5.96e-03 1.009 3.55e-06 0.003718
## 665
```

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-9.64e-02 -2.91e-02 1.99e-02 1.54e-01 0.973 2.35e-03 0.003206
         5.85e-03 -7.34e-03 3.22e-04 -1.25e-02 1.010 1.56e-05 0.005121
## 667
         2.23e-03 -1.07e-03 -5.88e-04 -3.93e-03 1.009 1.55e-06 0.004482
## 668
         6.04e-03 -2.65e-02 7.84e-04 -3.35e-02 1.007 1.12e-04 0.003744
## 669
## 670
        -3.39e-02 -2.57e-02 5.40e-03 9.99e-02 0.992 9.97e-04 0.003064
        -1.74e-02 -7.73e-03 -5.23e-03 3.01e-02 1.008 9.06e-05 0.004160
## 671
         3.20e-03 -8.12e-02 -2.00e-03 -9.33e-02 1.007 8.70e-04 0.007599
## 672
         1.57e-02 -4.36e-03 -1.04e-03 -3.28e-02 1.006 1.08e-04 0.002955
## 675
## 676
        -1.92e-03 1.96e-03 -3.57e-03 1.00e-02 1.008 1.00e-05 0.003758
## 679
         2.09e-03 1.25e-02 -7.55e-04 -2.81e-02 1.005 7.93e-05 0.002154
## 680
         5.32e-02 1.79e-03 1.62e-02 -8.04e-02 0.985 6.46e-04 0.001463
         3.05e-02 -1.44e-02 -2.31e-03 -6.34e-02 1.001 4.02e-04 0.002744
## 681
## 682
         1.53e-02 2.67e-02 -1.10e-02 4.37e-02 1.007 1.91e-04 0.004151
         3.35e-03 -1.42e-02 2.12e-03 -2.74e-02 1.006 7.52e-05 0.002380
## 684
        -3.22e-03 -4.37e-04 1.90e-03 9.29e-03 1.010 8.64e-06 0.005508
## 686
## 687
        -2.52e-02 -3.30e-02 3.83e-03 5.30e-02 1.006 2.81e-04 0.004218
        -3.44e-02 1.33e-02 1.10e-02 7.83e-02 0.998 6.13e-04 0.002896
## 690
## 691
        -1.37e-03 -2.89e-03 6.35e-05 4.19e-03 1.008 1.76e-06 0.002840
        -3.02e-02 1.23e-02 -6.13e-04 6.14e-02 0.999 3.77e-04 0.002275
## 692
## 693
        -1.34e-02 -8.60e-03 -1.26e-04 2.12e-02 1.010 4.48e-05 0.005348
        3.23e-02 2.60e-02 7.14e-03 -7.61e-02 1.008 5.80e-04 0.006980
## 694
        1.02e-02 2.24e-02 -4.47e-03 6.62e-02 1.004 4.38e-04 0.004320
## 695
        -7.91e-03 2.56e-04 2.02e-03 3.50e-02 1.004 1.22e-04 0.001971
## 696
         5.31e-03 -2.29e-03 4.57e-03 -1.31e-02 1.005 1.71e-05 0.001185
## 697
       -2.68e-02 1.48e-02 2.46e-02 9.14e-02 1.003 8.35e-04 0.005581
## 698
## 699
        2.08e-02 -2.24e-02 -1.44e-02 6.16e-02 1.000 3.79e-04 0.002533
## 700
       -9.93e-03 4.96e-03 -1.75e-02 4.24e-02 1.001 1.80e-04 0.001530
## 701
        -1.42e-04 -1.82e-03 -3.69e-03 1.18e-02 1.006 1.39e-05 0.001938
        -9.63e-03 2.54e-03 1.97e-02 2.58e-02 1.007 6.64e-05 0.003350
## 702
## 703
        -2.98e-03 6.76e-04 -1.16e-02 -1.54e-02 1.008 2.38e-05 0.003532
## 705
        -4.31e-03 6.83e-04 4.03e-03 -8.26e-03 1.006 6.82e-06 0.001202
## 706
         5.70e-04 -9.43e-03 4.25e-02 5.53e-02 1.001 3.05e-04 0.002355
## 707
         2.71e-03 -3.42e-03 1.09e-02 1.47e-02 1.007 2.16e-05 0.002960
## 709
         1.29e-03 -4.88e-03 -3.63e-03 9.39e-03 1.006 8.82e-06 0.001539
## 711
         9.38e-04 -3.97e-04 -2.72e-03 6.88e-03 1.008 4.74e-06 0.003104
## 712
         3.76e-04 -1.74e-04 -4.00e-03 -5.84e-03 1.007 3.41e-06 0.002409
## 715
        -2.47e-02 3.96e-03 1.34e-02 -3.46e-02 1.007 1.20e-04 0.003937
## 716
        8.13e-03 -1.02e-02 -1.21e-02 3.18e-02 1.005 1.01e-04 0.002389
         1.33e-02 -1.99e-02 -1.79e-02 6.25e-02 1.000 3.90e-04 0.002623
## 719
       -1.73e-04 -3.75e-02 -1.39e-02 7.30e-02 0.997 5.33e-04 0.002451
## 721
        8.70e-03 -6.04e-03 -1.60e-02 5.58e-02 1.002 3.12e-04 0.002702
## 722
## 723
        -1.23e-02 5.26e-03 6.92e-03 -1.97e-02 1.009 3.89e-05 0.004991
## 724
        -3.71e-03 7.26e-03 6.46e-03 -1.71e-02 1.006 2.93e-05 0.001742
        -9.26e-03 -2.66e-03 1.72e-02 3.21e-02 1.008 1.03e-04 0.004049
## 726
        -6.35e-04 -5.43e-04 4.33e-04 -1.62e-03 1.008 2.63e-07 0.003110
## 729
        -4.42e-03 -8.93e-03 -7.36e-03 4.42e-02 1.008 1.96e-04 0.004822
## 730
## 731
         1.18e-03 8.51e-03 -1.21e-02 2.89e-02 1.002 8.37e-05 0.001064
        -6.42e-03 3.68e-03 1.46e-03 -1.29e-02 1.008 1.66e-05 0.003431
## 732
## 733
        5.89e-03 -6.99e-03 -8.04e-03 1.82e-02 1.005 3.30e-05 0.001337
## 735
        -1.63e-03 -1.51e-03 -1.44e-03 9.21e-03 1.009 8.49e-06 0.004130
        -1.98e-02 -3.78e-02 -1.34e-02 6.68e-02 1.006 4.47e-04 0.004973
## 737
## 738
        8.35e-03 -2.96e-02 -1.86e-02 5.52e-02 0.999 3.05e-04 0.001952
## 739
       -1.51e-03 -6.64e-04 1.14e-02 1.34e-02 1.007 1.80e-05 0.002297
## 741
        2.46e-02 4.05e-03 -6.93e-03 4.44e-02 1.009 1.97e-04 0.006117
```

```
2.59e-02 1.71e-02 4.48e-02 6.67e-02 1.003 4.45e-04 0.003643
         1.19e-02 2.09e-02 1.38e-02 -5.33e-02 1.006 2.84e-04 0.004101
## 744
## 745
         1.78e-02 -1.97e-02 4.22e-02 6.65e-02 1.002 4.42e-04 0.003416
         4.17e-02 -1.02e-01 -2.79e-02 1.59e-01 0.989 2.53e-03 0.005615
## 749
## 750
        -9.09e-04 -1.32e-02 -1.53e-02 3.23e-02 1.005 1.04e-04 0.002430
        -4.66e-05 -1.12e-05 2.85e-05 -1.16e-04 1.007 1.34e-09 0.001812
## 753
        -3.70e-03 -1.47e-03 2.34e-02 3.64e-02 1.006 1.33e-04 0.003409
## 754
         1.21e-02 -5.16e-02 -1.87e-02 8.95e-02 0.994 8.00e-04 0.002776
## 756
## 758
        -8.03e-03 2.40e-02 2.07e-02
                                     1.06e-01 1.001 1.12e-03 0.005822
## 759
        -3.12e-02 -4.27e-02 -1.76e-03 9.11e-02 0.998 8.30e-04 0.003761
## 760
         2.81e-02 -4.26e-02 -1.78e-02 9.08e-02 0.999 8.23e-04 0.004153
         1.19e-03 -2.98e-03 -4.55e-03 1.20e-02 1.006 1.45e-05 0.001678
## 761
## 762
        -4.04e-04 2.56e-03 4.50e-03 -1.56e-02 1.005 2.44e-05 0.001129
        1.28e-02 9.56e-03 2.48e-02 3.84e-02 1.006 1.47e-04 0.003595
## 763
## 764
         1.35e-02 4.87e-02 3.86e-02 7.83e-02 1.005 6.13e-04 0.005729
## 766
         8.09e-04 -1.53e-02 -8.65e-03
                                      4.25e-02 1.009 1.81e-04 0.005453
        -5.24e-03 1.41e-02 -1.75e-02
                                     4.28e-02 1.001 1.83e-04 0.001659
## 768
        -3.97e-03 -6.17e-03 -6.98e-03
                                      1.67e-02 1.006 2.80e-05 0.001749
         1.66e-02 -4.46e-03 3.34e-02 5.65e-02 1.002 3.19e-04 0.002906
## 771
## 773
         1.77e-02 -6.07e-03 -1.05e-03
                                      8.89e-02 1.016 7.91e-04 0.014073
## 774
        9.23e-03 -9.46e-03 -7.68e-03 3.39e-02 1.004 1.15e-04 0.001973
        -1.79e-01 3.89e-02 1.33e-01 2.79e-01 0.963 7.77e-03 0.007386
## 775
        -1.16e-02 3.61e-02 2.03e-03 5.48e-02 1.008 3.01e-04 0.005635
## 776
         2.04e-03 -5.13e-03 -5.69e-02 -7.88e-02 0.996 6.21e-04 0.002607
## 777
       -3.19e-03 2.59e-02 -1.10e-02 4.31e-02 1.001 1.85e-04 0.001587
## 778
## 781
         2.62e-03 1.36e-03 2.21e-03 -9.83e-03 1.007 9.66e-06 0.001969
## 782
        -8.57e-04 1.92e-03 1.51e-04 -5.24e-03 1.007 2.75e-06 0.001903
        1.24e-01 1.60e-01 -9.85e-03 -2.95e-01 0.964 8.67e-03 0.008287
## 783
## 785
         8.30e-03 -3.95e-03 -5.02e-03  1.44e-02  1.006  2.09e-05  0.001901
## 787
         3.77e-02 -3.36e-02 2.90e-02 -1.12e-01 1.008 1.25e-03 0.009295
## 788
        -4.03e-03 -1.63e-03 -9.80e-03 -1.41e-02 1.008 1.99e-05 0.003031
## 790
         4.70e-03 -7.42e-03 -2.00e-04 2.00e-02 1.009 4.01e-05 0.004264
## 793
        -3.08e-03 4.05e-03 1.69e-02 2.29e-02 1.008 5.25e-05 0.004127
         3.88e-02 2.56e-03 -1.68e-02 -8.32e-02 1.010 6.92e-04 0.008657
## 794
## 795
        -8.97e-03 -2.12e-02 -1.13e-02 4.38e-02 1.010 1.92e-04 0.006201
        -2.37e-02 -2.75e-02 -7.16e-03 4.11e-02 1.006 1.69e-04 0.003241
## 797
## 799
        1.05e-02 -3.03e-03 -1.86e-02 -2.65e-02 1.007 7.01e-05 0.003040
        -1.81e-03 2.02e-03 7.16e-03 1.05e-02 1.007 1.09e-05 0.002269
## 801
         3.02e-03 1.24e-02 -1.02e-02 -2.15e-02 1.009 4.62e-05 0.004582
## 802
       -2.20e-02 -5.06e-02 -5.26e-03 -1.78e-01 0.975 3.17e-03 0.004399
## 803
        -1.53e-02 -5.77e-02 -1.80e-02 -1.09e-01 1.003 1.18e-03 0.006566
## 805
       -3.58e-03 -3.39e-04 3.84e-03 1.31e-02 1.009 1.72e-05 0.004561
## 808
## 810
        8.80e-03 2.02e-03 -6.09e-03 -1.76e-02 1.012 3.10e-05 0.006831
       -1.36e-02 -1.59e-02 2.52e-02 4.74e-02 1.006 2.25e-04 0.003840
## 813
## 814
        1.53e-04 4.46e-04 7.97e-04 1.55e-03 1.008 2.41e-07 0.003300
        -7.80e-03 2.90e-04
                            6.02e-03 2.25e-02 1.012 5.08e-05 0.007403
## 815
## 816
        -1.91e-02 -7.93e-03
                            1.53e-02 3.50e-02 1.009 1.22e-04 0.005655
                            1.52e-02 3.04e-02 1.007 9.27e-05 0.003703
## 817
        -1.12e-02 3.03e-06
## 818
        -3.53e-03 7.58e-03
                            1.19e-02 2.13e-02 1.007 4.56e-05 0.003191
## 819
        -8.51e-03 6.18e-03
                            1.45e-02 2.95e-02 1.007 8.71e-05 0.003712
        -7.54e-03 -3.26e-03 1.43e-02 1.90e-02 1.007 3.60e-05 0.002827
## 820
## 823
        7.58e-04 9.89e-04 -3.61e-03 9.41e-03 1.006 8.86e-06 0.001591
## 826
        2.63e-03 1.35e-02 -1.38e-02 -6.18e-02 1.008 3.82e-04 0.006424
       -1.62e-02 7.54e-03 1.67e-02 4.35e-02 1.007 1.90e-04 0.004006
## 828
```

```
1.05e-02 -2.24e-03 -1.42e-02 -1.89e-02 1.008 3.58e-05 0.004032
         1.16e-02 8.03e-03 -2.42e-02 -4.37e-02 1.006 1.91e-04 0.003389
## 830
## 831
         4.77e-03 3.80e-03 -9.68e-03 -1.68e-02 1.007 2.83e-05 0.002659
## 833
         3.00e-03 7.13e-03 -9.75e-03 -1.84e-02 1.009 3.40e-05 0.004369
## 836
         3.98e-04 4.76e-03
                            1.74e-02 2.69e-02 1.007 7.26e-05 0.003482
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## 837
         2.55e-05 -1.30e-05 4.95e-05 9.53e-05 1.008 9.08e-10 0.003618
## 838
## 839
        -3.89e-03 -2.91e-03 1.34e-02 2.16e-02 1.006 4.67e-05 0.002368
## 842
        -1.48e-03 -1.35e-03 -2.76e-03 -6.35e-03 1.008 4.03e-06 0.003286
## 844
         9.13e-04 -1.05e-02 1.44e-02 3.14e-02 1.006 9.84e-05 0.002966
## 846
        -3.56e-02 -3.85e-03
                            3.10e-02 5.39e-02 1.006 2.91e-04 0.004391
                            4.63e-02 7.03e-02 1.002 4.95e-04 0.003619
## 847
        -2.76e-02 -1.97e-02
## 849
        1.18e-03 2.01e-02 4.90e-02 6.23e-02 1.003 3.88e-04 0.003352
## 851
        -1.27e-02 3.50e-03 1.42e-02 2.70e-02 1.007 7.31e-05 0.003341
         3.90e-02 -3.35e-02 -3.22e-02 -1.28e-01 0.997 1.63e-03 0.005824
## 854
        -4.45e-02 -7.65e-03 3.02e-02 7.75e-02 1.009 6.01e-04 0.007554
## 855
        -1.02e-03 -1.48e-03 -2.41e-03 7.61e-03 1.007 5.79e-06 0.002022
## 857
        -4.66e-03 2.02e-04 4.56e-03 -1.34e-02 1.007 1.81e-05 0.002330
## 860
        -7.35e-03 1.16e-03 -4.87e-03 2.05e-02 1.005 4.18e-05 0.001538
## 863
## 866
         6.47e-03 2.56e-03 -5.98e-03 1.45e-02 1.007 2.10e-05 0.002373
## 867
         2.94e-03 -5.58e-04 -8.09e-03 2.99e-02 1.004 8.97e-05 0.001868
        9.76e-03 -6.74e-03 -1.28e-02 2.48e-02 1.004 6.17e-05 0.001261
## 868
         3.94e-03 -1.34e-03 -6.69e-03 1.84e-02 1.006 3.39e-05 0.002110
## 869
         2.48e-02 8.21e-03 -3.18e-02 6.53e-02 0.997 4.26e-04 0.002090
## 870
## 871
         1.29e-04 -4.43e-04 -3.83e-03 1.11e-02 1.007 1.23e-05 0.001993
## 872
        -1.04e-02 8.64e-03 4.56e-02 -9.30e-02 0.997 8.64e-04 0.003515
        -3.55e-05
                  1.66e-03
                            3.29e-02 5.65e-02 1.007 3.19e-04 0.005121
## 873
## 875
         2.92e-03 -4.36e-03 9.70e-03 1.66e-02 1.010 2.75e-05 0.005771
       -1.65e-05 5.32e-04 -1.43e-02 -1.89e-02 1.007 3.59e-05 0.002778
## 876
## 877
        1.81e-03 -8.24e-03 -3.92e-03 3.49e-02 1.005 1.22e-04 0.002741
## 878
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## 879
        -6.61e-04 -7.10e-03 4.70e-02 8.56e-02 1.006 7.32e-04 0.006290
## 880
        -4.81e-03 -1.09e-03 -1.27e-02 -1.90e-02 1.006 3.61e-05 0.002390
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## 882
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        2.52e-04 4.85e-04 2.11e-03 3.06e-03 1.009 9.37e-07 0.004329
## 883
## 885
        -5.45e-04 -4.81e-04 2.51e-03 3.86e-03 1.008 1.49e-06 0.003046
        -4.30e-03 -5.86e-04 -3.87e-02 -8.39e-02 1.009 7.04e-04 0.008110
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                  1.76e-03 1.03e-02 4.80e-02 1.015 2.30e-04 0.011185
## 887
         1.16e-02 1.79e-03 -6.49e-03 5.58e-02 1.001 3.11e-04 0.002528
## 888
        -1.14e-02 -1.55e-03 4.58e-02 6.27e-02 1.005 3.93e-04 0.004612
## 889
         5.82e-04 1.19e-02 -2.31e-02 -3.12e-02 1.007 9.72e-05 0.003693
## 891
## 892
        -4.84e-04 -9.61e-04 -6.47e-03 -9.00e-03 1.008 8.10e-06 0.002925
       -1.26e-03 3.62e-03 1.52e-02 3.22e-02 1.007 1.04e-04 0.003313
## 893
## 894
        9.20e-03 2.83e-03 1.20e-02 2.17e-02 1.008 4.73e-05 0.004041
                  2.25e-02 -2.36e-03 1.62e-01 1.003 2.63e-03 0.010305
## 895
         9.36e-03
## 896
        -1.55e-03
                  1.61e-03 1.44e-03 -5.83e-03 1.009 3.41e-06 0.004131
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## 897
## 899
         2.04e-02 4.01e-03 -2.98e-02 -4.26e-02 1.006 1.81e-04 0.003521
## 900
        5.84e-02 -8.96e-03 2.81e-02 -1.44e-01 1.011 2.08e-03 0.013108
         1.24e-02 8.21e-04 -2.45e-02 -3.34e-02 1.007 1.11e-04 0.003443
## 901
## 902
        -1.56e-02 2.14e-02 8.11e-03 7.21e-02 0.998 5.20e-04 0.002723
## 907
        -3.15e-02 6.48e-03 8.10e-04 5.07e-02 1.005 2.57e-04 0.003833
        1.58e-02 9.75e-03 -3.63e-03 4.41e-02 1.004 1.94e-04 0.002844
## 908
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-4.87e-03 -2.94e-03 2.65e-03 -8.95e-03 1.006 8.01e-06 0.001370
       -3.01e-03 3.54e-02 1.62e-03 4.11e-02 1.011 1.69e-04 0.007130
## 914
       -3.84e-03 -2.74e-02 1.11e-02 -4.21e-02 1.001 1.77e-04 0.001532
       -7.60e-03 -2.42e-02 2.83e-03 -8.56e-02 1.002 7.32e-04 0.004496
## 918
## 919
       -1.54e-03 -3.59e-02 -5.40e-03 -5.89e-02 1.006 3.47e-04 0.004531
       -1.11e-03 -1.56e-02 -1.38e-02 -1.44e-01 0.983 2.08e-03 0.003870
## 920
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       -1.83e-03 -2.26e-02 -1.72e-02 4.79e-02 1.005 2.30e-04 0.003541
## 922
## 923
        -4.85e-02 -7.11e-02 3.23e-02 -1.41e-01 1.001 1.99e-03 0.007943
## 925
       -1.96e-02 1.58e-02 1.25e-02 -6.79e-02 0.993 4.60e-04 0.001627
## 928
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                            2.05e-02 -9.21e-02 1.006 8.48e-04 0.006925
## 929
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## 931
        -5.49e-03 2.12e-03 6.17e-03 -2.10e-02 1.005 4.42e-05 0.001578
        -1.86e-03 -3.43e-02 -1.18e-04 -4.83e-02 1.005 2.33e-04 0.003436
## 932
        -2.79e-03 7.46e-03 1.93e-04 -4.71e-02 1.012 2.22e-04 0.008249
## 933
## 934
        -3.04e-02 -2.21e-02 8.32e-03 -7.36e-02 0.999 5.42e-04 0.003040
         5.87e-04 -4.76e-02 -3.02e-04 -8.60e-02 1.003 7.39e-04 0.004935
## 935
## 937
        -1.24e-02 4.06e-02 6.74e-03 -1.11e-01 0.991 1.24e-03 0.003394
        1.46e-02 -3.48e-02 -8.72e-03 -6.72e-02 1.011 4.52e-04 0.008940
## 939
         2.09e-03 -4.23e-03 -1.13e-02 3.90e-02 1.005 1.52e-04 0.002846
## 941
## 942
       -2.75e-03 -5.59e-03 -7.26e-03 2.16e-02 1.007 4.68e-05 0.002924
         3.36e-02 -1.70e-02 -1.39e-02 1.02e-01 1.001 1.03e-03 0.005482
## 947
        7.63e-04 5.34e-04 6.26e-04 -1.65e-03 1.006 2.72e-07 0.001215
## 950
        -5.01e-04 -3.57e-03 -5.64e-03 1.25e-02 1.006 1.57e-05 0.001826
## 951
## 952
        -2.59e-03 -6.43e-03 -4.81e-03 1.64e-02 1.008 2.69e-05 0.003753
## 953
        3.99e-03 -1.55e-02 -1.58e-02 4.07e-02 1.003 1.66e-04 0.002234
         1.36e-03 1.32e-03 2.43e-03 -7.94e-03 1.006 6.30e-06 0.001594
## 954
## 955
        -2.73e-02 -1.89e-02 5.17e-02 7.14e-02 1.001 5.10e-04 0.003508
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## 957
## 960
        3.82e-03 4.46e-03 -1.27e-02 -1.57e-02 1.008 2.47e-05 0.003658
## 961
        -6.56e-03 8.22e-03 -2.39e-02 1.04e-01 1.014 1.08e-03 0.013171
## 962
        -1.65e-03 -1.14e-03 -5.34e-04 1.08e-02 1.006 1.18e-05 0.001652
## 963
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         2.49e-02 -6.86e-03 -2.35e-02 6.56e-02 0.992 4.30e-04 0.001479
## 964
## 965
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        1.59e-02 9.80e-03 -4.35e-02 -1.31e-01 0.992 1.71e-03 0.004606
## 966
## 968
        2.83e-04 -2.54e-03 3.39e-03 7.68e-03 1.009 5.90e-06 0.004521
        7.74e-03 7.65e-03 -2.52e-02 -3.24e-02 1.008 1.05e-04 0.004266
## 969
         4.94e-03 -4.41e-03 1.99e-02 3.20e-02 1.008 1.02e-04 0.004290
## 970
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## 971
        2.13e-02 1.30e-02 -1.54e-02 -3.24e-02 1.010 1.05e-04 0.006330
## 973
       -1.01e-03 1.49e-04 -5.49e-03 -9.23e-03 1.009 8.53e-06 0.004531
## 974
        1.46e-02 3.00e-02 -2.58e-02 1.23e-01 0.989 1.52e-03 0.003790
## 975
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## 976
## 977
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## 980
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         2.89e-03 1.56e-02 -1.47e-02 -3.27e-02 1.011 1.07e-04 0.006604
## 981
## 982
        -7.74e-06 -3.59e-05 -6.73e-04 -1.66e-03 1.017 2.77e-07 0.011656
        7.72e-03 -7.76e-03 -2.76e-03 5.91e-02 1.003 3.49e-04 0.003473
## 983
         6.97e-03 2.97e-02 5.60e-04 -6.43e-02 0.999 4.13e-04 0.002481
## 984
        -7.96e-04 -2.36e-03 3.97e-02 5.15e-02 1.007 2.65e-04 0.004941
## 985
## 986
        1.79e-03 7.13e-04 2.02e-03 -1.59e-02 1.005 2.52e-05 0.001427
         5.11e-03 -4.45e-03 -5.96e-03 4.91e-02 1.001 2.41e-04 0.001946
## 987
```

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-9.59e-03 -1.67e-02 -4.19e-03 4.94e-02 1.001 2.44e-04 0.002107
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## 994
## 996
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## 998
## 999
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## 1000 -6.81e-02 -7.89e-03 -7.75e-02 7.42e-01 1.741 5.50e-02 0.424756
## 1001 2.91e-02 -2.17e-02 3.51e-02 -8.71e-02 0.993 7.59e-04 0.002526
## 1003 -4.63e-02 -3.78e-02 1.04e-02 -6.83e-02 1.007 4.66e-04 0.005742
## 1004 -2.09e-02 -2.58e-03 1.82e-02 -3.34e-02 1.007 1.11e-04 0.003407
## 1005 -7.80e-02 -1.65e-02 4.80e-02 -1.10e-01 1.002 1.21e-03 0.006522
## 1006 -3.90e-03 -1.35e-02 7.96e-03 -2.42e-02 1.006 5.84e-05 0.002501
## 1008 -4.84e-02 -1.33e-02 -1.26e-02 -7.04e-02 1.008 4.96e-04 0.006684
## 1009 1.20e-03 2.40e-02 3.03e-02 5.27e-02 1.005 2.78e-04 0.003948
## 1013 -1.05e-03 -1.08e-03 -5.55e-03 3.55e-02 1.044 1.26e-04 0.037564
## 1014 -8.74e-04 1.90e-04 3.83e-04 -1.62e-03 1.009 2.63e-07 0.004120
## 1015 -4.17e-02 6.94e-03 1.18e-02 -4.59e-02 1.011 2.11e-04 0.007556
## 1016 -2.39e-02 -1.18e-03 2.69e-02 -1.21e-01 1.026 1.47e-03 0.023760
## 1018 -6.62e-02 -1.89e-02 2.87e-02 -8.18e-02 1.000 6.69e-04 0.003792
## 1019 -8.89e-03 -4.52e-03 1.79e-02 -6.74e-02 1.026 4.54e-04 0.021283
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## 1023 -2.50e-02 -5.74e-03 1.85e-02 -4.18e-02 1.008 1.75e-04 0.005113
## 1024 1.65e-03 7.82e-03 1.32e-02 -2.91e-02 1.005 8.45e-05 0.002260
## 1025 -3.57e-03 1.62e-05
                            3.73e-03 -1.42e-02 1.010 2.02e-05 0.005144
## 1026 1.34e-04 6.84e-03 3.21e-02 -5.99e-02 1.001 3.58e-04 0.002740
## 1028 -2.52e-03 2.72e-03 2.18e-02 -4.58e-02 1.006 2.10e-04 0.003733
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## 1029
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## 1030
## 1032 3.91e-02 -6.71e-03 -2.15e-02 5.99e-02 1.006 3.59e-04 0.004517
## 1035 -6.04e-02 -9.30e-03 3.07e-02 -7.69e-02 1.006 5.92e-04 0.006127
## 1037 -4.78e-02 1.50e-02 2.46e-02 -6.29e-02 1.003 3.95e-04 0.003565
## 1039 -1.75e-02 -1.56e-02 3.84e-02 -1.03e-01 1.003 1.06e-03 0.006113
## 1041 -1.23e-02 -6.59e-04 1.32e-02 -3.77e-02 1.007 1.42e-04 0.003734
## 1046 -6.38e-03 2.55e-03 1.50e-02 -2.84e-02 1.007 8.06e-05 0.003017
## 1047 -3.64e-03 -4.78e-03 -1.80e-02 -3.68e-02 1.009 1.36e-04 0.005189
## 1049 -3.82e-02 -2.33e-02 -4.87e-03 1.00e-01 0.998 1.01e-03 0.004454
## 1051 -3.05e-03 3.21e-03 1.33e-02 -4.64e-02 1.012 2.16e-04 0.008244
## 1052 4.95e-02 2.51e-03 -1.36e-02 1.53e-01 1.002 2.33e-03 0.009194
## 1053 9.72e-03 -2.43e-04 7.58e-03 -3.85e-02 1.006 1.48e-04 0.003454
## 1054 -2.39e-03 3.44e-03 3.83e-03 -2.10e-02 1.007 4.42e-05 0.002550
## 1055 -5.04e-02 5.61e-03 2.21e-02 -8.88e-02 0.995 7.87e-04 0.003012
## 1056 -2.81e-03 4.22e-03 1.71e-03 -1.47e-02 1.009 2.15e-05 0.004591
## 1060 3.35e-03 1.88e-04 -4.60e-04 4.66e-03 1.020 2.17e-06 0.014590
## 1062 -1.10e-02 6.49e-03 1.09e-02 4.63e-02 1.011 2.14e-04 0.007221
## 1063 7.95e-03 2.24e-02 1.87e-03 -5.03e-02 1.016 2.53e-04 0.011999
## 1064 7.87e-04 1.75e-03 1.35e-02 1.73e-02 1.007 3.01e-05 0.002548
## 1065
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## 1066 -1.77e-02 1.96e-03 2.57e-02 -1.80e-01 1.003 3.23e-03 0.011621
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## 1071 -1.40e-03 2.21e-02 8.01e-03 -6.46e-02 1.002 4.17e-04 0.003290
## 1072 -1.18e-03 4.92e-03 9.25e-04 -1.02e-02 1.015 1.05e-05 0.010015
## 1075 -1.42e-03 1.03e-03 2.34e-03 -8.96e-03 1.009 8.02e-06 0.003981
## 1076 -8.81e-02 -7.53e-02 2.18e-04 1.42e-01 0.989 2.02e-03 0.004634
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## 1077 1.21e-03 -2.05e-02 1.36e-03 -2.34e-02 1.013 5.47e-05 0.008004
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## 1082 4.30e-02 5.62e-03 -4.50e-02 -1.10e-01 1.003 1.21e-03 0.006768
## 1083 -4.76e-03 4.95e-02 3.17e-02 -9.28e-02 0.998 8.62e-04 0.003758
## 1084 -7.61e-03 -7.65e-03 6.84e-03 -1.71e-02 1.006 2.92e-05 0.002004
## 1086 9.84e-04 -2.95e-03 2.03e-03 -1.48e-02 1.007 2.19e-05 0.002752
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## 1088 -2.10e-02 1.33e-02 5.29e-03 -3.63e-02 1.007 1.32e-04 0.004035
## 1089 4.95e-03 6.13e-03 4.12e-03 -3.31e-02 1.004 1.09e-04 0.002061
## 1091 -1.58e-02 1.78e-02 1.95e-03 -5.50e-02 1.018 3.03e-04 0.013583
## 1093 -5.99e-03 -6.30e-02 -1.54e-03 -7.96e-02 1.003 6.34e-04 0.004497
## 1094 -7.96e-02 -2.85e-02 7.64e-02 -3.37e-01 1.014 1.13e-02 0.027801
## 1097 -2.30e-03 4.68e-04 4.50e-03 -1.43e-02 1.011 2.06e-05 0.005821
## 1098 -6.69e-04 7.03e-03 6.72e-03 -2.00e-02 1.008 4.01e-05 0.003264
## 1099 3.30e-03 -1.42e-03 -9.03e-03 1.68e-02 1.008 2.83e-05 0.003605
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## 1104 2.47e-03 -1.30e-03 6.95e-03 1.40e-02 1.010 1.96e-05 0.005519
## 1105 -3.61e-03 6.13e-05 7.34e-04 1.47e-02 1.014 2.16e-05 0.008832
## 1106 5.32e-03 -2.71e-03 -1.19e-02 3.29e-02 1.008 1.09e-04 0.004342
## 1108 -3.43e-02 3.90e-02 2.73e-02 -7.39e-02 1.002 5.46e-04 0.003772
## 1109 1.66e-03 -2.99e-03 -1.02e-03 1.48e-02 1.006 2.20e-05 0.001753
## 1111
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## 1113
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## 1114
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## 1115
## 1116 -2.10e-03 1.80e-03 1.58e-03 -5.06e-03 1.007 2.56e-06 0.001917
## 1118
        1.78e-04 2.83e-05 4.23e-04 -2.15e-03 1.008 4.63e-07 0.002713
## 1119 5.46e-03 -1.38e-03 1.41e-02 2.35e-02 1.007 5.51e-05 0.003043
## 1121 -6.92e-03 4.70e-03 5.10e-03 -1.76e-02 1.006 3.11e-05 0.001802
                            2.41e-04 -1.20e-03 1.011 1.44e-07 0.006075
## 1122 -1.00e-03 2.84e-04
## 1123
        1.81e-03 9.72e-03
                            1.28e-03 -1.74e-02 1.006 3.03e-05 0.002047
        1.13e-03 2.60e-03 2.54e-03 -1.02e-02 1.006 1.05e-05 0.001435
## 1127
## 1128
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## 1129
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        1.70e-02 3.05e-02 6.29e-04 -1.13e-01 0.984 1.27e-03 0.002561
## 1130
## 1131 3.26e-03 6.27e-04 5.77e-03 -1.46e-02 1.007 2.12e-05 0.002595
## 1133 -7.68e-03 -1.34e-02 9.35e-03 -2.84e-02 1.003 8.05e-05 0.001227
## 1134 6.18e-04 6.11e-03 1.36e-03 -1.24e-02 1.007 1.54e-05 0.002750
## 1136 -1.06e-03 -2.95e-03 7.92e-03 -3.52e-02 1.002 1.24e-04 0.001376
## 1137 -7.67e-04 2.49e-03 1.80e-03 -7.09e-03 1.006 5.03e-06 0.001543
## 1138 1.32e-02 2.56e-02 -1.32e-02 7.02e-02 0.995 4.93e-04 0.001978
        5.35e-02 1.08e-01 -7.48e-02 1.75e-01 1.005 3.08e-03 0.012072
## 1139
## 1140 -7.47e-03 8.04e-04 7.26e-03 3.83e-02 1.010 1.47e-04 0.006570
## 1141 -2.54e-04 6.84e-03 -1.90e-03 8.38e-03 1.007 7.03e-06 0.002559
## 1142 1.58e-05 1.70e-05 3.82e-06 -2.18e-04 1.007 4.74e-09 0.002190
## 1144
        6.87e-03 4.19e-03 4.12e-03 -2.07e-02 1.005 4.28e-05 0.001805
        1.61e-02 -1.67e-03 -5.86e-03 8.02e-02 1.008 6.43e-04 0.007205
## 1147 -1.60e-02 -2.05e-02 -4.97e-03 8.57e-02 1.009 7.35e-04 0.008440
## 1148 1.09e-02 -7.41e-03 -1.29e-03 5.96e-02 1.005 3.55e-04 0.004374
## 1149 -9.20e-04 3.33e-03 4.78e-03 -1.17e-02 1.007 1.37e-05 0.002210
```

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## 1151 -5.00e-03 -3.99e-03 -3.18e-02 -4.45e-02 1.004 1.98e-04 0.002698
## 1152 2.15e-03 -1.55e-03 -1.05e-05 -6.56e-03 1.006 4.31e-06 0.001601
## 1153 5.04e-03 3.44e-03 -8.48e-03 1.57e-02 1.005 2.46e-05 0.001189
## 1154 -4.74e-03 -4.76e-03 -2.54e-03 1.25e-02 1.006 1.57e-05 0.001911
## 1156 -3.37e-03 -4.78e-03 -5.05e-03 2.05e-02 1.004 4.19e-05 0.001261
## 1158 7.10e-03 1.36e-02 3.64e-03 -3.25e-02 1.005 1.06e-04 0.002216
## 1159 -9.41e-04 1.84e-03 2.93e-03 -1.41e-02 1.006 2.00e-05 0.001684
## 1160 1.11e-02 -7.24e-03 -7.89e-04 -9.71e-02 0.985 9.41e-04 0.002067
## 1163 -1.26e-02 5.27e-03 9.51e-03 -6.36e-02 1.008 4.05e-04 0.006434
## 1165 8.71e-03 -6.57e-03 -8.95e-03 6.42e-02 0.993 4.11e-04 0.001503
## 1166 -1.75e-03 1.04e-03 4.54e-04 -1.48e-02 1.007 2.19e-05 0.002734
## 1168 -1.52e-03 1.69e-03 -3.78e-03 2.21e-02 1.005 4.88e-05 0.001619
## 1169 1.25e-04 -8.66e-04 -3.32e-04 1.89e-03 1.006 3.57e-07 0.001522
## 1170 -2.14e-03 -3.63e-04 -2.20e-03 6.03e-03 1.007 3.63e-06 0.002395
## 1171 -3.74e-03 8.18e-03 8.10e-03 -3.54e-02 1.001 1.25e-04 0.001264
## 1172
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## 1173 2.10e-03 -1.64e-03 6.56e-04 -7.79e-03 1.006 6.07e-06 0.001597
## 1174 -2.40e-02 -1.62e-02 -5.24e-03 1.35e-01 0.977 1.82e-03 0.002851
        1.75e-02 2.06e-03 6.57e-03 -3.66e-02 1.003 1.34e-04 0.001669
## 1175
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## 1176
        1.20e-03 -1.24e-02 1.13e-02 6.09e-02 1.011 3.71e-04 0.008389
## 1177
## 1179 -5.16e-04 -2.94e-03 1.83e-03 -6.98e-03 1.006 4.87e-06 0.001681
        1.29e-02 -3.69e-02 2.47e-03 -4.68e-02 1.009 2.19e-04 0.005909
## 1180
                            2.62e-03 -1.06e-02 1.007 1.13e-05 0.002491
## 1184 2.43e-03 3.44e-04
## 1186 3.68e-03 4.54e-04 9.62e-04 -1.04e-02 1.006 1.07e-05 0.001606
## 1187 3.18e-02 -4.03e-02 2.99e-03 -6.15e-02 1.004 3.79e-04 0.003915
## 1188 -5.11e-03 -4.60e-03 -1.47e-03 1.43e-02 1.006 2.04e-05 0.002066
## 1189 -1.40e-02 1.12e-02 -4.79e-03 -6.45e-02 1.005 4.17e-04 0.004316
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## 1191 -9.34e-03 -2.84e-02 -1.87e-02 1.10e-01 1.016 1.20e-03 0.014682
## 1193 3.77e-03 -1.79e-03 -4.81e-03 1.68e-02 1.004 2.81e-05 0.000961
## 1194 2.16e-03 1.74e-01 -2.36e-03 1.81e-01 1.013 3.28e-03 0.017114
## 1196 8.29e-03 -4.06e-02 -1.83e-02 6.85e-02 1.000 4.69e-04 0.002925
## 1197 -1.20e-02 -3.84e-03 -2.32e-02 -5.94e-02 1.008 3.53e-04 0.005940
## 1199 -2.05e-03 1.55e-03 -7.59e-03 -1.07e-02 1.007 1.14e-05 0.002618
## 1200 9.79e-05 3.48e-04 1.87e-02 3.12e-02 1.005 9.71e-05 0.002255
## 1201 8.72e-03 -9.71e-03 -1.07e-02 -6.35e-02 1.006 4.03e-04 0.005041
## 1204 -8.44e-02 -6.49e-03 2.44e-02 2.61e-01 0.993 6.80e-03 0.012888
## 1205 -1.04e-03 3.35e-04 1.65e-03 -3.85e-03 1.006 1.48e-06 0.001627
## 1206 1.82e-04 -1.63e-04 2.65e-03 3.85e-03 1.007 1.48e-06 0.002539
## 1207 2.67e-03 1.57e-03 -4.97e-03 -7.70e-03 1.009 5.93e-06 0.003741
## 1210
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## 1214 8.99e-03 -5.95e-04 -3.52e-02 -6.56e-02 1.000 4.30e-04 0.002605
## 1215 6.22e-04 -3.90e-04 3.60e-03 6.94e-03 1.009 4.82e-06 0.004462
## 1217 -4.08e-02 -8.15e-03 9.66e-02 1.58e-01 0.970 2.48e-03 0.003094
## 1219 -1.81e-02 -2.58e-02 2.49e-02 4.55e-02 1.007 2.07e-04 0.004643
## 1221 -5.98e-02 -1.88e-02 2.82e-01 5.48e-01 0.796 2.93e-02 0.005919
## 1223 -2.25e-02 -2.18e-02 3.48e-02 6.44e-02 1.002 4.14e-04 0.003424
## 1224 -1.58e-02 1.86e-03 -4.71e-02 -7.52e-02 0.998 5.66e-04 0.002865
## 1226 1.68e-04 -8.22e-03 -9.12e-03 -1.69e-02 1.008 2.85e-05 0.003754
## 1227 -2.13e-03 5.06e-03 -1.46e-02 -2.30e-02 1.007 5.31e-05 0.002763
## 1229 -1.78e-02 1.62e-02 -5.00e-03 -1.47e-01 1.006 2.15e-03 0.010786
## 1230 -1.55e-02 1.85e-02 2.72e-02 8.14e-02 1.001 6.62e-04 0.003903
## 1231 9.04e-03 -2.68e-03 1.25e-02 2.15e-02 1.008 4.63e-05 0.003631
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## 1237
## 1240 2.18e-03 -3.70e-04 -2.37e-02 -4.75e-02 1.005 2.26e-04 0.003407
## 1241 -5.06e-02 -1.48e-02 6.11e-02 9.40e-02 1.004 8.83e-04 0.006221
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## 1247 -9.41e-03 1.20e-02 4.89e-03 -2.25e-02 1.007 5.05e-05 0.003024
## 1251 -3.15e-03 -2.93e-03 4.65e-03 8.67e-03 1.008 7.53e-06 0.003139
## 1253 -8.99e-03 3.40e-02 3.66e-02 6.98e-02 1.004 4.87e-04 0.004574
## 1257 -4.27e-02 -1.44e-03 3.32e-02 7.76e-02 1.010 6.02e-04 0.008206
## 1259 1.81e-02 1.21e-02 2.52e-02 -5.99e-02 1.009 3.59e-04 0.006927
## 1260 8.00e-04 4.60e-03 1.68e-03 2.11e-02 1.008 4.45e-05 0.003424
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## 1264 -4.00e-04 -4.64e-03 1.00e-03 2.85e-02 1.010 8.10e-05 0.005501
## 1265 -1.68e-02 -2.23e-02 -1.02e-02 4.84e-02 1.001 2.34e-04 0.002007
## 1268 -1.41e-02 1.75e-03 -1.78e-02 5.26e-02 1.011 2.77e-04 0.007995
## 1269 -3.04e-03 3.62e-03 -8.56e-03 1.65e-02 1.007 2.73e-05 0.002310
## 1270 6.84e-03 -1.15e-02 -2.82e-02 6.32e-02 0.996 3.99e-04 0.001744
## 1271 -1.08e-02 1.36e-02 -5.02e-03 4.45e-02 1.005 1.98e-04 0.003210
## 1272 2.54e-04 1.01e-04 2.05e-04 -5.74e-04 1.007 3.30e-08 0.002607
## 1273 -1.59e-02 2.06e-03 7.81e-03 -3.53e-02 1.004 1.25e-04 0.002103
## 1275  1.07e-02  3.29e-02 -9.62e-03  4.04e-02  1.006  1.63e-04  0.003440
        1.09e-02 -1.20e-02 -4.33e-03 3.50e-02 1.003 1.23e-04 0.001588
## 1279 2.20e-02 2.58e-02 2.81e-03 -4.64e-02 1.006 2.16e-04 0.003788
## 1280 -7.85e-03 1.85e-05 1.96e-03 -2.62e-02 1.005 6.88e-05 0.001937
## 1281 -4.50e-02 4.11e-02 -6.30e-03 1.13e-01 0.991 1.27e-03 0.003447
## 1284 -3.41e-03 2.09e-03 6.54e-03 1.02e-02 1.009 1.04e-05 0.003818
## 1285 1.33e-03 1.19e-03 1.43e-03 -3.92e-03 1.006 1.53e-06 0.001704
## 1287 -4.48e-04 -2.71e-02 -8.42e-03 4.82e-02 1.003 2.32e-04 0.002621
## 1288 -1.16e-02 -8.37e-03 3.94e-03 -1.87e-02 1.011 3.48e-05 0.006373
## 1289 -1.73e-02 2.40e-02 -6.88e-03 6.73e-02 0.994 4.53e-04 0.001722
## 1290 6.89e-02 8.79e-02 -9.52e-02 -2.39e-01 0.987 5.68e-03 0.009805
## 1291 3.52e-03 8.25e-03 -1.32e-02 3.46e-02 1.004 1.20e-04 0.001862
## 1294 -9.54e-04 1.79e-04 8.93e-04 -4.29e-03 1.006 1.85e-06 0.001406
## 1296 1.56e-02 -4.17e-02 -3.16e-03 -8.29e-02 1.011 6.88e-04 0.009725
## 1297 3.11e-02 -1.69e-02 3.58e-03 1.21e-01 1.001 1.47e-03 0.006489
## 1299 -4.90e-03 -2.88e-03 3.16e-03 2.72e-02 1.014 7.41e-05 0.009465
## 1303 -3.23e-04 -1.33e-04 -3.53e-05 2.20e-03 1.010 4.83e-07 0.005119
## 1304 4.36e-02 1.61e-02 -9.55e-03 -1.98e-01 0.980 3.90e-03 0.006030
## 1306 -3.81e-03 -3.58e-03 2.85e-03 3.68e-02 1.009 1.36e-04 0.005731
## 1307 2.01e-03 -1.59e-03 3.52e-04 9.10e-03 1.011 8.29e-06 0.006137
## 1308 6.80e-03 5.93e-04 -2.35e-03 -1.99e-02 1.012 3.98e-05 0.007783
## 1310 -7.12e-02 -3.68e-02 2.24e-02 1.74e-01 0.995 3.04e-03 0.008132
## 1311 -3.98e-03 -3.12e-02 5.54e-03 -1.36e-01 0.994 1.85e-03 0.005332
## 1313 1.60e-02 -2.51e-02 -2.88e-04 -5.34e-02 1.011 2.85e-04 0.007785
## 1314 6.82e-06 -3.07e-04 -3.53e-04 2.55e-03 1.009 6.52e-07 0.004026
## 1315 -3.85e-04 -6.37e-04 2.85e-04 -3.92e-03 1.010 1.54e-06 0.005320
## 1316 4.62e-02 2.67e-02 6.72e-04 1.88e-01 0.988 3.53e-03 0.007018
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## 1317
## 1318 -3.27e-03 2.04e-02 -1.66e-02 6.44e-02 1.009 4.14e-04 0.006802
## 1320 7.03e-03 3.62e-03 8.76e-04 -8.32e-02 1.003 6.92e-04 0.005056
## 1321 2.20e-02 3.70e-03 -7.52e-03 -7.64e-02 1.007 5.83e-04 0.006284
## 1323 -4.57e-03 -3.50e-03 3.37e-05 -4.25e-02 1.008 1.80e-04 0.004889
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## 1325
## 1326 -2.52e-02 -1.36e-02 8.60e-03 8.39e-02 1.007 7.04e-04 0.007080
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## 1329 -1.37e-02 1.19e-02 -3.88e-03 4.48e-02 1.010 2.01e-04 0.006555
## 1331 1.22e-01 -1.11e-01 1.90e-02 -2.68e-01 0.979 7.18e-03 0.009593
## 1332 6.96e-03 -7.22e-03 -1.92e-03 2.83e-02 1.010 8.01e-05 0.005778
## 1334 -1.69e-03 4.69e-02 -5.20e-03 -8.13e-02 1.011 6.61e-04 0.009493
## 1335 -2.06e-02 -2.04e-02 -3.78e-03 4.18e-02 1.017 1.75e-04 0.012878
## 1337 -4.88e-04 4.14e-03 7.46e-04 1.67e-02 1.012 2.80e-05 0.007057
## 1338 2.65e-03 -6.55e-03 -4.61e-03 6.21e-02 1.007 3.86e-04 0.005232
## 1339 -2.57e-02 5.43e-02 7.26e-03 1.20e-01 1.006 1.45e-03 0.008930
## 1340 -3.93e-04 -2.98e-04 -2.67e-04 2.02e-03 1.009 4.09e-07 0.004357
       1.33e-02 -8.57e-03 -4.61e-04 -5.21e-02 1.008 2.71e-04 0.005743
## 1342 -1.72e-03 -1.33e-03 -7.66e-04 1.43e-02 1.010 2.06e-05 0.005310
## 1343 3.53e-03 5.07e-04 4.91e-03 -1.59e-02 1.016 2.52e-05 0.010965
## 1344 2.62e-03 1.95e-03 -2.87e-05 -1.19e-02 1.010 1.42e-05 0.005514
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## 1346 -9.61e-03 -4.03e-02 2.35e-03 -7.21e-02 1.009 5.19e-04 0.007731
## 1348 -1.14e-03 -1.26e-04 -5.39e-04 -5.66e-03 1.012 3.21e-06 0.006912
## 1349 -1.70e-03 2.84e-03 7.43e-03 1.14e-02 1.008 1.31e-05 0.003108
## 1350 -9.69e-03 -1.06e-02 1.72e-02 -8.52e-02 1.007 7.25e-04 0.006963
## 1351 -7.86e-05 1.29e-03 -6.86e-03 2.10e-02 1.007 4.41e-05 0.002994
## 1352 2.59e-02 -5.73e-03 -9.47e-03 -7.16e-02 1.009 5.13e-04 0.007753
## 1354
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## 1356
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       4.48e-03 7.02e-04 3.56e-04 -1.37e-02 1.011 1.89e-05 0.005878
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## 1364 -1.09e-02 2.33e-03 3.12e-03 3.89e-02 1.010 1.52e-04 0.006207
        4.11e-03 5.58e-04 3.31e-03 -3.18e-02 1.010 1.01e-04 0.005645
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## 1367 1.89e-03 1.51e-02 3.98e-02 1.19e-01 0.998 1.42e-03 0.005571
## 1370 3.72e-03 -1.32e-03 -4.83e-03 2.98e-02 1.005 8.90e-05 0.002318
## 1371 -2.26e-03 1.48e-04 -1.29e-03 6.18e-03 1.006 3.82e-06 0.001528
## 1372 1.14e-03 8.25e-04 2.34e-03 -9.96e-03 1.007 9.93e-06 0.002551
## 1376 -1.03e-02 1.32e-02 2.12e-02 -4.06e-02 1.003 1.65e-04 0.001992
## 1377 -2.26e-03 1.82e-03 4.68e-03 -1.31e-02 1.009 1.71e-05 0.004243
## 1378 6.29e-03 3.00e-03 1.13e-02 -2.36e-02 1.005 5.57e-05 0.001796
## 1383 -8.25e-03 -3.32e-03 -2.76e-03 1.68e-02 1.008 2.83e-05 0.003168
## 1384 7.96e-03 2.97e-02 -1.64e-02 7.02e-02 1.001 4.93e-04 0.003459
## 1385 4.43e-04 -7.59e-03 -1.23e-02 2.34e-02 1.008 5.49e-05 0.003681
## 1386 -1.75e-03 5.82e-04 -2.19e-02 5.02e-02 1.004 2.52e-04 0.002968
## 1387 -4.55e-03 -2.09e-03 -4.22e-03 3.46e-02 1.007 1.20e-04 0.003708
## 1388
       1.64e-02 2.42e-03 -1.48e-02 3.20e-02 1.008 1.02e-04 0.004289
        1.35e-02 -1.71e-02 -2.56e-02 7.92e-02 1.005 6.27e-04 0.005377
## 1389
## 1391 -1.59e-02 -1.91e-02 -1.70e-02 -3.67e-02 1.009 1.35e-04 0.005011
## 1392 3.82e-03 -1.13e-02 -1.78e-02 4.62e-02 1.002 2.14e-04 0.002142
## 1395 1.98e-03 -1.24e-04 1.58e-02 2.27e-02 1.008 5.17e-05 0.003432
## 1396 -2.05e-02 -1.61e-03 2.47e-02 -4.16e-02 1.003 1.73e-04 0.002049
```

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## 1397 3.11e-03 -2.10e-02 -4.45e-06 -2.66e-02 1.008 7.08e-05 0.004167
## 1398 -1.24e-02 1.71e-02 1.47e-02 -6.74e-02 0.997 4.53e-04 0.002268
## 1401 -1.12e-02 1.82e-03 1.60e-02 -7.80e-02 1.021 6.08e-04 0.017793
## 1402 2.08e-03 -1.35e-03 1.43e-02 -6.24e-02 1.000 3.90e-04 0.002607
## 1404 -2.82e-02 3.64e-02 5.28e-03 -6.13e-02 1.005 3.76e-04 0.004567
## 1405 5.23e-03 4.35e-03 -6.97e-03 -1.01e-01 0.984 1.02e-03 0.002149
## 1407 -1.62e-03 -1.88e-03 1.39e-03 -7.24e-03 1.007 5.25e-06 0.002506
## 1409 -2.05e-02 2.84e-03 -2.87e-02 -7.76e-02 1.010 6.03e-04 0.008190
## 1410 -8.01e-03 -8.34e-04 -1.88e-02 -5.36e-02 1.011 2.87e-04 0.007521
## 1412 -3.93e-03 5.08e-03 7.07e-03 -2.55e-02 1.007 6.51e-05 0.003089
## 1413 -3.76e-03 4.22e-03 -1.25e-02 -3.94e-02 1.012 1.56e-04 0.007758
## 1415 -6.86e-03 1.68e-02 1.50e-02 -5.11e-02 1.008 2.61e-04 0.005688
## 1416 -2.53e-03 1.49e-03 2.30e-03 -7.72e-03 1.010 5.96e-06 0.005114
## 1418 2.79e-03 6.16e-06 -3.45e-03 9.54e-03 1.008 9.11e-06 0.003739
## 1419 -1.32e-04 -1.68e-03 -5.24e-03 -8.62e-03 1.008 7.43e-06 0.003287
## 1420 -1.29e-03 -5.10e-04 8.00e-03 1.64e-02 1.008 2.68e-05 0.003843
## 1421 8.94e-04 1.97e-03 -3.84e-02 -5.09e-02 1.003 2.59e-04 0.002836
## 1422 -4.21e-03 3.08e-03 6.41e-04 4.23e-02 1.015 1.79e-04 0.011113
## 1424 -2.95e-03 1.17e-03 1.09e-02 1.62e-02 1.007 2.63e-05 0.002896
## 1427 7.51e-03 -1.35e-03 9.99e-03 2.34e-02 1.010 5.47e-05 0.005923
## 1428 -8.73e-04 1.35e-03 -4.72e-03 -2.65e-02 1.021 7.02e-05 0.016486
## 1430 2.85e-03 7.39e-03 -1.74e-02 -3.43e-02 1.008 1.17e-04 0.004173
## 1431 -4.42e-02 9.48e-03 1.16e-02 -6.11e-02 1.004 3.74e-04 0.003623
## 1432 -4.34e-03 1.93e-03 1.84e-03 -6.63e-03 1.010 4.40e-06 0.004877
## 1433 5.54e-03 -2.16e-03 6.19e-03 1.08e-02 1.009 1.17e-05 0.004597
## 1435
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## 1438
        9.41e-04 9.20e-04 8.64e-03 2.79e-02 1.009 7.79e-05 0.004906
## 1439
        1.50e-03 -2.95e-03 1.24e-02 3.02e-02 1.008 9.13e-05 0.003917
## 1441 -2.20e-03 1.65e-03 -4.56e-03 -6.47e-03 1.009 4.19e-06 0.003850
## 1442 -1.55e-02 -1.68e-02 5.69e-02 1.02e-01 0.998 1.04e-03 0.004345
## 1443 5.72e-04 2.12e-03 -3.59e-03 -1.07e-02 1.009 1.14e-05 0.004311
## 1444 2.18e-02 8.01e-03 -3.14e-02 8.39e-02 0.997 7.04e-04 0.003135
## 1445 -5.44e-02 1.27e-01 -8.54e-02 -2.56e-01 0.978 6.55e-03 0.008730
## 1446 -7.74e-05 -1.91e-04 9.41e-04 1.67e-03 1.007 2.79e-07 0.002656
## 1449 -9.72e-03 -1.60e-02 -3.69e-02 -8.28e-02 1.003 6.85e-04 0.004962
## 1451 1.82e-04 -5.31e-04 -1.44e-03 -1.89e-03 1.008 3.58e-07 0.003221
## 1452 -4.72e-02 8.24e-03 -4.38e-02 -8.21e-02 1.004 6.74e-04 0.005245
## 1454 7.51e-02 -1.34e-02 -3.49e-02 1.60e-01 1.008 2.57e-03 0.012475
## 1455 -1.34e-02 -2.89e-04 -1.12e-02 -2.08e-02 1.009 4.34e-05 0.004442
## 1456 1.38e-04 -2.62e-04 1.65e-03 2.98e-03 1.009 8.88e-07 0.004201
## 1457 3.49e-02 2.77e-02 2.51e-02 8.25e-02 1.006 6.81e-04 0.006079
## 1458 -1.00e-02 5.76e-04 -2.18e-02 -3.29e-02 1.008 1.08e-04 0.004236
## 1459 -2.30e-02 1.10e-02 1.97e-02 -6.79e-02 1.005 4.61e-04 0.004944
## 1460 -6.15e-05 8.51e-05 -1.30e-04 -8.54e-04 1.013 7.29e-08 0.008307
## 1461 -3.64e-04 1.08e-04 9.79e-04 1.43e-03 1.007 2.04e-07 0.002276
## 1462 1.01e-02 9.19e-03 4.29e-02 7.29e-02 1.000 5.32e-04 0.003138
## 1463 -1.49e-02 4.84e-02 4.73e-02 1.21e-01 0.997 1.47e-03 0.005408
## 1466 -1.20e-02 1.47e-03 -1.55e-02 -3.38e-02 1.009 1.14e-04 0.005272
## 1467 -1.88e-02 -3.34e-04 1.01e-02 -2.98e-02 1.007 8.86e-05 0.003182
## 1468 2.33e-02 1.62e-02 -2.23e-02 -2.29e-01 1.026 5.23e-03 0.029034
## 1469 -5.18e-03 -2.61e-03 -1.34e-02 3.82e-02 1.006 1.46e-04 0.003460
## 1470 -6.89e-03 -2.25e-03 3.15e-03 -1.00e-02 1.007 1.00e-05 0.002568
## 1472 9.35e-03 -1.82e-02 -1.23e-02 4.78e-02 1.005 2.29e-04 0.003298
## 1473 5.85e-04 -1.72e-03 4.78e-03 9.86e-03 1.008 9.73e-06 0.003551
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## 1474 1.76e-03 -3.32e-04 -5.56e-03 -2.32e-02 1.012 5.40e-05 0.007199
## 1476 -4.10e-03 3.09e-03 -1.48e-02 -6.46e-02 1.023 4.17e-04 0.018788
## 1477 -8.15e-04 4.37e-04 8.58e-04 -2.61e-03 1.008 6.84e-07 0.003342
## 1479 -1.06e-02 4.25e-05 -3.40e-02 -7.65e-02 1.005 5.85e-04 0.005197
## 1481 5.36e-03 -4.64e-03 -3.25e-03 1.66e-02 1.010 2.76e-05 0.005149
## 1482 -2.74e-02 -2.36e-03 -2.72e-02 -5.05e-02 1.005 2.55e-04 0.003823
## 1483 -2.87e-03 3.02e-03 1.58e-02 3.84e-02 1.007 1.48e-04 0.003871
## 1484 3.10e-02 -2.68e-04 -1.81e-02 5.97e-02 0.996 3.57e-04 0.001660
## 1485 -9.04e-03 7.88e-03 4.99e-03 -2.75e-02 1.009 7.55e-05 0.004854
## 1486
       3.04e-03 -9.29e-04 4.31e-03 9.85e-03 1.009 9.71e-06 0.004643
## 1488
       1.29e-03 -8.43e-03 1.07e-02 1.99e-02 1.008 3.97e-05 0.003698
## 1489 -3.18e-03 6.00e-03 5.58e-03 1.27e-02 1.010 1.63e-05 0.005421
## 1491 -4.20e-04 -2.70e-03 6.14e-03 1.22e-02 1.009 1.48e-05 0.004493
## 1492 2.15e-03 -2.88e-02 3.23e-02 6.26e-02 1.005 3.92e-04 0.004265
## 1493 3.26e-04 -4.98e-05 5.51e-04 -3.12e-03 1.007 9.74e-07 0.002606
## 1494 -1.87e-02 4.39e-03 -1.97e-02 4.45e-02 0.999 1.98e-04 0.001369
## 1495 -1.05e-02 8.17e-03 -4.10e-02 7.68e-02 0.994 5.90e-04 0.002186
## 1497 -1.96e-01 -2.02e-01 2.80e-03 3.87e-01 0.922 1.48e-02 0.007581
## 1498 -2.82e-03 -6.49e-04 -3.11e-03 8.10e-03 1.007 6.56e-06 0.002133
## 1501 2.83e-02 -1.28e-02 -8.58e-03 7.17e-02 1.000 5.14e-04 0.003032
## 1502 -1.75e-02 3.11e-03 -1.48e-02 3.67e-02 1.003 1.34e-04 0.001890
## 1503 -1.79e-02 -3.79e-03 -1.06e-02 4.32e-02 1.001 1.87e-04 0.001640
## 1504 -6.49e-02 3.70e-03 -3.08e-02 1.08e-01 0.985 1.16e-03 0.002530
## 1505 5.21e-03 -5.80e-03 -4.64e-03 1.60e-02 1.006 2.55e-05 0.001874
## 1507 -5.31e-03 -1.02e-02 -1.93e-03 4.75e-02 0.999 2.26e-04 0.001437
## 1508 -5.19e-03 1.06e-02 -5.66e-03 2.28e-02 1.004 5.19e-05 0.001101
## 1509 -6.90e-02 1.78e-02 -2.14e-02 1.09e-01 0.990 1.19e-03 0.003207
## 1510 -2.28e-02 -2.18e-02 -3.53e-03 5.33e-02 0.999 2.84e-04 0.001769
## 1511 -9.31e-03 -4.60e-03 -1.20e-04 2.93e-02 1.005 8.61e-05 0.002326
## 1512 1.91e-02 -1.69e-02 7.91e-03 -3.39e-02 1.012 1.15e-04 0.007977
## 1514 3.20e-02 1.52e-02 -3.40e-04 -4.56e-02 1.005 2.08e-04 0.003337
## 1515 -2.18e-03 -1.65e-03 -7.63e-03 3.21e-02 1.007 1.03e-04 0.003835
## 1517 1.14e-03 1.27e-02 -2.46e-02 4.78e-02 0.994 2.28e-04 0.000913
## 1519 -3.36e-02 -4.11e-03 -3.05e-02 8.03e-02 0.990 6.45e-04 0.001865
## 1520 -2.40e-03 6.83e-03 -2.22e-02 3.83e-02 1.000 1.47e-04 0.001165
## 1521 -1.22e-03 -5.10e-05 1.44e-04 3.44e-03 1.007 1.19e-06 0.001955
## 1522 -4.73e-02 -4.16e-02 -2.58e-02 1.12e-01 0.988 1.25e-03 0.002976
## 1524 6.88e-03 -8.36e-03 -3.02e-02 1.27e-01 0.988 1.60e-03 0.003748
## 1525 2.27e-03 -7.80e-03 -5.71e-03 5.29e-02 0.999 2.80e-04 0.001734
## 1527 -2.54e-02 -1.14e-02 -4.85e-03 4.67e-02 1.003 2.18e-04 0.002355
## 1529 -2.99e-03 -6.56e-03 -1.13e-02 2.79e-02 1.004 7.79e-05 0.001642
## 1531 -2.87e-04 -2.12e-04 1.14e-04 8.23e-03 1.007 6.78e-06 0.002175
## 1533 -5.22e-03 -3.48e-03 -1.20e-02 4.09e-02 0.998 1.67e-04 0.001048
## 1534 -4.21e-02 -3.49e-02 -1.07e-02 6.38e-02 1.000 4.07e-04 0.002725
## 1535 -1.58e-02 1.53e-02 3.84e-02 6.52e-02 1.002 4.24e-04 0.003396
       6.73e-03 2.04e-02 -6.61e-05 5.17e-02 1.006 2.68e-04 0.004456
## 1536
## 1537
        6.08e-03 -2.20e-02 -7.91e-03 3.69e-02 1.005 1.36e-04 0.002481
## 1539 -2.66e-02 1.28e-02 3.14e-02 6.56e-02 1.005 4.31e-04 0.004520
## 1540
       1.07e-02 1.75e-02 -2.80e-02 5.17e-02 1.003 2.67e-04 0.002744
## 1541
        2.40e-03 4.54e-03 -1.01e-02 -1.28e-02 1.008 1.65e-05 0.003735
## 1542 9.86e-03 -1.43e-02 -4.31e-02 1.07e-01 0.979 1.13e-03 0.001960
## 1543 -1.08e-02 4.71e-04 -1.51e-02 5.87e-02 0.986 3.44e-04 0.000856
## 1544 -1.44e-02 2.39e-03 -1.82e-02 4.61e-02 1.011 2.12e-04 0.007141
## 1545 -2.09e-02 -7.94e-03 -1.17e-02 4.66e-02 1.003 2.17e-04 0.002461
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## 1546 -1.42e-02 7.24e-03 -2.21e-02 4.65e-02 1.002 2.17e-04 0.002136
## 1547 -4.46e-03 8.38e-04 -7.70e-03 1.54e-02 1.005 2.36e-05 0.000989
## 1549 3.02e-03 2.28e-03 -1.42e-06 -4.67e-03 1.011 2.18e-06 0.006250
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## 1550
## 1551 -8.66e-03 6.69e-03 -1.51e-02 3.94e-02 1.006 1.55e-04 0.003457
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## 1553 -3.16e-03 -1.98e-02 -5.61e-03 2.56e-02 1.005 6.58e-05 0.001849
## 1554 9.67e-03 5.11e-03 1.52e-03 -1.70e-02 1.006 2.91e-05 0.002155
## 1555
        5.07e-03 3.41e-05 4.82e-03 -1.99e-02 1.008 3.94e-05 0.003540
## 1556 -1.13e-02 6.98e-03 2.75e-02 4.73e-02 1.005 2.24e-04 0.003509
        5.08e-03 -9.44e-03 -3.59e-03 3.04e-02 1.004 9.26e-05 0.001629
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## 1560
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        7.26e-03 1.33e-02 3.16e-03 -2.95e-02 1.007 8.72e-05 0.003434
## 1561
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## 1563
        6.02e-04 8.43e-04 -2.29e-03 4.23e-03 1.006 1.79e-06 0.000987
        2.18e-02 -1.81e-03 -1.72e-02 3.34e-02 1.004 1.12e-04 0.002140
## 1568 -1.28e-01 -1.78e-02 3.13e-02 -1.64e-01 0.988 2.68e-03 0.005693
## 1570 -2.49e-02 3.24e-03 1.42e-02 -4.32e-02 1.005 1.87e-04 0.003163
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## 1573 -3.63e-02 -5.20e-02 2.54e-02 -9.46e-02 0.986 8.94e-04 0.002047
## 1574 -4.30e-02 -1.27e-02 6.62e-03 -5.73e-02 1.016 3.28e-04 0.012319
## 1575 -4.62e-03 -8.96e-03 -5.73e-03 2.12e-02 1.007 4.50e-05 0.002759
## 1577 -1.98e-02 -5.14e-03 9.70e-03 -2.82e-02 1.010 7.98e-05 0.006183
## 1578 9.10e-03 2.52e-03 -6.27e-03 1.48e-02 1.008 2.18e-05 0.003142
## 1579 -6.54e-03 -1.10e-03 4.25e-03 -1.04e-02 1.008 1.08e-05 0.003407
## 1580 -4.41e-02 5.85e-02 3.20e-02 -1.04e-01 0.992 1.08e-03 0.003179
## 1582 1.37e-03 -1.07e-02 -1.86e-02 4.19e-02 1.000 1.76e-04 0.001338
## 1583 -1.90e-03 7.99e-04 1.63e-03 -3.76e-03 1.007 1.42e-06 0.002086
## 1585 -1.51e-02 -5.22e-03 1.53e-02 -2.71e-02 1.005 7.35e-05 0.002032
## 1587 5.35e-03 -3.08e-04 -3.59e-02 7.63e-02 1.007 5.83e-04 0.006349
## 1588 -1.71e-02 1.11e-03 9.51e-03 -2.31e-02 1.007 5.36e-05 0.002914
## 1589 -9.00e-03 -2.84e-02 2.01e-02 -8.35e-02 1.004 6.96e-04 0.005465
## 1590 -1.29e-03 1.95e-03 7.59e-03 -1.50e-02 1.005 2.27e-05 0.000910
## 1591 -4.33e-04 -3.26e-04 8.06e-04 -1.59e-03 1.006 2.54e-07 0.001567
## 1592 7.06e-04 3.46e-07 4.50e-03 -1.02e-02 1.006 1.05e-05 0.001234
## 1593 2.50e-02 8.40e-03 -2.64e-03 -5.36e-02 1.000 2.88e-04 0.002099
## 1594 2.61e-03 -3.03e-03 1.17e-03 -7.02e-03 1.009 4.94e-06 0.004592
## 1595 -3.58e-02 9.62e-03 1.28e-02 7.30e-02 1.002 5.33e-04 0.003829
## 1596 -2.15e-02 3.59e-02 4.93e-04 6.43e-02 1.008 4.13e-04 0.006403
## 1598 8.54e-04 -2.78e-03 -1.03e-02 -1.58e-02 1.007 2.48e-05 0.002637
## 1599 7.71e-03 -8.12e-04 -1.04e-02 2.52e-02 1.002 6.38e-05 0.000878
## 1600 -1.17e-03 3.04e-03 -6.94e-03 1.47e-02 1.007 2.15e-05 0.002390
## 1603 4.42e-04 -2.46e-03 -1.54e-03 4.57e-03 1.007 2.09e-06 0.002134
## 1604 2.20e-02 3.16e-02 -1.35e-02 5.52e-02 1.004 3.05e-04 0.003640
## 1605 3.14e-03 1.96e-03 -2.13e-02 4.09e-02 1.000 1.67e-04 0.001390
## 1606 -1.10e-03 9.36e-03 3.66e-03 -4.85e-02 1.002 2.35e-04 0.002386
## 1607 7.34e-03 -3.21e-03 -3.25e-03 1.48e-02 1.007 2.20e-05 0.002503
## 1608 9.92e-03 -5.91e-04 -1.57e-02 2.62e-02 1.004 6.84e-05 0.001528
## 1609 -1.27e-03 -1.57e-03 -5.22e-03 1.78e-02 1.005 3.19e-05 0.001342
## 1610 3.25e-02 4.23e-03 -2.69e-02 7.67e-02 0.993 5.87e-04 0.001970
## 1611 -3.62e-03 -1.60e-03 4.44e-03 -1.07e-02 1.006 1.15e-05 0.001345
## 1612 -1.05e-03 -9.72e-04 -8.10e-03 2.64e-02 1.004 6.98e-05 0.001298
## 1614 5.09e-04 -3.24e-03 1.24e-02 7.96e-02 1.021 6.34e-04 0.017133
```

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## 1615 -1.70e-03 -1.44e-03 1.07e-03 -9.19e-03 1.007 8.45e-06 0.002390
## 1616 8.09e-03 2.27e-03 -5.39e-03 2.07e-02 1.006 4.30e-05 0.002069
## 1617
        1.03e-02 -3.54e-03 -3.10e-03 1.01e-01 1.009 1.01e-03 0.009519
       2.20e-03 -4.59e-03 -9.75e-03 2.08e-02 1.005 4.31e-05 0.001455
## 1618
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## 1620 5.96e-03 2.26e-04 -9.35e-03 2.10e-02 1.004 4.42e-05 0.001171
## 1623 -1.04e-03 -1.09e-03 5.39e-04 -1.63e-02 1.008 2.65e-05 0.003240
## 1625 3.10e-02 -2.31e-02 -2.13e-02 5.56e-02 1.003 3.09e-04 0.003067
## 1628 -1.21e-03 -3.39e-03 2.62e-03 -6.87e-03 1.007 4.73e-06 0.002691
## 1629 -1.23e-02 5.67e-03 -1.35e-03 3.35e-02 1.005 1.12e-04 0.002614
       1.81e-02 7.15e-03 -1.19e-02 3.10e-02 1.005 9.64e-05 0.002411
## 1631
## 1632
       1.62e-02 -4.63e-03 -1.35e-02 3.58e-02 1.002 1.28e-04 0.001387
## 1636 -2.30e-04 -2.16e-03 -4.85e-03 9.11e-03 1.006 8.31e-06 0.001507
       1.08e-03 -3.95e-03 -7.29e-03 2.61e-02 1.006 6.80e-05 0.002238
## 1638
## 1640
        3.27e-03 5.87e-05 -7.57e-03 1.79e-02 1.004 3.21e-05 0.000950
       2.16e-03 -9.73e-04 -3.74e-03 7.05e-03 1.006 4.97e-06 0.001538
## 1642
       1.30e-02 -2.34e-03 3.38e-02 9.19e-02 1.000 8.44e-04 0.004431
## 1644 -1.18e-02 -5.98e-03 -1.49e-02 5.05e-02 1.004 2.55e-04 0.002913
## 1645 -2.56e-04 -3.04e-03 8.66e-03 1.44e-02 1.007 2.08e-05 0.002468
## 1646 9.04e-05 7.03e-04 -1.04e-03 2.30e-03 1.008 5.29e-07 0.002712
       2.76e-02 -1.47e-03 -1.69e-02 5.20e-02 1.004 2.70e-04 0.003304
## 1649 -1.50e-04 7.94e-04 1.63e-06 1.28e-02 1.007 1.65e-05 0.002704
        1.60e-03 -9.87e-04 -1.33e-03 5.13e-03 1.007 2.63e-06 0.001806
## 1653 1.76e-04 -6.40e-05 -8.46e-05 5.45e-04 1.007 2.97e-08 0.002258
## 1654 -2.50e-05 8.44e-05 3.61e-05 -3.07e-04 1.007 9.44e-09 0.001995
## 1655 -3.33e-03 1.39e-03 -2.24e-02 4.18e-02 1.000 1.75e-04 0.001317
## 1657 -1.24e-03 -8.01e-03 -2.57e-03 2.21e-02 1.005 4.88e-05 0.001546
       4.73e-03 2.44e-02 -4.03e-03 7.75e-02 0.993 6.00e-04 0.002125
## 1658
## 1659
       7.25e-03 -7.15e-03 -5.93e-03 2.31e-02 1.005 5.36e-05 0.001926
## 1661
        3.33e-02 -2.81e-04 -2.58e-02 5.42e-02 1.004 2.94e-04 0.003452
## 1662
       6.44e-03 -7.28e-03 -1.34e-02 2.64e-02 1.006 6.99e-05 0.002341
        1.83e-04 -2.27e-03 -7.51e-04 5.00e-03 1.007 2.50e-06 0.002424
        7.62e-03 1.03e-03 -5.46e-03 -3.54e-02 1.006 1.26e-04 0.002951
## 1664
        7.63e-04 -8.15e-04 -2.53e-03 5.50e-03 1.007 3.02e-06 0.001830
       1.79e-02 -4.50e-03 -1.68e-02 3.28e-02 1.004 1.07e-04 0.001999
## 1668 -7.98e-05 -6.95e-05 -2.13e-04 5.51e-04 1.010 3.04e-08 0.005068
## 1669 1.18e-03 7.40e-03 9.68e-03 -2.22e-02 1.005 4.92e-05 0.001520
## 1670 -1.68e-03 -1.73e-03 5.57e-04 -1.17e-02 1.007 1.36e-05 0.002570
## 1671 1.16e-03 -3.22e-04 -2.43e-03 5.09e-03 1.006 2.59e-06 0.001703
## 1672 2.83e-03 -4.54e-03 2.11e-02 3.76e-02 1.007 1.42e-04 0.003586
## 1673 -7.18e-04 -8.97e-04 -1.73e-03 3.56e-03 1.006 1.26e-06 0.001599
## 1674 -3.46e-04 4.50e-03 5.47e-03 -2.38e-02 1.004 5.66e-05 0.001311
## 1675 -3.59e-04 7.99e-05 -3.07e-04 2.96e-03 1.007 8.75e-07 0.002064
## 1676 -3.92e-03 3.53e-03 1.56e-03 -1.69e-02 1.007 2.86e-05 0.003015
## 1677 -1.65e-02 -1.95e-02 1.07e-02 -4.18e-02 1.008 1.74e-04 0.004892
## 1678 1.61e-02 -4.46e-03 -3.60e-03 4.27e-02 1.007 1.82e-04 0.004377
## 1679 -5.24e-04 -6.88e-04 -1.15e-03 2.83e-03 1.006 8.01e-07 0.000982
## 1680 -2.42e-03 6.60e-04 -7.80e-04 5.36e-03 1.006 2.88e-06 0.001125
## 1681 -1.01e-04 8.86e-03 -5.02e-03 2.26e-02 1.006 5.13e-05 0.002323
       2.84e-03 -6.05e-03 -1.26e-02 3.24e-02 1.005 1.05e-04 0.002427
       1.86e-02 1.02e-02 1.08e-02 -3.19e-02 1.004 1.02e-04 0.001780
## 1686 4.13e-04 2.51e-03 2.86e-02 -7.49e-02 0.992 5.60e-04 0.001838
## 1687 -2.74e-02 -5.63e-02 1.09e-02 9.72e-02 1.000 9.45e-04 0.004747
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## 1688 -2.09e-02 -9.82e-03 -6.09e-03 3.34e-02 1.010 1.12e-04 0.005865
       1.16e-02 9.58e-03 2.70e-03 -1.66e-02 1.010 2.75e-05 0.005181
## 1689
       1.68e-03 1.80e-02 -1.56e-02 3.34e-02 1.003 1.12e-04 0.001678
       2.29e-03 -7.59e-03 -3.49e-02 7.22e-02 0.997 5.21e-04 0.002407
## 1692 -3.77e-02 1.81e-02 1.74e-02 -6.73e-02 0.997 4.53e-04 0.002139
## 1693 3.08e-03 -1.04e-03 -3.56e-03 7.22e-03 1.006 5.22e-06 0.001004
## 1694 -1.14e-03 -8.05e-05 1.20e-03 -4.01e-03 1.009 1.61e-06 0.004553
## 1696 -1.29e-02 5.75e-03 1.08e-02 -2.19e-02 1.005 4.79e-05 0.001564
       3.48e-03 1.02e-02 4.88e-03 -2.89e-02 1.004 8.36e-05 0.001625
## 1697
## 1699 -8.85e-03 1.01e-02 8.46e-03 -2.68e-02 1.004 7.19e-05 0.001516
## 1700 3.43e-04 -2.02e-03 -3.05e-03 8.00e-03 1.006 6.40e-06 0.001635
## 1701 -5.44e-03 3.01e-02 1.32e-02 -8.97e-02 0.987 8.04e-04 0.001959
## 1702 -1.13e-02 1.87e-04 1.58e-02 -3.24e-02 1.004 1.05e-04 0.001909
## 1703 1.75e-03 1.79e-03 2.61e-03 -5.94e-03 1.006 3.53e-06 0.001403
## 1704 2.03e-04 8.33e-05 1.66e-04 -6.71e-04 1.006 4.51e-08 0.001421
       9.22e-03 -2.94e-03 -5.58e-03 3.19e-02 1.009 1.02e-04 0.005398
       1.98e-04 -3.68e-04 -3.25e-04 1.44e-03 1.008 2.08e-07 0.002752
## 1706
## 1708 6.87e-02 4.05e-02 3.74e-02 -1.56e-01 0.989 2.42e-03 0.005359
## 1709 -1.37e-03 2.92e-03 1.74e-03 -6.38e-03 1.008 4.07e-06 0.002816
## 1710 3.01e-02 1.41e-02 3.18e-02 -8.03e-02 1.006 6.45e-04 0.005917
## 1711 1.18e-02 -4.92e-04 -9.68e-03 5.05e-02 1.009 2.55e-04 0.005765
## 1713 9.32e-04 6.88e-03 5.73e-03 -1.55e-02 1.006 2.41e-05 0.001527
## 1714 -8.19e-03 -3.17e-03 -7.19e-03 1.76e-02 1.006 3.10e-05 0.002032
## 1716 -2.08e-04 2.12e-03 -6.07e-03 1.32e-02 1.005 1.74e-05 0.001024
## 1717 -5.88e-04 2.46e-03 4.70e-03 -1.59e-02 1.006 2.53e-05 0.001985
## 1720 1.32e-04 1.34e-04 1.00e-04 -5.59e-04 1.008 3.13e-08 0.003125
       4.90e-04 -9.87e-04 -7.87e-03 1.37e-02 1.006 1.87e-05 0.001898
## 1723 -2.29e-03 -1.32e-03 7.96e-04 3.90e-03 1.020 1.53e-06 0.014783
## 1724 -3.07e-03 9.33e-03 8.83e-03 -3.50e-02 1.002 1.23e-04 0.001361
## 1725 -3.37e-03 6.10e-03 2.51e-03 -2.35e-02 1.005 5.51e-05 0.001993
## 1726 -2.66e-03 1.20e-03 -3.26e-03 7.99e-03 1.007 6.38e-06 0.001929
## 1727 -2.20e-03 -4.24e-03 5.02e-03 -1.61e-02 1.006 2.61e-05 0.001853
## 1728 1.48e-03 1.85e-02 2.30e-02 -4.63e-02 1.000 2.14e-04 0.001540
## 1729
        1.89e-03 -2.66e-03
                           3.27e-03 -1.47e-02 1.006 2.17e-05 0.001839
       4.63e-03 3.39e-03 9.48e-04 -3.01e-02 1.006 9.05e-05 0.002846
## 1730
       1.07e-04 2.15e-04 2.78e-04 -5.93e-04 1.007 3.52e-08 0.002600
## 1732 -5.00e-04 -2.08e-03 3.67e-03 -1.64e-02 1.006 2.69e-05 0.001988
## 1733 -8.02e-05 -4.75e-04 -1.04e-03 2.57e-03 1.006 6.63e-07 0.001618
## 1734 -1.45e-03 -1.95e-03 4.95e-03 -1.86e-02 1.006 3.45e-05 0.002059
## 1735 -4.50e-03 -9.78e-04 7.17e-03 -1.49e-02 1.007 2.23e-05 0.002293
## 1737 1.20e-03 -1.77e-03 1.41e-02 -3.00e-02 1.005 9.03e-05 0.002043
## 1738 -6.05e-03 -1.03e-02 2.31e-02 -5.04e-02 1.003 2.54e-04 0.002819
## 1739 -4.37e-04 -4.81e-04 -1.23e-03 2.70e-03 1.007 7.30e-07 0.001717
## 1740 1.79e-02 2.26e-03 1.43e-02 -5.24e-02 0.999 2.75e-04 0.001746
## 1741 -5.98e-03 1.33e-03 -5.20e-03 -1.01e-02 1.009 1.02e-05 0.004175
## 1742 8.66e-03 -4.40e-03 -8.81e-03 4.72e-02 1.010 2.22e-04 0.007100
## 1744 -3.90e-03 4.15e-03 7.21e-03 -2.27e-02 1.007 5.15e-05 0.003076
## 1746 1.33e-03 -1.67e-03 -1.35e-03 1.56e-02 1.007 2.42e-05 0.002866
       2.56e-03 5.59e-03 -1.53e-03 1.05e-01 1.023 1.11e-03 0.019894
## 1747
## 1748 -5.47e-02 -2.67e-03 1.63e-02 -6.53e-02 1.004 4.26e-04 0.004176
## 1749 -1.41e-03 4.07e-03 -4.25e-03 1.51e-02 1.006 2.27e-05 0.001756
## 1750 -2.25e-03 1.66e-03 4.45e-03 -1.24e-02 1.007 1.55e-05 0.002889
## 1751 2.82e-02 1.37e-02 1.27e-02 -6.48e-02 0.998 4.20e-04 0.002213
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## 1752 1.51e-03 2.82e-03 1.15e-02 -4.37e-02 0.999 1.91e-04 0.001307
## 1753 -7.67e-03 1.13e-02 1.44e-02 -4.63e-02 1.005 2.14e-04 0.003178
## 1754 -7.37e-03 1.29e-02 6.31e-03 -3.07e-02 1.004 9.43e-05 0.001614
        5.24e-04 -7.00e-03 8.99e-03 -2.05e-02 1.004 4.19e-05 0.001253
## 1755
        2.06e-02 1.37e-02 2.77e-02 -8.99e-02 0.996 8.08e-04 0.003126
        2.23e-03 -2.81e-03 -7.05e-03 1.72e-02 1.005 2.96e-05 0.001210
## 1757
        3.94e-03 -3.77e-03 -1.16e-02 3.22e-02 1.003 1.03e-04 0.001610
## 1760 1.00e-04 -3.77e-04 -2.97e-04 8.50e-04 1.007 7.22e-08 0.001735
## 1761 -1.16e-03 -5.49e-03 -3.14e-03 1.55e-02 1.007 2.40e-05 0.002675
## 1762 -7.80e-04 6.93e-04 1.80e-03 -6.33e-03 1.008 4.00e-06 0.003481
## 1763 -2.98e-03 3.17e-03 5.24e-03 -1.86e-02 1.007 3.48e-05 0.002596
## 1766 7.22e-03 -9.30e-03 -9.60e-03 3.20e-02 1.009 1.02e-04 0.005134
## 1767
        1.93e-03 3.83e-04 -9.50e-03 -2.63e-02 1.008 6.93e-05 0.003930
## 1768 1.15e-03 -2.19e-03 -2.33e-03 7.77e-03 1.009 6.04e-06 0.004471
## 1769 -2.16e-03 -1.13e-03 -1.38e-02 -2.17e-02 1.007 4.70e-05 0.002654
## 1770 -1.42e-03 -1.04e-04 -3.18e-03 -4.95e-03 1.008 2.45e-06 0.003367
## 1772 -3.36e-03 -4.59e-03 -1.99e-02 -2.51e-02 1.006 6.32e-05 0.002452
## 1775 -4.73e-03 -6.21e-03 -2.35e-02 -3.68e-02 1.008 1.35e-04 0.004424
## 1776 -5.68e-03 -1.70e-03 -1.11e-02 -1.68e-02 1.007 2.82e-05 0.002898
## 1777 7.11e-03 6.22e-03 -8.57e-02 -1.10e-01 0.988 1.22e-03 0.002893
## 1778 -3.66e-03 1.10e-03 1.52e-02 4.63e-02 1.008 2.14e-04 0.005025
## 1779 -2.08e-03 -7.63e-03 -1.85e-02 -3.29e-02 1.006 1.08e-04 0.002839
        1.46e-02 1.09e-02 1.04e-02 3.53e-02 1.008 1.25e-04 0.004223
        9.28e-03 6.24e-03 1.58e-02 3.60e-02 1.006 1.30e-04 0.003060
## 1784 3.02e-02 7.06e-03 1.27e-02 4.69e-02 1.009 2.20e-04 0.005558
## 1792 -2.10e-03 -8.01e-03 1.44e-02 1.97e-02 1.009 3.90e-05 0.004646
## 1793 3.15e-03 5.37e-03 1.77e-03 -1.02e-02 1.006 1.04e-05 0.001426
## 1795 -3.89e-04 2.33e-03 -1.93e-03 5.93e-03 1.006 3.52e-06 0.001088
## 1796 -4.19e-02 1.85e-02 -2.09e-02 9.31e-02 0.982 8.65e-04 0.001716
## 1798 6.94e-03 -1.90e-02 -1.89e-02 -3.65e-02 1.009 1.33e-04 0.005169
## 1799 2.50e-03 2.80e-04 -6.21e-04 -7.32e-03 1.011 5.36e-06 0.006421
## 1800 -7.47e-06 -1.09e-03 2.06e-03 3.19e-03 1.009 1.02e-06 0.004197
        9.39e-03 -4.56e-03 2.31e-03 -1.73e-02 1.008 3.01e-05 0.003196
        1.26e-02 -8.07e-04 -8.89e-04 2.56e-02 1.006 6.57e-05 0.002385
## 1802
        1.69e-02 4.75e-03 -2.47e-02 -3.39e-02 1.006 1.15e-04 0.003111
## 1804 -2.49e-02 4.65e-02 2.72e-02 6.42e-02 1.012 4.12e-04 0.009380
## 1805 -1.75e-03 7.49e-03 7.46e-04 -1.62e-02 1.006 2.61e-05 0.001815
        1.15e-05 -1.41e-04 1.35e-04 -3.89e-04 1.007 1.52e-08 0.001854
        3.26e-02 8.01e-02 -6.59e-03 -1.09e-01 1.008 1.19e-03 0.009405
## 1808 3.41e-04 -8.92e-03 -8.65e-04 2.18e-02 1.011 4.77e-05 0.006704
## 1811 4.78e-03 4.07e-03 -2.51e-03 3.58e-02 1.006 1.28e-04 0.002903
## 1812 -3.48e-02 4.43e-02 -8.02e-03 7.84e-02 1.001 6.14e-04 0.003923
## 1813 1.49e-02 -1.32e-02 1.85e-03 -2.79e-02 1.017 7.78e-05 0.012696
## 1814 2.44e-04 9.83e-04 -5.67e-04 1.83e-03 1.006 3.36e-07 0.001182
## 1815 -1.45e-03 -8.58e-04 -5.46e-03 -7.80e-03 1.008 6.09e-06 0.003179
## 1817 8.17e-04 -3.47e-02 3.87e-04 -5.11e-02 1.012 2.61e-04 0.008713
## 1818 -5.79e-03 -2.90e-03 1.94e-03 1.11e-02 1.010 1.22e-05 0.005498
## 1819 2.59e-03 -5.95e-03 -3.32e-03 1.87e-02 1.010 3.50e-05 0.005559
## 1820 1.90e-02 -4.92e-02 1.99e-02 -9.57e-02 1.008 9.16e-04 0.008399
## 1821 -6.08e-03 -3.01e-02 2.55e-02 -5.90e-02 1.002 3.48e-04 0.002763
## 1823 7.27e-02 6.73e-02 -1.72e-02 1.16e-01 1.010 1.35e-03 0.011014
## 1827 -6.60e-02 -8.49e-02 -1.89e-02 1.25e-01 1.006 1.57e-03 0.008999
## 1829 -3.62e-02 -1.53e-02 -1.56e-02 5.54e-02 1.007 3.07e-04 0.004805
## 1831 1.24e-02 2.51e-02 5.66e-03 -5.68e-02 1.018 3.23e-04 0.014133
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## 1832 -4.13e-05 2.56e-04 9.56e-03 1.16e-02 1.009 1.34e-05 0.003871
        1.26e-02 2.02e-05 3.07e-02 -8.89e-02 1.005 7.90e-04 0.006034
## 1833
        2.56e-02 4.70e-03 1.26e-02 -4.85e-02 1.008 2.35e-04 0.005609
## 1835
        5.68e-02 3.28e-02 -5.12e-02 -1.22e-01 0.999 1.50e-03 0.006194
## 1838 -1.04e-03 5.80e-04 5.28e-03 -1.63e-02 1.004 2.67e-05 0.000908
## 1839 -5.83e-04 -6.27e-03 -3.06e-03 2.34e-02 1.010 5.50e-05 0.005700
## 1840 -2.12e-04 -2.60e-04 -1.20e-02 -2.55e-02 1.015 6.48e-05 0.010079
## 1841 3.60e-03 1.46e-02 4.46e-03 -3.60e-02 1.002 1.30e-04 0.001546
## 1844 -5.49e-03 -2.10e-03 1.85e-03 1.78e-02 1.009 3.18e-05 0.004593
## 1845 -7.22e-04 4.41e-04 4.55e-02 6.04e-02 1.001 3.64e-04 0.002586
## 1846 -1.02e-02 -7.97e-03 -9.66e-04 1.77e-02 1.026 3.13e-05 0.020872
        9.66e-03 6.09e-03 -3.15e-03 3.01e-02 1.008 9.04e-05 0.004097
## 1847
## 1848 -4.79e-02 6.60e-03 1.77e-02 -9.24e-02 0.984 8.52e-04 0.001771
## 1849 -7.07e-03 6.24e-04 -6.03e-03 2.57e-02 1.006 6.61e-05 0.002331
## 1852 -1.77e-02 7.35e-03 2.27e-02 3.38e-02 1.006 1.14e-04 0.003108
## 1853 -3.67e-02 -3.55e-02 4.57e-02 9.55e-02 1.007 9.12e-04 0.007842
        2.78e-03 -3.75e-03 4.68e-03 -1.51e-02 1.008 2.27e-05 0.003038
## 1855
## 1858
        5.72e-02 -1.41e-02 -5.29e-03 -9.78e-02 0.990 9.56e-04 0.002618
        1.47e-02 -6.77e-02 1.60e-02 -8.25e-02 1.003 6.80e-04 0.004967
## 1859
## 1860 -4.46e-03 -3.06e-03 -1.54e-03 1.97e-02 1.005 3.90e-05 0.001384
## 1861 3.68e-03 -1.21e-03 -1.19e-03 -2.68e-02 1.113 7.19e-05 0.097567
## 1862 -1.16e-05 1.99e-06 1.25e-04 1.46e-04 1.007 2.14e-09 0.002618
## 1864 3.06e-03 2.76e-03 1.85e-03 -9.76e-03 1.010 9.52e-06 0.004824
## 1865 -2.61e-04 -6.74e-04 -2.02e-03 5.64e-03 1.010 3.18e-06 0.005607
## 1869 8.33e-04 4.01e-03 -2.64e-03 8.78e-03 1.007 7.71e-06 0.002583
## 1871 -9.92e-04 2.60e-03 -1.01e-03 8.64e-03 1.006 7.46e-06 0.001353
        2.14e-03 -1.90e-03 2.13e-03 -6.32e-03 1.008 4.00e-06 0.003698
## 1874
        8.26e-03 -3.69e-03 -8.00e-03 1.62e-02 1.007 2.64e-05 0.002359
## 1876
        1.25e-02 -1.19e-02 7.67e-03 -3.64e-02 1.004 1.32e-04 0.002177
## 1877
        3.44e-03 1.75e-02 -1.78e-02 -9.65e-02 0.997 9.31e-04 0.003874
        9.24e-03 -4.92e-03 1.53e-03 -3.10e-02 1.005 9.63e-05 0.002089
## 1879
## 1880 -1.40e-02 -1.08e-02 -5.72e-03 4.00e-02 1.000 1.60e-04 0.001227
## 1883 -2.14e-03 8.60e-04 4.70e-03 8.20e-03 1.007 6.73e-06 0.002492
        1.18e-01 1.97e-01 -4.44e-02 2.36e-01 1.019 5.54e-03 0.024694
## 1884
        5.29e-03 -6.13e-03 3.32e-03 -1.93e-02 1.008 3.71e-05 0.003944
        1.21e-02 -9.33e-03 -8.36e-03 -2.04e-02 1.012 4.14e-05 0.007474
## 1888
        1.98e-03 -6.04e-04 -4.51e-03 1.08e-02 1.007 1.17e-05 0.002044
## 1892 4.20e-02 -6.08e-02 -1.08e-02 1.01e-01 1.015 1.02e-03 0.013567
## 1893 -1.51e-02 -3.37e-03 2.74e-02 -4.99e-02 1.008 2.49e-04 0.005044
## 1894 -4.51e-04 -9.53e-04 -4.96e-04 2.51e-03 1.009 6.30e-07 0.003732
        2.55e-03 9.28e-04 -7.55e-03 -9.38e-03 1.008 8.79e-06 0.002880
## 1896 -1.63e-02 4.02e-03 -8.07e-03 5.34e-02 1.005 2.86e-04 0.003792
## 1897
        5.50e-02 -4.12e-02 -1.49e-02 1.15e-01 0.980 1.32e-03 0.002324
        1.66e-02 -6.58e-02 2.33e-02 -1.25e-01 1.009 1.56e-03 0.011118
## 1898
        2.11e-02 8.15e-03 -1.99e-03 -4.54e-02 1.001 2.06e-04 0.001859
        1.42e-02 -2.59e-02 -5.19e-02 -7.86e-02 1.006 6.17e-04 0.005827
## 1900
## 1901
        1.70e-02 5.02e-02 -2.08e-02 8.98e-02 0.990 8.05e-04 0.002302
        1.79e-02 2.33e-03 3.15e-02 5.26e-02 1.007 2.76e-04 0.004583
## 1902
## 1904 -5.81e-04 -8.38e-02 3.77e-04 -1.55e-01 0.993 2.39e-03 0.006361
        1.43e-03 -7.37e-03 -4.02e-03 4.38e-02 1.005 1.92e-04 0.002952
## 1908 -3.07e-03 2.93e-03 1.06e-03 -7.57e-03 1.012 5.73e-06 0.006875
## 1909 -1.43e-02 -1.28e-02 -2.31e-03 2.44e-02 1.007 5.96e-05 0.003324
## 1910 -7.12e-03 -1.72e-03 8.24e-03 1.29e-02 1.008 1.65e-05 0.003107
## 1911 4.19e-02 -2.71e-02 -3.53e-02 -7.88e-02 1.007 6.21e-04 0.006732
```

```
## 1912 -1.39e-02 -3.80e-02 3.45e-02 6.52e-02 1.010 4.25e-04 0.007539
## 1913 3.57e-03 5.24e-03 6.48e-04 -1.01e-02 1.012 1.02e-05 0.007587
## 1914 1.11e-02 -5.40e-02 -1.06e-02 1.45e-01 0.989 2.11e-03 0.004955
        1.64e-02 -1.99e-02 -2.48e-02 -4.22e-02 1.008 1.78e-04 0.005004
        3.84e-04 3.28e-03 -6.63e-04 6.07e-03 1.009 3.68e-06 0.003867
        1.95e-03 -1.65e-03 7.59e-04 -6.06e-03 1.008 3.68e-06 0.003155
        2.04e-02 -2.92e-02 -2.51e-02 5.64e-02 0.998 3.18e-04 0.001709
        3.16e-02 6.65e-02 -4.79e-03 -1.03e-01 1.006 1.06e-03 0.007708
## 1923
        3.46e-03 5.92e-02 -1.06e-02 8.25e-02 0.990 6.79e-04 0.001962
## 1925 -1.08e-02 2.43e-02 8.52e-04 3.50e-02 1.008 1.22e-04 0.004153
## 1926 2.11e-02 1.46e-02 2.17e-02 3.95e-02 1.009 1.56e-04 0.005613
## 1927 -2.78e-03 -7.58e-04
                            5.33e-03 1.04e-02 1.008 1.09e-05 0.003025
## 1928
       1.32e-02 2.00e-02 2.88e-02 4.57e-02 1.005 2.08e-04 0.003470
## 1930 -1.24e-03 6.13e-03 -4.86e-03 1.35e-02 1.006 1.81e-05 0.001941
## 1931 4.31e-03 -3.95e-04 5.77e-03 -1.51e-02 1.007 2.29e-05 0.002861
## 1932 -6.63e-03 5.48e-02 -4.10e-03 7.94e-02 1.001 6.30e-04 0.003887
        1.07e-02 3.33e-02 -1.41e-02 5.41e-02 1.006 2.93e-04 0.004138
## 1933
## 1935 -1.28e-04 2.63e-03 3.70e-03 -7.83e-03 1.006 6.13e-06 0.001249
       3.82e-02 -1.09e-02 4.43e-03 -6.54e-02 1.000 4.28e-04 0.002709
## 1938
## 1939
        6.39e-02 2.06e-02 1.46e-02 -1.57e-01 0.994 2.47e-03 0.006602
## 1940
       3.14e-03 8.63e-03 1.85e-02 3.06e-02 1.008 9.40e-05 0.003861
        1.29e-02 -4.32e-03 -9.12e-03 -1.92e-02 1.010 3.71e-05 0.005122
## 1942 -7.50e-02 1.25e-02 3.02e-02 -3.92e-01 0.959 1.53e-02 0.012411
## 1944 -3.17e-03 -1.08e-03 -2.24e-03 1.17e-02 1.007 1.38e-05 0.002058
## 1945 5.52e-02 6.29e-02 -2.09e-02 -1.32e-01 0.998 1.75e-03 0.006466
## 1947 -1.51e-02 -2.90e-02 2.47e-02 4.36e-02 1.008 1.90e-04 0.005093
## 1949 -1.08e-02 2.08e-02 -1.04e-02 4.66e-02 1.007 2.17e-04 0.004221
## 1951 -4.58e-03 -2.44e-03 -1.14e-03 6.18e-03 1.008 3.82e-06 0.003210
## 1952 5.57e-03 -1.37e-03 -6.48e-03 -1.07e-02 1.010 1.15e-05 0.005264
## 1955 3.07e-02 -6.46e-03 3.63e-02 6.20e-02 1.006 3.85e-04 0.004853
## 1956 -2.56e-02 4.35e-02 -1.38e-02 6.70e-02 1.000 4.48e-04 0.002844
## 1957
        1.06e-02 -1.66e-03 3.50e-03 -2.31e-02 1.009 5.33e-05 0.004486
## 1958 -3.71e-02 -2.72e-02 -8.94e-04 8.70e-02 0.986 7.55e-04 0.001725
## 1960 -1.97e-02 -1.34e-02 3.23e-03 9.22e-02 0.995 8.49e-04 0.003108
## 1961 -1.17e-02 2.85e-02
                            2.70e-02 4.96e-02 1.007 2.46e-04 0.004974
## 1962 -2.60e-02 6.45e-02 1.52e-02 2.06e-01 0.985 4.24e-03 0.007307
## 1964 -1.38e-02 1.60e-02 6.81e-04 2.76e-02 1.007 7.61e-05 0.003409
## 1967 9.93e-03 4.58e-02 1.76e-03 6.58e-02 1.008 4.33e-04 0.006382
        1.35e-03 1.20e-03 -4.25e-03 -3.14e-02 1.009 9.84e-05 0.005262
        2.29e-02 -1.98e-02 1.44e-02 -9.26e-02 0.994 8.58e-04 0.002926
## 1969
        1.91e-02 -1.53e-04 1.24e-02 -3.46e-02 1.005 1.20e-04 0.002611
## 1975
## 1976
        1.71e-03 2.35e-02 -2.83e-02 -4.94e-02 1.005 2.44e-04 0.003739
        6.08e-03 6.36e-04 1.10e-02 1.76e-02 1.009 3.10e-05 0.004616
## 1977
       3.74e-03 -3.64e-03 -3.90e-03 1.51e-02 1.005 2.27e-05 0.001198
## 1978
## 1979 -8.31e-03 1.99e-02 4.16e-03 4.36e-02 1.011 1.90e-04 0.007307
## 1980 2.27e-03 -2.28e-02 9.70e-03 -3.81e-02 1.010 1.45e-04 0.006646
## 1981 -1.09e-02 -4.99e-03 1.91e-02 -6.38e-02 1.002 4.07e-04 0.003198
## 1982 -3.94e-03 2.02e-03 -3.23e-03 1.12e-02 1.006 1.25e-05 0.001268
## 1984 9.70e-02 2.32e-02 -3.60e-02 -1.32e-01 1.005 1.74e-03 0.008970
## 1985
        1.50e-03 2.75e-03 -1.22e-02 -2.37e-02 1.009 5.61e-05 0.004656
        1.28e-03 -2.35e-03 1.57e-03 -9.39e-03 1.006 8.83e-06 0.001518
## 1986
## 1988 -6.00e-03 1.72e-04 -1.09e-02 2.57e-02 1.007 6.61e-05 0.003205
## 1989 -4.73e-02 2.90e-02 -1.16e-02 7.98e-02 0.996 6.36e-04 0.002700
## 1993 8.92e-04 -2.10e-03 -5.21e-04 -9.65e-03 1.007 9.32e-06 0.002683
```

```
## 1994 2.66e-03 -6.14e-03 8.07e-03 -2.35e-02 1.005 5.51e-05 0.001561
## 1997 -1.27e-02 5.88e-03 2.50e-02 5.43e-02 1.005 2.95e-04 0.003713
## 1999 2.31e-02 -4.58e-03 -1.47e-02 5.92e-02 0.999 3.50e-04 0.002198
## 2001 -1.98e-03 -2.45e-02 -1.30e-02 1.02e-01 0.988 1.03e-03 0.002580
## 2002 -3.05e-04 7.69e-04 5.14e-04 -1.66e-03 1.006 2.75e-07 0.001575
## 2004 -1.07e-03 -4.54e-03 -1.85e-03 1.15e-02 1.007 1.33e-05 0.002062
## 2005 -2.26e-02 -6.46e-03 -1.26e-02 5.82e-02 0.999 3.39e-04 0.002163
## 2006 2.56e-03 -3.65e-04 -2.05e-03 5.30e-03 1.006 2.81e-06 0.001474
## 2007 -1.14e-02 -7.40e-04 -3.47e-03 1.82e-02 1.008 3.33e-05 0.003451
## 2009
       4.04e-03 2.06e-02 -2.02e-02 1.13e-01 0.994 1.27e-03 0.004113
## 2012 5.51e-02 2.88e-02 -1.40e-02 1.46e-01 0.996 2.14e-03 0.006749
       2.54e-03 1.37e-03 4.99e-03 -1.08e-02 1.007 1.16e-05 0.002423
## 2013
## 2014 -6.79e-03 -4.26e-03 -1.24e-03 1.31e-02 1.007 1.73e-05 0.002397
       9.18e-03 1.56e-02 -1.51e-02 4.50e-02 0.997 2.02e-04 0.001143
       1.86e-03 5.88e-03 -4.78e-03 2.05e-02 1.004 4.21e-05 0.001110
## 2017
## 2019 -1.80e-02 1.56e-02 1.66e-02 -6.23e-02 1.000 3.89e-04 0.002589
## 2020 2.81e-02 1.26e-02 -2.00e-02 4.74e-02 1.003 2.25e-04 0.002450
## 2021 -3.09e-02 -1.24e-02 6.12e-02 9.85e-02 0.994 9.70e-04 0.003360
## 2022 -3.26e-03 -4.28e-02 2.10e-04 1.37e-01 0.994 1.87e-03 0.005518
        1.31e-02 1.21e-02 -6.77e-04 -2.58e-02 1.006 6.68e-05 0.002797
## 2028
       4.25e-04 2.61e-04 -3.67e-05 -1.11e-03 1.007 1.23e-07 0.001875
## 2029 -1.93e-02 2.19e-02 -2.08e-02 6.45e-02 0.991 4.15e-04 0.001328
       3.90e-03 -6.52e-03 6.58e-03 -1.68e-02 1.007 2.83e-05 0.003052
        3.07e-03 -6.01e-03 -2.41e-03 9.68e-03 1.007 9.38e-06 0.002479
## 2034
       1.42e-03 3.21e-04 8.94e-04 2.65e-03 1.010 7.00e-07 0.004693
## 2035 -6.70e-02 1.77e-01 -8.55e-03 2.06e-01 1.003 4.22e-03 0.013108
       5.30e-03 -3.07e-03 6.13e-03 1.11e-01 0.991 1.22e-03 0.003356
## 2036
## 2037
        1.07e-04 3.93e-03 3.01e-03 -7.15e-03 1.008 5.11e-06 0.002826
## 2038 5.17e-03 -8.97e-03 -8.06e-03 2.79e-02 1.004 7.76e-05 0.001477
## 2043 -1.09e-02 -2.54e-02 6.68e-04 6.07e-02 1.003 3.69e-04 0.003476
## 2045
        1.75e-03 8.43e-05 1.29e-02 3.77e-02 1.014 1.43e-04 0.010084
## 2046 -3.06e-02 5.56e-03 -2.21e-02 6.28e-02 0.998 3.94e-04 0.002217
## 2047
       1.40e-03 2.24e-02 -6.54e-03 1.01e-01 0.990 1.02e-03 0.002727
## 2048 -5.47e-02 8.88e-02 -6.38e-03 1.63e-01 0.990 2.66e-03 0.006103
## 2049 -8.42e-03
                 1.16e-04
                           1.20e-02 1.82e-02 1.008 3.31e-05 0.003838
## 2053 -2.48e-03 2.05e-03 2.10e-04 -4.77e-03 1.011 2.27e-06 0.005945
## 2055 -2.17e-03 3.42e-04 4.40e-03 -7.86e-03 1.006 6.19e-06 0.001112
## 2057 -1.99e-02 -1.02e-02 -7.72e-03 3.63e-02 1.003 1.32e-04 0.001645
       9.04e-03 -7.27e-03 -1.10e-02 3.16e-02 1.008 9.99e-05 0.003999
## 2062 -1.12e-02 -1.92e-02 1.59e-03 3.50e-02 1.008 1.23e-04 0.004621
## 2064 -4.85e-03 5.97e-03 -1.14e-03 1.17e-01 1.006 1.36e-03 0.008901
## 2065 -3.86e-04 6.88e-02 2.84e-02 -1.12e-01 0.988 1.26e-03 0.003090
## 2066 -2.29e-01 -4.96e-02 1.18e-01 -3.20e-01 0.983 1.02e-02 0.013679
## 2068 -2.20e-03 -2.10e-02 4.80e-03 4.34e-02 1.008 1.88e-04 0.004768
       1.53e-02 5.97e-03 5.50e-03 -5.73e-02 1.000 3.28e-04 0.002324
        1.75e-03 -3.78e-04 1.70e-03 -4.49e-03 1.006 2.01e-06 0.001252
## 2070
## 2071
        3.05e-02 -3.14e-02 1.23e-02 -8.01e-02 1.002 6.42e-04 0.004234
       3.89e-03 4.76e-03 -7.45e-05 -7.37e-03 1.010 5.43e-06 0.005277
## 2074 -3.83e-02 -7.23e-03 -1.09e-02 5.27e-02 1.003 2.78e-04 0.002818
## 2075 3.06e-03 -1.02e-01 -1.79e-03 -1.08e-01 1.038 1.18e-03 0.033351
## 2076 -1.33e-02 -2.00e-02 1.61e-02 -6.84e-02 1.002 4.67e-04 0.003651
## 2079 -8.99e-02 -1.12e-01 -1.65e-02 2.31e-01 0.990 5.34e-03 0.010153
## 2080 -4.04e-02 -1.94e-01 -1.64e-03 -2.16e-01 1.019 4.64e-03 0.022876
```

```
## 2082 3.10e-02 -2.32e-02 -1.17e-02 9.74e-02 0.997 9.48e-04 0.003841
## 2083 -9.43e-03 -3.33e-02 -3.48e-03 9.22e-02 1.013 8.51e-04 0.011412
## 2085 6.81e-03 3.91e-03 1.21e-02 -2.31e-02 1.006 5.33e-05 0.002111
## 2086 -1.35e-02 6.40e-03 6.04e-03 -3.69e-02 1.007 1.36e-04 0.004091
        1.35e-02 7.83e-03 -2.81e-02 -1.64e-01 1.022 2.70e-03 0.022488
## 2088 -3.00e-07 1.74e-06 6.12e-06 -1.44e-05 1.009 2.07e-11 0.003696
## 2089 1.00e-02 8.37e-03 -3.67e-02 -5.99e-02 1.004 3.59e-04 0.003836
## 2091 -4.95e-03 6.91e-04 1.74e-02 -3.09e-02 1.006 9.53e-05 0.002715
## 2092 5.71e-03 -2.58e-03 -6.90e-03 2.84e-02 1.007 8.08e-05 0.003436
## 2094 -1.93e-02 1.68e-02 1.92e-02 -4.26e-02 1.004 1.82e-04 0.002553
## 2095
        8.90e-03 4.36e-03 1.00e-02 -2.92e-02 1.006 8.55e-05 0.002620
        2.35e-02 -2.46e-02 2.20e-02 -7.04e-02 1.001 4.96e-04 0.003380
## 2096
## 2097 -1.15e-03 -4.23e-03 5.22e-03 -1.05e-02 1.006 1.10e-05 0.001253
## 2098 2.75e-04 3.08e-03 3.49e-03 -3.12e-02 1.027 9.75e-05 0.021353
## 2100 -8.54e-03 -9.25e-03 1.23e-02 -4.54e-02 1.001 2.06e-04 0.001726
        1.34e-02 1.20e-03 1.96e-02 -4.59e-02 1.011 2.11e-04 0.007564
## 2104 2.42e-04 -6.97e-05 -3.50e-04 8.39e-04 1.008 7.04e-08 0.003020
## 2105 -3.31e-03 2.35e-03 9.88e-03 -2.80e-02 1.004 7.82e-05 0.001725
## 2106 -4.59e-03 3.00e-03 -2.85e-02 -7.27e-02 1.010 5.28e-04 0.008225
        1.35e-03 4.91e-03 2.41e-02 -9.78e-02 1.001 9.55e-04 0.005192
## 2108 8.95e-04 -2.78e-03 5.85e-03 -1.55e-02 1.005 2.41e-05 0.001361
## 2109 2.46e-03 2.57e-03 -9.27e-03 -1.20e-02 1.007 1.45e-05 0.002186
## 2110 -6.63e-03 1.77e-02 1.28e-02 -3.35e-02 1.004 1.12e-04 0.001892
## 2111 -4.00e-02 1.52e-02 9.23e-03 -1.08e-01 1.003 1.16e-03 0.006769
## 2114 1.29e-02 -6.02e-04 1.49e-02 -4.70e-02 0.999 2.21e-04 0.001461
## 2115 -9.70e-03 5.55e-03 -1.63e-02 -3.08e-02 1.007 9.47e-05 0.003420
## 2118 3.73e-04 6.94e-05 3.98e-04 6.94e-04 1.011 4.81e-08 0.005676
## 2119 -2.61e-04 8.63e-04 2.26e-03 -4.99e-03 1.008 2.49e-06 0.002793
## 2121 -5.72e-03 -8.02e-04 -1.03e-02 -1.64e-02 1.009 2.68e-05 0.003996
## 2122 1.16e-02 2.27e-03 -7.88e-03 1.65e-02 1.007 2.72e-05 0.002489
## 2123 -4.06e-02 7.09e-02 -7.68e-02 -1.35e-01 1.001 1.82e-03 0.007421
## 2124 1.16e-02 -4.22e-03 -7.34e-03 1.90e-02 1.007 3.62e-05 0.002550
## 2125 -7.00e-03 -5.06e-03 -2.61e-02 -4.19e-02 1.005 1.76e-04 0.002911
## 2126 5.12e-04 -1.15e-03 -1.21e-03 2.36e-03 1.006 5.55e-07 0.001108
## 2127 -2.11e-02 -2.96e-03 -4.17e-02 -6.23e-02 1.005 3.88e-04 0.004543
## 2128 6.93e-04 1.21e-02 5.47e-03 -1.87e-02 1.007 3.51e-05 0.003156
## 2129 3.04e-03 2.82e-03 3.31e-03 7.25e-03 1.009 5.25e-06 0.004203
## 2131 -7.47e-03 4.57e-03 -9.64e-03 -1.82e-02 1.008 3.32e-05 0.003250
## 2132 -2.73e-03 -9.61e-04 4.74e-03 8.64e-03 1.008 7.47e-06 0.003520
## 2133 -6.22e-04 -3.34e-04 -7.14e-04 -1.16e-03 1.008 1.35e-07 0.003629
## 2134 7.43e-03 2.14e-03 5.84e-03 1.24e-02 1.008 1.55e-05 0.003275
## 2135 2.31e-02 -5.85e-02 -2.22e-03 1.03e-01 0.990 1.05e-03 0.002871
## 2137 -1.57e-02 2.67e-03 -2.42e-02 -3.76e-02 1.006 1.41e-04 0.003546
## 2138 -3.62e-03 -1.34e-03 4.52e-03 -1.56e-02 1.006 2.43e-05 0.001649
## 2141 6.34e-04 -7.64e-04 3.96e-03 9.43e-03 1.009 8.91e-06 0.003966
## 2142 -3.41e-03 4.53e-03 -8.64e-03 -1.25e-02 1.008 1.55e-05 0.002986
## 2143 3.86e-03 -3.56e-04 5.64e-03 9.15e-03 1.007 8.38e-06 0.002569
## 2146 2.78e-03 -4.16e-03 -1.42e-02 -2.50e-02 1.007 6.24e-05 0.003251
## 2147 1.26e-03 -2.71e-02 -1.83e-02 -6.05e-02 1.007 3.67e-04 0.005283
## 2150 -6.22e-03 -1.94e-03 -1.08e-02 -1.79e-02 1.007 3.19e-05 0.003091
## 2151 -3.71e-03 1.80e-02 1.06e-02 -3.16e-02 1.002 9.97e-05 0.001215
## 2152 -2.20e-03 -9.79e-04 6.37e-03 -3.00e-02 1.003 9.01e-05 0.001505
## 2154 3.04e-02 1.66e-02 2.29e-02 5.00e-02 1.007 2.50e-04 0.004876
## 2156 -1.37e-02 -2.65e-02 -7.65e-03 6.52e-02 1.001 4.25e-04 0.002897
```

```
## 2158 -2.08e-03 -1.74e-03 -4.68e-03 1.40e-02 1.006 1.96e-05 0.001998
## 2162 -3.88e-03 2.33e-04 4.58e-03 1.39e-02 1.010 1.93e-05 0.005362
## 2163 -9.37e-03 -1.09e-02 9.69e-03 -4.26e-02 1.007 1.82e-04 0.003899
## 2165 7.76e-03 -5.66e-03 4.31e-02 8.54e-02 0.999 7.29e-04 0.003788
## 2169 -3.56e-03 8.25e-03 -4.16e-03 2.08e-02 1.007 4.32e-05 0.002882
## 2171 -3.81e-04 -9.14e-03 -1.22e-02 5.73e-02 1.007 3.28e-04 0.005101
## 2174 -2.35e-02 -5.67e-02 -4.09e-03 1.15e-01 0.986 1.31e-03 0.002852
## 2175 9.21e-04 2.61e-03 1.97e-02 2.70e-02 1.007 7.27e-05 0.003115
## 2177
        8.58e-04 2.62e-03 2.44e-03 -5.94e-03 1.007 3.53e-06 0.002501
## 2178 1.40e-02 6.78e-02 -2.77e-02 1.57e-01 0.992 2.46e-03 0.006232
## 2180 -2.08e-02 -2.78e-03 -1.52e-02 7.84e-02 1.003 6.14e-04 0.004741
## 2182 -1.34e-03 -1.39e-03 -1.24e-03 4.62e-03 1.007 2.13e-06 0.001873
## 2183 1.88e-02 -2.66e-03 -1.37e-02 5.18e-02 0.997 2.68e-04 0.001438
## 2184 8.99e-03 -3.16e-02 1.72e-03 5.68e-02 1.003 3.23e-04 0.003025
## 2185 -8.81e-03 1.11e-02 -7.95e-03 4.93e-02 1.000 2.43e-04 0.001818
## 2187 -1.70e-03 -9.33e-03 -9.87e-03 1.98e-02 1.007 3.94e-05 0.002564
## 2188 -3.35e-03 -1.30e-02 -5.19e-03 2.44e-02 1.005 5.94e-05 0.001771
        3.61e-02 1.05e-02 -7.07e-03 1.68e-01 1.005 2.83e-03 0.011855
## 2190 6.41e-03 -1.33e-02 -8.17e-03 5.32e-02 1.002 2.83e-04 0.002670
## 2191
        1.51e-03 -3.36e-03 -1.41e-03 8.07e-03 1.009 6.52e-06 0.004194
## 2192 9.42e-03 -3.28e-03 -5.22e-03 4.18e-02 1.005 1.75e-04 0.003229
## 2193 2.71e-04 -1.68e-04 -2.64e-04 6.09e-04 1.008 3.71e-08 0.002768
## 2194 -2.80e-03 -5.36e-04 2.82e-03 -5.85e-03 1.006 3.42e-06 0.001114
## 2196 6.54e-04 1.62e-02 -1.78e-02 6.10e-02 0.995 3.71e-04 0.001513
## 2197
        1.13e-03 4.70e-03 -5.55e-03 4.99e-02 1.002 2.49e-04 0.002422
## 2200
       6.00e-03 1.84e-04 -6.99e-03 1.97e-02 1.006 3.87e-05 0.001951
## 2202
        1.12e-02 8.92e-03 8.46e-03 -2.45e-02 1.006 5.98e-05 0.002582
        5.24e-03 7.97e-03 -3.52e-03 2.68e-02 1.003 7.18e-05 0.001214
        1.16e-03 -1.56e-02 -1.89e-03 -3.00e-02 1.009 8.99e-05 0.005282
## 2204
## 2205 3.68e-03 1.95e-03 1.14e-02 2.30e-02 1.007 5.30e-05 0.003067
## 2206 -2.64e-04 1.29e-04 -1.95e-03 -2.65e-03 1.007 7.04e-07 0.002229
## 2207 -2.25e-03 -4.09e-03 -3.03e-03 2.42e-02 1.005 5.85e-05 0.001766
## 2208 5.40e-03 -2.20e-03 -1.07e-02 1.86e-02 1.005 3.45e-05 0.001469
## 2210 -1.52e-02 4.53e-03 8.10e-03 -3.70e-02 1.004 1.37e-04 0.002139
        7.31e-03 -4.39e-03 6.20e-03 -3.04e-02 1.009 9.24e-05 0.004682
## 2212 -1.38e-03 9.38e-04 2.23e-03 -6.02e-03 1.007 3.63e-06 0.002083
## 2213 -7.07e-03 -2.51e-03 -1.10e-02 2.62e-02 1.014 6.89e-05 0.009316
## 2214 -5.02e-04 -1.82e-03 1.66e-03 -8.09e-03 1.007 6.54e-06 0.002059
## 2215 4.27e-03 -8.19e-03 -4.76e-03 2.83e-02 1.005 8.01e-05 0.002187
## 2216 7.81e-03 3.35e-04 -4.35e-03 2.83e-02 1.008 8.03e-05 0.004344
## 2217 1.41e-02 4.33e-03 -4.32e-03 3.01e-02 1.006 9.05e-05 0.002827
## 2218 -1.92e-03 1.59e-03 2.58e-03 -1.39e-02 1.008 1.94e-05 0.003778
## 2219 -5.22e-03 4.11e-03 -4.37e-03 1.90e-02 1.006 3.61e-05 0.001902
## 2220 3.11e-03 6.23e-05 -6.97e-03 4.14e-02 1.004 1.72e-04 0.002452
## 2221 2.50e-03 3.64e-03 9.19e-03 -2.30e-02 1.005 5.29e-05 0.001684
## 2222 -1.92e-02 -2.66e-03 -6.25e-03 4.66e-02 1.003 2.18e-04 0.002504
## 2223
        1.17e-03 -2.85e-05 -4.00e-04 -6.79e-03 1.008 4.61e-06 0.002920
        3.34e-03 -3.84e-04 -3.65e-03 1.09e-02 1.006 1.18e-05 0.001813
## 2224
## 2225
        8.47e-05 -1.12e-04 1.51e-04 -4.14e-03 1.006 1.72e-06 0.001354
        2.24e-03 1.90e-02 3.49e-03 -2.55e-02 1.008 6.52e-05 0.003640
## 2227 -3.84e-03 -5.49e-03 -1.03e-02 3.75e-02 1.008 1.41e-04 0.004971
## 2228 -9.57e-07 -3.35e-04 -3.61e-04 1.60e-03 1.007 2.56e-07 0.002093
## 2230 -4.92e-03 2.55e-03 -1.45e-02 6.47e-02 0.994 4.18e-04 0.001578
## 2231 -3.76e-04 4.34e-04 4.74e-03 6.87e-03 1.007 4.73e-06 0.002121
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## 2233 -4.04e-03 -1.99e-03 4.93e-03 -1.89e-02 1.007 3.56e-05 0.003046
## 2234 1.44e-04 3.48e-03 -5.37e-04 -1.33e-02 1.008 1.78e-05 0.002959
        4.54e-02 2.23e-02 -2.34e-02 7.54e-02 1.001 5.69e-04 0.003496
## 2236 9.01e-04 -5.70e-03 -1.98e-03 9.69e-03 1.007 9.40e-06 0.001912
## 2237 -1.24e-02 1.06e-02 -1.64e-02 4.49e-02 1.000 2.02e-04 0.001485
       2.62e-02 -4.24e-02 -1.88e-02 9.44e-02 0.993 8.89e-04 0.002821
        3.87e-04 -4.13e-05 5.32e-04 -1.19e-03 1.010 1.43e-07 0.005592
## 2240 -3.04e-03 4.47e-03 2.64e-03 -2.36e-02 1.005 5.59e-05 0.001978
        2.54e-03 -7.90e-03 -4.03e-03 1.43e-02 1.006 2.05e-05 0.001683
## 2242 -1.14e-02 -4.63e-03 1.61e-02 2.40e-02 1.007 5.77e-05 0.002936
## 2243 -9.38e-03 -2.59e-02 -1.08e-02 4.37e-02 1.007 1.91e-04 0.004452
## 2244 -2.01e-03 -8.27e-04 -2.27e-02 3.90e-02 1.005 1.52e-04 0.002876
## 2245 -4.74e-04 -2.76e-03 -1.54e-03 4.94e-03 1.006 2.44e-06 0.001238
## 2246
       4.94e-04 3.90e-03 -3.68e-05 8.50e-03 1.007 7.23e-06 0.002208
        1.26e-04 -4.04e-04 4.49e-06 1.49e-03 1.007 2.21e-07 0.002064
## 2247
## 2248
        9.41e-04 6.96e-05 -8.93e-04 2.89e-03 1.008 8.36e-07 0.003006
        3.69e-03 6.75e-03 -1.41e-02 2.65e-02 1.005 7.01e-05 0.001686
## 2249
        8.62e-03 3.59e-03 -5.99e-04 -2.52e-02 1.005 6.37e-05 0.001972
## 2251 -1.21e-03 3.45e-03 -4.37e-03 5.33e-02 0.999 2.84e-04 0.001705
## 2252 -1.90e-04 -5.47e-04 -1.09e-04 2.03e-03 1.007 4.13e-07 0.002222
## 2253 -7.26e-03 -3.17e-03 -3.42e-04 1.40e-02 1.007 1.96e-05 0.002510
## 2254 1.85e-02 -2.64e-02 -4.18e-03 -6.72e-02 1.007 4.51e-04 0.006151
## 2255 -5.82e-03 -3.54e-02 -9.61e-04 -6.75e-02 0.997 4.56e-04 0.002188
        2.98e-03 1.29e-03 4.75e-03 -1.94e-02 1.006 3.78e-05 0.001921
## 2256
## 2257
        9.18e-03 4.43e-03 -8.36e-04 -1.61e-02 1.008 2.58e-05 0.003200
## 2258 -6.81e-05 -1.37e-04 -8.03e-05 -2.09e-03 1.007 4.37e-07 0.001909
        6.47e-03 -2.52e-03 -1.45e-02 -2.41e-02 1.007 5.80e-05 0.003046
        7.18e-03 2.44e-02 4.47e-03 -6.66e-02 0.999 4.44e-04 0.002583
## 2262 -8.79e-03 8.28e-03 -6.73e-04 2.59e-02 1.005 6.71e-05 0.002132
## 2265
        7.62e-03 -4.33e-03 2.42e-03 -1.73e-02 1.007 3.00e-05 0.003081
## 2268
        2.53e-02 1.19e-02 -9.83e-04 -7.67e-02 0.998 5.88e-04 0.002895
## 2270
        3.42e-02 4.51e-02 6.85e-03 -9.06e-02 0.993 8.20e-04 0.002685
        1.03e-02 -1.90e-02 -2.15e-03 -4.07e-02 1.005 1.65e-04 0.002991
## 2274 5.02e-03 1.31e-04 2.27e-04 -1.40e-02 1.006 1.96e-05 0.001618
## 2275 -1.13e-02 -5.90e-03 -6.93e-03 2.45e-02 1.005 6.01e-05 0.001704
        1.91e-02 -3.83e-02 5.79e-03 -7.54e-02 0.996 5.68e-04 0.002380
        4.04e-04 2.53e-03 -5.36e-04 1.66e-02 1.014 2.77e-05 0.008850
## 2278 1.03e-02 -1.54e-02 -7.40e-04 -3.04e-02 1.006 9.25e-05 0.002893
## 2279 -1.34e-02 -3.69e-03 -2.93e-02 6.83e-02 0.997 4.67e-04 0.002165
       2.45e-02 3.62e-03 -1.48e-03 -6.93e-02 1.001 4.80e-04 0.003170
## 2280
        9.62e-03 -2.23e-03 1.48e-02 -3.55e-02 1.003 1.26e-04 0.001758
## 2288 -2.50e-03 2.29e-03 -2.92e-03 -1.80e-02 1.011 3.24e-05 0.006159
## 2289 -4.18e-04 1.95e-03 6.09e-03 1.16e-02 1.008 1.34e-05 0.002977
## 2290 5.85e-02 -7.61e-03 -2.85e-02 -8.92e-02 1.009 7.96e-04 0.008276
## 2292 -2.72e-03 -2.93e-03 2.18e-03 -8.10e-03 1.010 6.56e-06 0.005268
## 2296 4.91e-02 5.91e-03 -3.11e-02 -8.11e-02 1.008 6.57e-04 0.007149
## 2297 -8.45e-02 5.55e-02 2.29e-02 -1.17e-01 1.000 1.37e-03 0.006198
## 2298 -5.81e-04 2.55e-04 -2.74e-02 -5.44e-02 1.006 2.96e-04 0.004431
## 2300
        4.90e-04 -2.97e-04 1.80e-02 2.24e-02 1.008 5.00e-05 0.003486
## 2303
        1.31e-03 -5.84e-03 -1.51e-02 -5.61e-02 1.007 3.15e-04 0.005243
        6.33e-05 -8.62e-06 1.10e-03 2.22e-03 1.008 4.93e-07 0.003655
## 2304
## 2308 -3.16e-04 -9.06e-05 3.40e-04 -8.66e-04 1.007 7.51e-08 0.001917
## 2313 -3.16e-03 -4.63e-03 1.64e-02 -3.36e-02 1.004 1.13e-04 0.002066
## 2314 2.73e-03 -8.08e-03 1.24e-02 -5.15e-02 1.008 2.65e-04 0.005215
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## 2315 1.29e-03 2.19e-03 2.87e-03 -1.12e-02 1.007 1.25e-05 0.002128
## 2316 -5.00e-03 -1.12e-02 1.83e-02 -4.47e-02 1.001 2.00e-04 0.001660
## 2318 -1.25e-01 -1.14e-01 4.06e-02 -1.80e-01 0.975 3.23e-03 0.004481
## 2319 -4.10e-04 9.84e-04 4.41e-03 -1.34e-02 1.007 1.79e-05 0.002172
        3.12e-02 -8.47e-03 -2.41e-02 6.79e-02 0.997 4.61e-04 0.002120
## 2322 -5.76e-03 -1.05e-02 3.61e-03 -2.91e-02 1.004 8.50e-05 0.001510
## 2323 -1.25e-02 -3.97e-02 7.66e-03 -1.46e-01 1.003 2.13e-03 0.009218
## 2325 -4.40e-04 1.22e-03 -9.66e-04 5.33e-03 1.006 2.85e-06 0.001601
        2.74e-03 -2.23e-02 8.59e-03 -5.13e-02 1.003 2.64e-04 0.002731
## 2327
        8.86e-03 5.48e-03 -1.35e-03 -2.52e-02 1.007 6.36e-05 0.002932
## 2328 -3.95e-03 6.25e-02 1.06e-02 -1.54e-01 0.970 2.37e-03 0.002966
## 2330 -3.42e-02 -1.67e-02 1.23e-02 7.18e-02 1.004 5.16e-04 0.004444
        3.08e-03 -1.91e-02 -1.27e-03 -6.29e-02 1.003 3.96e-04 0.003389
       3.65e-03 4.07e-03 -1.70e-04 -1.17e-02 1.010 1.37e-05 0.005551
## 2336 -5.11e-03 2.29e-04 -3.94e-03 -5.59e-02 1.006 3.13e-04 0.004405
## 2337 -3.54e-02 2.89e-03 1.51e-02 -4.54e-02 1.009 2.06e-04 0.006129
        5.26e-02 -8.35e-03 6.80e-04 -8.97e-02 0.995 8.04e-04 0.002988
## 2338
        7.23e-05 -1.51e-03 -6.86e-04 7.88e-03 1.007 6.21e-06 0.002323
## 2340 -1.23e-02 -1.11e-02 -8.77e-04 -5.42e-02 1.000 2.94e-04 0.002125
## 2342 -8.02e-04 -8.21e-04 6.22e-04 -1.87e-03 1.006 3.48e-07 0.001477
## 2343
        1.20e-03 -2.79e-03 -8.04e-03 2.57e-02 1.013 6.58e-05 0.008893
        9.98e-03 9.72e-03 1.05e-02 -6.97e-02 0.998 4.86e-04 0.002578
        2.82e-03 4.52e-03 6.17e-03 -3.02e-02 1.006 9.13e-05 0.002795
## 2345
        1.23e-02 -1.30e-02 2.88e-03 -8.84e-02 0.987 7.81e-04 0.001924
## 2347 -2.68e-02 -1.85e-02 2.85e-02 -1.49e-01 1.013 2.23e-03 0.014871
## 2348 1.11e-02 7.34e-03 -8.72e-04 -2.82e-02 1.006 7.93e-05 0.002693
## 2349 -2.65e-03 4.25e-03 -6.62e-03 1.48e-02 1.005 2.18e-05 0.001412
## 2350 -6.43e-03 1.40e-02 -2.82e-03 -6.29e-02 1.003 3.96e-04 0.003355
## 2351 -4.78e-02 -7.52e-02 4.41e-02 -1.33e-01 0.989 1.76e-03 0.004215
## 2352 -2.54e-02 -2.42e-02 1.00e-02 -4.09e-02 1.005 1.68e-04 0.002883
## 2353 -7.63e-02 -2.13e-01 2.56e-02 -2.49e-01 0.977 6.17e-03 0.008075
## 2354 5.88e-02 4.76e-02 -2.88e-02 1.02e-01 0.997 1.03e-03 0.004199
## 2355 -3.05e-02 -2.44e-02 1.41e-02 -7.42e-02 1.013 5.51e-04 0.010192
        4.85e-03 -2.15e-02 5.86e-03 -3.13e-02 1.004 9.79e-05 0.001965
## 2356
        3.17e-03 5.23e-02
                            1.85e-02 -8.17e-02 1.002 6.68e-04 0.004262
## 2358 -1.59e-02 -2.75e-02 1.21e-02 -4.22e-02 1.005 1.78e-04 0.002900
## 2359
        2.83e-04 -1.84e-03 7.14e-03 -1.51e-02 1.004 2.27e-05 0.000847
        1.70e-02 -3.49e-03 1.93e-02 -5.03e-02 1.003 2.53e-04 0.002514
## 2362 -2.46e-02 -9.45e-04 8.33e-03 -3.81e-02 1.005 1.45e-04 0.002986
## 2364 -6.15e-03 -2.83e-03 7.41e-03 -2.65e-02 1.004 7.03e-05 0.001395
        2.02e-03 -1.30e-02 -8.41e-03 -1.04e-01 0.995 1.08e-03 0.003852
## 2366
        2.88e-03 -1.54e-03 -2.25e-03 9.42e-03 1.007 8.88e-06 0.001999
## 2367
        6.23e-03 -4.92e-03 -8.03e-03 2.62e-02 1.006 6.86e-05 0.002326
        2.98e-02 1.34e-02 -1.87e-02 -7.21e-02 1.008 5.20e-04 0.006645
## 2368
        4.51e-03 3.15e-03 2.74e-03 -1.18e-02 1.008 1.38e-05 0.003625
        1.64e-02 8.72e-04 -8.65e-03 3.27e-02 1.002 1.07e-04 0.001369
## 2370
## 2371
        3.50e-05 -9.41e-04 9.94e-04 -5.06e-03 1.007 2.56e-06 0.002241
        5.11e-03 9.07e-03 4.67e-03 -2.27e-02 1.006 5.14e-05 0.002380
## 2372
## 2373 -2.70e-05 3.47e-03 1.60e-02 -2.81e-02 1.007 7.91e-05 0.003475
## 2375
        1.92e-03 4.20e-03 4.02e-03 -1.37e-02 1.007 1.88e-05 0.002702
        5.44e-03 8.07e-03 -5.56e-03 3.01e-02 1.005 9.08e-05 0.002090
## 2376
       1.13e-02 -1.82e-03 -8.03e-03 4.00e-02 1.010 1.60e-04 0.006673
## 2382 -4.98e-03 -1.42e-02 3.19e-03 -2.25e-02 1.010 5.07e-05 0.005800
## 2383 -2.12e-02 -1.85e-03 4.89e-03 -6.31e-02 1.013 3.99e-04 0.009579
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## 2384 3.46e-03 -2.03e-03 -7.69e-03 -1.41e-02 1.010 1.98e-05 0.005293
       3.57e-03 1.68e-03 4.12e-03 3.84e-02 1.013 1.48e-04 0.008908
## 2386 -4.97e-02 -8.72e-03 1.69e-02 -1.16e-01 0.990 1.35e-03 0.003468
## 2387 -6.25e-03 -1.96e-02 -3.43e-03 2.62e-02 1.010 6.89e-05 0.006038
## 2388 -2.15e-03 -1.73e-03 -1.55e-02 -2.31e-02 1.006 5.32e-05 0.002489
## 2389 -1.51e-04 -4.54e-04 8.72e-04 -2.56e-03 1.006 6.54e-07 0.001543
## 2390 -5.58e-04 -1.56e-03 2.28e-03 4.59e-03 1.009 2.10e-06 0.004245
        1.21e-02 -4.58e-03 -1.82e-02 -3.46e-02 1.010 1.20e-04 0.006080
## 2392 -6.29e-03 8.98e-04 -2.37e-02 -5.71e-02 1.009 3.27e-04 0.006709
## 2393 -1.11e-03 -1.33e-03 4.74e-03 -1.29e-02 1.005 1.66e-05 0.001169
## 2394 -1.97e-04 -1.42e-02 2.42e-02 -5.00e-02 0.997 2.50e-04 0.001278
        2.92e-02 4.48e-03 -1.36e-02 4.53e-02 1.006 2.05e-04 0.003720
## 2396
## 2397 -2.63e-02 -2.75e-03 -7.23e-02 -9.97e-02 0.999 9.94e-04 0.004718
## 2398 2.86e-02 -2.19e-02 -4.46e-02 -6.70e-02 1.005 4.49e-04 0.004865
## 2399 -3.07e-02 6.06e-04 -4.69e-02 -7.75e-02 1.001 6.00e-04 0.003854
## 2401 -3.10e-03 -5.19e-04 -9.47e-03 -1.23e-02 1.007 1.50e-05 0.002437
        1.23e-02 1.57e-03 -1.13e-02 -2.16e-02 1.010 4.66e-05 0.005502
## 2402
        1.70e-02 -2.32e-02 -1.53e-02 6.05e-02 0.997 3.65e-04 0.001795
        3.59e-02 1.89e-02 -4.96e-02 -8.59e-02 1.007 7.38e-04 0.007163
## 2405
## 2409 -1.81e-02 2.35e-02 -5.74e-02 -7.94e-02 0.998 6.31e-04 0.003159
## 2410 -3.09e-03 3.01e-04 -1.26e-03 -4.49e-03 1.010 2.02e-06 0.005278
## 2411 2.71e-02 1.07e-02 2.02e-02 4.81e-02 1.007 2.31e-04 0.004845
## 2412 6.41e-02 1.93e-02 -4.87e-02 -1.03e-01 1.001 1.06e-03 0.005286
## 2413 8.36e-05 1.29e-06 3.48e-03 4.88e-03 1.009 2.38e-06 0.004308
## 2414 -2.04e-02 -2.01e-02 -1.63e-02 -3.58e-02 1.011 1.28e-04 0.007001
## 2416 4.93e-03 3.51e-04 2.52e-03 7.42e-03 1.012 5.51e-06 0.006909
## 2417 -1.36e-02 -1.08e-02 -1.15e-02 -4.44e-02 1.006 1.97e-04 0.003972
## 2418 -7.06e-04 2.35e-02 4.31e-02 -1.01e-01 0.997 1.01e-03 0.004194
## 2419 -1.76e-02 -4.07e-03 3.45e-02 7.68e-02 1.005 5.89e-04 0.005215
## 2422 -1.64e-03 8.92e-04 -2.41e-02 6.34e-02 1.001 4.02e-04 0.002893
## 2423 -4.29e-02 -9.90e-02 -3.29e-02 -1.36e-01 1.009 1.86e-03 0.011615
## 2425 -8.10e-03 -7.86e-03 7.65e-03 1.59e-02 1.012 2.54e-05 0.006941
## 2427 -5.33e-02 2.14e-02 -9.54e-02 -1.41e-01 0.978 1.97e-03 0.003116
       5.17e-02 -1.67e-02 -5.18e-02 -9.42e-02 0.999 8.86e-04 0.004244
        6.20e-03 1.32e-02 -2.82e-02 -3.56e-02 1.006 1.26e-04 0.003173
        1.07e-02 -9.50e-03 -6.53e-03 2.32e-02 1.007 5.39e-05 0.002855
## 2430
## 2431 -8.27e-04 -4.71e-03 -3.22e-03 -1.16e-02 1.009 1.35e-05 0.003987
## 2433 -7.82e-03 1.93e-02 2.45e-03 -5.48e-02 1.005 3.01e-04 0.003696
## 2434 5.29e-02 -1.64e-02 -8.76e-02 -1.13e-01 0.992 1.27e-03 0.003743
## 2435 -1.12e-02 9.27e-03 -2.81e-02 -4.22e-02 1.008 1.78e-04 0.004811
        1.19e-02 -3.13e-02 3.28e-02 7.44e-02 1.000 5.53e-04 0.003243
## 2437 -6.58e-03 6.00e-04 1.31e-03 -1.59e-02 1.009 2.53e-05 0.004363
        3.58e-02 -3.77e-02 6.94e-02 1.08e-01 0.999 1.17e-03 0.004991
## 2439
        1.06e-01 6.82e-02 -9.56e-02 -2.62e-01 0.976 6.83e-03 0.008692
## 2440
## 2443 1.70e-03 3.22e-03 6.31e-03 -2.52e-02 1.007 6.33e-05 0.003341
## 2446 -1.68e-02 -5.82e-03 -1.91e-02 -3.74e-02 1.006 1.40e-04 0.003136
## 2447 -4.17e-02 -3.72e-03 -5.20e-02 -9.56e-02 1.003 9.13e-04 0.005718
## 2450 -4.20e-03 8.68e-04 -1.35e-02 -4.17e-02 1.008 1.74e-04 0.004786
## 2451
        1.01e-02 1.35e-02 3.29e-02 5.27e-02 1.006 2.78e-04 0.004370
## 2454 -1.16e-02 2.40e-03 4.98e-03 5.05e-02 1.010 2.55e-04 0.006931
        1.05e-02 3.73e-03 9.62e-03 -3.64e-02 1.012 1.33e-04 0.008056
## 2455
       2.72e-03 7.98e-04 8.43e-05 -1.03e-02 1.010 1.06e-05 0.005609
## 2458 1.57e-02 -7.65e-04 -3.57e-04 9.76e-02 1.010 9.53e-04 0.010066
## 2459 -1.54e-04 -1.92e-04 1.67e-05 -9.31e-04 1.012 8.68e-08 0.006887
```

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## 2461 -6.43e-03 8.98e-03 7.92e-04 -5.98e-02 1.007 3.58e-04 0.005645
        1.26e-03 5.36e-03 -2.42e-03 3.58e-02 1.010 1.28e-04 0.006305
## 2463
        3.22e-03 5.09e-02 -4.85e-03 -1.19e-01 1.008 1.42e-03 0.009725
        8.24e-04 5.30e-04 -2.38e-03 3.61e-02 1.007 1.31e-04 0.004003
## 2466
        1.24e-03 -3.63e-04 -5.56e-04 -1.28e-02 1.010 1.63e-05 0.005370
## 2469 -1.57e-04 -8.26e-06 1.21e-04 6.45e-03 1.010 4.16e-06 0.004872
        1.44e-02 2.26e-02 -6.85e-06 -5.54e-02 1.009 3.07e-04 0.006489
        9.50e-03 6.65e-03 -1.61e-03 -5.60e-02 1.007 3.13e-04 0.005199
## 2471
        8.71e-03 2.10e-03 2.99e-03 -3.90e-02 1.009 1.52e-04 0.005496
        2.17e-03 -3.33e-03 -7.42e-04 -1.31e-02 1.011 1.71e-05 0.005984
## 2475 -3.72e-03 6.18e-03 6.75e-03 4.62e-02 1.029 2.14e-04 0.024361
        3.16e-03 4.11e-02 -9.68e-04 -1.03e-01 1.003 1.05e-03 0.006290
## 2476
## 2479
        4.73e-03 -2.13e-04 -2.18e-03 3.52e-02 1.009 1.24e-04 0.005085
## 2481 -2.96e-02 2.26e-02 9.86e-03 -9.91e-02 1.005 9.82e-04 0.007001
## 2483 -9.40e-03 3.26e-03 -7.17e-04 3.12e-02 1.010 9.73e-05 0.005983
## 2484 -5.28e-04 1.99e-03 5.61e-04 -5.07e-03 1.011 2.57e-06 0.006154
        1.35e-02 -2.79e-03 -6.35e-03 -7.97e-02 1.005 6.35e-04 0.005782
## 2485
## 2486
        4.18e-05 5.85e-04 4.56e-04 7.08e-03 1.011 5.02e-06 0.005820
        7.15e-04 1.82e-03 1.24e-05 1.21e-02 1.010 1.46e-05 0.005074
## 2488
        1.76e-02 7.77e-03 -3.07e-03 -6.14e-02 1.008 3.77e-04 0.005803
## 2490 -5.49e-04 2.99e-05 -1.19e-03 7.93e-03 1.010 6.30e-06 0.005274
## 2491 -2.40e-03 3.79e-03 -8.59e-05 2.86e-02 1.010 8.19e-05 0.005961
## 2492 9.81e-03 4.67e-02 -3.56e-02 1.50e-01 0.998 2.24e-03 0.007547
        3.00e-03 2.28e-03 -2.16e-03 -6.52e-02 1.006 4.25e-04 0.005319
## 2493
## 2494
        2.11e-03 -1.58e-03 2.58e-04 -7.19e-03 1.010 5.18e-06 0.005559
## 2495
        3.48e-03 3.07e-03 -3.11e-03 -5.98e-02 1.007 3.58e-04 0.005210
        5.45e-03 3.96e-03 -5.59e-03 4.67e-02 1.009 2.18e-04 0.006227
## 2496
## 2497
        4.63e-04 1.41e-03 2.05e-04 -1.45e-02 1.010 2.10e-05 0.004930
## 2498 -1.69e-03 -1.39e-03 6.44e-03 -5.24e-02 1.007 2.74e-04 0.004661
        1.22e-02 3.33e-03 1.12e-02 -7.89e-02 1.006 6.23e-04 0.006114
## 2500
## 2501 -6.06e-03 -3.62e-02 1.21e-02 -1.50e-01 0.992 2.25e-03 0.005746
## 2502
        1.09e-03 7.47e-05 2.19e-04 -6.90e-03 1.010 4.76e-06 0.005285
        7.16e-04 -2.02e-03 -2.07e-04 -1.02e-02 1.010 1.04e-05 0.004867
## 2505 -3.53e-03 -2.61e-04 -6.24e-04 1.07e-02 1.014 1.14e-05 0.008861
        7.62e-03 1.67e-02 1.31e-02 -8.44e-02 1.005 7.11e-04 0.005725
## 2508 -1.42e-02 2.23e-02 -8.12e-03 7.86e-02 1.005 6.18e-04 0.005303
## 2509 1.06e-03 -5.32e-03 -1.82e-03 -2.26e-02 1.011 5.10e-05 0.006394
## 2510 -3.14e-03 4.50e-03 7.50e-03 1.99e-02 1.009 3.96e-05 0.004710
        7.57e-03 -2.05e-02 -1.63e-03 -4.45e-02 1.012 1.98e-04 0.008022
## 2512 -1.16e-02 -3.04e-03 -1.81e-03 3.91e-02 1.009 1.53e-04 0.005559
## 2513 -2.12e-03 -1.72e-03 -7.93e-05 1.81e-02 1.010 3.29e-05 0.005290
        4.50e-03 -3.40e-02 -3.61e-03 -6.01e-02 1.011 3.61e-04 0.008199
## 2515
## 2516
        6.96e-03 5.20e-04 -1.85e-03 -2.46e-02 1.010 6.05e-05 0.005743
        1.31e-02 4.48e-03 -2.10e-03 6.45e-02 1.009 4.16e-04 0.006643
## 2518
## 2520
        1.00e-03 -4.82e-03 5.61e-04 4.49e-02 1.009 2.02e-04 0.005557
        2.69e-03 -1.46e-03 3.98e-03 -4.67e-02 1.007 2.19e-04 0.004704
## 2522
## 2523
        1.59e-02 -1.82e-03 5.23e-03 -4.57e-02 1.010 2.09e-04 0.006802
        3.37e-03 -8.42e-03 -4.08e-04 -1.98e-02 1.011 3.91e-05 0.006808
## 2524
## 2525
        2.43e-02 -1.81e-02 6.56e-04 -1.15e-01 1.002 1.32e-03 0.006799
## 2528 -8.09e-03 -3.18e-03 -2.27e-03 2.80e-02 1.011 7.84e-05 0.006334
        4.53e-04 -2.08e-04 8.65e-05 -4.87e-03 1.010 2.37e-06 0.004974
## 2529
        1.85e-02 2.20e-02 -4.29e-04 -5.35e-02 1.011 2.86e-04 0.007544
## 2534 8.24e-03 2.64e-03 2.15e-04 3.86e-02 1.007 1.49e-04 0.004268
## 2535 1.76e-02 -1.17e-02 -3.47e-03 -6.73e-02 1.007 4.52e-04 0.005995
```

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## 2537 6.80e-04 1.26e-03 -3.48e-03 -4.97e-03 1.008 2.47e-06 0.003028
## 2543 5.30e-03 -4.56e-03 8.10e-03 1.38e-02 1.010 1.92e-05 0.005037
## 2545 -5.04e-02 1.66e-02 -4.47e-02 -1.21e-01 1.001 1.46e-03 0.006841
## 2547 -3.65e-03 -3.41e-03 -7.27e-03 -1.28e-02 1.008 1.63e-05 0.003068
## 2550 -2.00e-02 4.19e-03 -1.43e-02 -5.22e-02 1.007 2.72e-04 0.004726
## 2552 7.72e-03 -1.01e-02 5.06e-02 7.36e-02 1.003 5.42e-04 0.004074
        5.19e-03 1.14e-03 4.15e-03 2.67e-02 1.010 7.14e-05 0.005596
       6.27e-03 8.34e-04 -4.79e-03 1.40e-02 1.007 1.95e-05 0.002179
## 2557 -1.10e-02 -2.48e-02 -2.68e-02 1.68e-01 0.992 2.83e-03 0.006812
## 2558
       4.31e-03 2.01e-02 -2.88e-02 5.69e-02 1.001 3.24e-04 0.002599
7.40e-03 6.94e-04 -7.16e-03 2.31e-02 1.010 5.33e-05 0.005865
## 2562
## 2568 -1.80e-03 -8.58e-03 9.44e-03 -4.07e-02 1.012 1.66e-04 0.007904
## 2569 2.67e-03 1.53e-02 9.72e-04 -2.96e-02 1.014 8.76e-05 0.009280
## 2570 -6.75e-04 -8.26e-04 -1.98e-03 6.59e-03 1.008 4.34e-06 0.002923
## 2571 -3.33e-03 -1.44e-02 -9.80e-03 2.79e-02 1.007 7.79e-05 0.003530
## 2572 2.46e-02 1.92e-03 -3.66e-02 -5.00e-02 1.003 2.50e-04 0.002810
       5.12e-03 7.74e-03 -3.77e-03 3.90e-02 1.007 1.52e-04 0.004261
## 2575 -6.14e-04 -9.55e-04 -2.61e-02 5.06e-02 1.005 2.56e-04 0.003619
        5.84e-05 -6.68e-03 8.78e-03 -2.19e-02 1.007 4.81e-05 0.002954
        1.12e-02 1.04e-03 -5.48e-03 2.07e-02 1.009 4.30e-05 0.004532
       3.93e-03 -2.12e-03 -4.56e-03 1.79e-02 1.007 3.20e-05 0.003016
## 2589 -2.30e-02 -1.69e-02 1.34e-02 -5.75e-02 1.006 3.30e-04 0.004559
## 2590 -2.96e-02 -2.47e-02 -3.94e-02 1.91e-01 0.971 3.64e-03 0.004483
## 2592 5.68e-05 -4.95e-05 -1.12e-04 9.28e-04 1.009 8.62e-08 0.004632
## 2593 -1.08e-02 9.91e-03 2.93e-02 -9.92e-02 0.987 9.83e-04 0.002290
       5.11e-03 1.62e-03 3.53e-03 -2.05e-02 1.006 4.19e-05 0.002235
## 2595
## 2600 -9.50e-02 -1.81e-01 -6.02e-02 3.12e-01 0.952 9.69e-03 0.007518
## 2602 -5.89e-02 -4.02e-03 -5.11e-02 1.30e-01 0.998 1.68e-03 0.006251
## 2604 8.76e-04 -8.18e-06 -9.80e-04 3.67e-03 1.007 1.35e-06 0.002105
       7.22e-03 -1.99e-03 1.09e-02 -4.29e-02 0.999 1.84e-04 0.001234
## 2606 -1.36e-02 4.26e-03 3.83e-02 6.67e-02 1.006 4.46e-04 0.005191
## 2607 -4.63e-03 -1.73e-03 -2.59e-04 -2.21e-02 1.009 4.90e-05 0.004434
## 2608 2.44e-03 3.10e-03 5.96e-03 -1.48e-02 1.010 2.18e-05 0.005420
## 2609 -1.75e-04 -1.35e-03 5.76e-03 -1.91e-02 1.006 3.64e-05 0.001709
## 2610 1.34e-02 -2.57e-02 -1.29e-02 5.64e-02 0.997 3.18e-04 0.001689
## 2611 6.11e-02 -4.62e-03 -1.36e-02 8.67e-02 1.010 7.52e-04 0.009063
## 2612 4.49e-03 2.65e-03 -8.45e-03 -1.35e-02 1.009 1.82e-05 0.003906
## 2613 -4.86e-03 3.84e-04 1.70e-02 2.68e-02 1.006 7.16e-05 0.002539
## 2614 1.60e-02 4.69e-03 7.37e-03 -3.12e-02 1.005 9.76e-05 0.002290
## 2616 -4.71e-03 -7.16e-03 -4.14e-03 2.86e-02 1.007 8.18e-05 0.003175
## 2619 -3.93e-03 -4.13e-03 -7.12e-03 3.85e-02 1.004 1.48e-04 0.002209
## 2620 -4.21e-03 2.23e-02 4.38e-02 7.63e-02 0.999 5.81e-04 0.003144
## 2621 -2.77e-03 7.57e-04 3.81e-03 8.44e-03 1.009 7.13e-06 0.004067
## 2622 1.24e-03 -2.32e-03 -9.62e-03 -1.33e-02 1.008 1.77e-05 0.003573
## 2625 -1.36e-02 -1.21e-02 2.14e-02 3.09e-02 1.009 9.55e-05 0.004804
## 2627 -3.71e-02 -7.62e-03 -1.65e-02 -1.07e-01 0.999 1.14e-03 0.005040
## 2629 -5.43e-04 1.15e-05 -1.34e-03 -3.67e-03 1.012 1.35e-06 0.007278
## 2632
       1.73e-03 -3.05e-04 5.68e-03 8.39e-03 1.010 7.05e-06 0.005089
        3.25e-05 6.84e-05 2.85e-04 3.71e-04 1.009 1.38e-08 0.004006
## 2634
## 2635 -1.55e-03 6.64e-03 -6.19e-03 -1.15e-02 1.009 1.31e-05 0.003994
## 2637 -3.45e-02 -8.20e-02 -1.55e-02 1.36e-01 0.962 1.83e-03 0.001948
## 2638 1.88e-02 1.02e-02 -7.81e-03 3.40e-02 1.006 1.15e-04 0.003050
## 2640 -7.53e-03 -8.47e-03 -5.98e-03 -4.19e-02 1.010 1.75e-04 0.006134
```

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## 2644 -4.46e-03 -2.61e-03 -5.82e-03 -1.07e-02 1.008 1.14e-05 0.003302
## 2645 8.02e-03 1.26e-03 -5.27e-03 -1.95e-02 1.011 3.81e-05 0.005999
## 2646 2.74e-02 2.20e-01 1.05e-01 -4.45e-01 0.916 1.96e-02 0.009255
## 2647 -7.35e-03 -2.03e-03 3.05e-02 4.11e-02 1.007 1.69e-04 0.004375
## 2648 -6.02e-03 -2.10e-02 -4.25e-02 -7.13e-02 1.001 5.09e-04 0.003421
## 2652 -1.34e-02 7.22e-03 -1.98e-02 -4.14e-02 1.014 1.71e-04 0.009806
        5.34e-04 5.81e-04 1.92e-03 3.45e-03 1.013 1.19e-06 0.008160
        2.10e-02 7.69e-04 4.98e-02 1.05e-01 1.001 1.10e-03 0.005619
## 2655
        1.10e-02 -5.53e-04 -1.91e-02 -3.27e-02 1.009 1.07e-04 0.004907
## 2659
        1.92e-01 2.88e-02 -1.57e-01 -3.54e-01 0.927 1.24e-02 0.006811
## 2660
        3.08e-02 1.63e-02 -1.20e-02 -6.15e-02 1.011 3.79e-04 0.008057
## 2661 -1.90e-02 5.47e-02 1.80e-02 -1.16e-01 0.978 1.35e-03 0.002184
        5.06e-03 -2.21e-04 9.69e-03 1.46e-02 1.008 2.14e-05 0.003720
## 2662
## 2665 -2.31e-02 7.52e-03 -2.80e-02 -6.56e-02 1.007 4.30e-04 0.005850
        9.03e-04 1.71e-03 2.93e-03 1.70e-02 1.010 2.89e-05 0.005229
## 2666
        6.04e-02 2.45e-02 -3.50e-02 -9.12e-02 1.008 8.32e-04 0.007915
        1.61e-02 -1.29e-02 -1.50e-02 5.37e-02 1.003 2.89e-04 0.002971
## 2668
        4.73e-02 -4.86e-03 7.84e-02 1.34e-01 0.995 1.79e-03 0.005614
## 2673 -3.16e-03 1.30e-02 5.06e-02 9.30e-02 0.995 8.65e-04 0.003263
## 2676 -3.18e-03 -3.26e-03 -1.02e-02 -1.35e-02 1.008 1.84e-05 0.003842
## 2679 -6.43e-03 7.01e-04 2.87e-03 -1.56e-02 1.006 2.42e-05 0.001780
## 2680 -1.29e-02 1.85e-02 -2.22e-02 -6.99e-02 1.011 4.89e-04 0.008609
## 2681 -1.11e-03 -2.21e-03 -4.02e-03 -1.11e-02 1.008 1.24e-05 0.003564
## 2683 4.71e-04 1.03e-03 -2.69e-03 -4.59e-03 1.008 2.11e-06 0.003369
## 2685 -1.18e-03 -2.00e-03 1.32e-03 -1.22e-02 1.006 1.50e-05 0.001923
## 2686 -3.50e-02 -1.30e-02 3.47e-02 1.03e-01 1.004 1.05e-03 0.006464
## 2687 -4.04e-03 3.66e-03 -4.17e-02 -4.94e-02 1.003 2.44e-04 0.002811
## 2690 5.55e-03 5.94e-04 1.37e-02 2.70e-02 1.008 7.31e-05 0.004331
## 2692 -2.84e-03 3.96e-03 2.06e-03 -1.08e-02 1.008 1.17e-05 0.003202
## 2693 -1.21e-03 1.08e-03 -8.82e-03 2.47e-02 1.005 6.09e-05 0.002050
## 2694 -2.46e-04 2.63e-04 2.66e-02 4.78e-02 1.003 2.28e-04 0.002419
## 2695 -7.78e-02 -9.72e-03 -1.42e-02 -9.16e-02 1.013 8.39e-04 0.011444
## 2697 -1.10e-02 7.03e-03 1.77e-02 5.65e-02 1.006 3.19e-04 0.004272
## 2698 -4.90e-05 1.58e-05 -1.08e-04 -1.47e-04 1.007 2.17e-09 0.002587
## 2702 -6.31e-03 6.33e-06 -2.74e-02 -3.89e-02 1.006 1.51e-04 0.003150
## 2703 5.06e-03 8.59e-03 1.65e-02 3.36e-02 1.006 1.13e-04 0.002778
## 2705 5.61e-04 -1.43e-03 8.46e-03 1.47e-02 1.011 2.15e-05 0.006574
## 2707 -7.26e-03 2.05e-03 -6.64e-03 -1.45e-02 1.008 2.11e-05 0.003601
## 2708 -3.31e-03 -1.16e-03 2.14e-02 2.93e-02 1.006 8.60e-05 0.002585
        1.78e-03 -7.01e-04 -2.88e-03 -6.18e-03 1.008 3.83e-06 0.003145
## 2709
        2.29e-02 4.15e-03 -3.21e-02 8.19e-02 0.999 6.70e-04 0.003345
        3.90e-02 3.76e-03 1.08e-02 4.47e-02 1.018 2.00e-04 0.013470
## 2711
        4.36e-03 -7.73e-05 -8.06e-03 2.13e-02 1.005 4.54e-05 0.001724
## 2714 -1.67e-01 -7.79e-02 -3.15e-02 6.12e-01 0.975 3.72e-02 0.029138
## 2716 1.51e-01 9.31e-02 -8.62e-02 2.54e-01 0.998 6.45e-03 0.014181
## 2717 -5.90e-03 2.26e-03 -7.85e-03 -1.39e-02 1.007 1.94e-05 0.002839
## 2718 8.18e-02 1.56e-01 -6.88e-02 2.28e-01 0.997 5.18e-03 0.012093
## 2719
        2.31e-02 2.54e-02 -1.84e-02 6.45e-02 1.004 4.15e-04 0.004218
## 2720
        1.36e-02 1.57e-03 6.22e-03 -5.44e-02 1.004 2.96e-04 0.003352
        5.86e-03 7.14e-03 -2.07e-02 9.59e-02 1.003 9.19e-04 0.005659
## 2722 -7.91e-03 -1.18e-03 4.90e-03 -1.42e-02 1.007 2.03e-05 0.002604
       1.33e-02 -2.10e-03 -2.86e-02 6.74e-02 0.999 4.55e-04 0.002489
## 2725 6.02e-03 -7.79e-04 -3.21e-03 1.03e-02 1.008 1.07e-05 0.003058
## 2726 2.14e-01 3.04e-01 -2.00e-01 4.82e-01 0.947 2.31e-02 0.014760
```

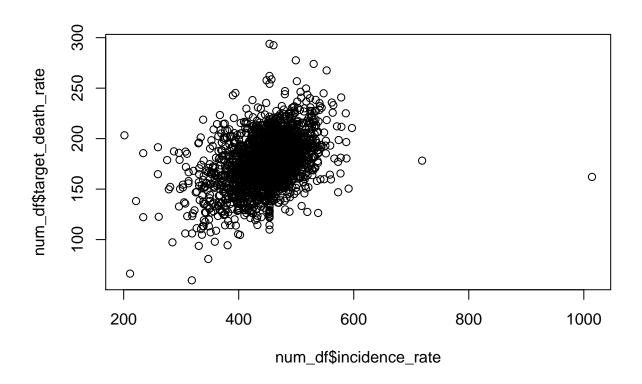
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## 2727 7.60e-02 2.16e-01 -7.85e-02 3.30e-01 0.958 1.08e-02 0.009103
        7.72e-02 5.85e-02 -3.37e-02 1.11e-01 1.030 1.24e-03 0.026181
## 2729
## 2730 -9.22e-03 -2.22e-02 -3.90e-03 6.70e-02 1.011 4.49e-04 0.008863
## 2732 7.14e-02 1.15e-02 -4.03e-02 1.28e-01 1.000 1.63e-03 0.006568
        4.17e-04 1.44e-04 -3.02e-04 6.35e-04 1.015 4.03e-08 0.010247
## 2735 -1.94e-03 9.36e-04 3.35e-03 -1.07e-02 1.008 1.15e-05 0.002893
## 2736 -3.09e-03 3.86e-03 5.30e-02 -1.34e-01 0.998 1.79e-03 0.006410
## 2737 -1.20e-02 -5.00e-04 7.13e-03 -2.58e-02 1.010 6.65e-05 0.005746
## 2738 -2.08e-02 -1.74e-02 1.19e-02 -3.47e-02 1.011 1.21e-04 0.006955
## 2739
        1.69e-03 -6.90e-03 -4.96e-04 2.18e-02 1.008 4.74e-05 0.003759
## 2740 -1.53e-02 -1.17e-02 6.46e-03 -4.42e-02 1.013 1.96e-04 0.008828
        2.02e-03 1.23e-05 2.76e-03 -1.93e-02 1.080 3.71e-05 0.069382
## 2742
## 2743 7.80e-03 -2.60e-03 -5.09e-03 1.30e-02 1.008 1.69e-05 0.003820
## 2744 -1.29e-01 -4.00e-02 5.60e-02 -1.80e-01 1.010 3.25e-03 0.015359
## 2747 -2.85e-02 -5.13e-03 1.56e-02 -8.26e-02 1.009 6.82e-04 0.008078
## 2748 -6.74e-03 1.91e-03 3.46e-03 -1.14e-02 1.007 1.31e-05 0.002637
## 2749 -9.73e-02 -2.42e-03 3.45e-02 -1.76e-01 0.988 3.09e-03 0.006424
## 2750 -8.13e-03 9.51e-04 -6.59e-03 -1.76e-02 1.008 3.09e-05 0.003546
## 2752 2.01e-04 2.27e-03 -7.34e-03 -1.01e-02 1.007 1.03e-05 0.002465
        1.46e-04 9.32e-05 3.26e-03 4.20e-03 1.008 1.77e-06 0.002765
## 2759 -5.63e-02 -1.47e-02 -4.16e-02 -1.05e-01 1.001 1.10e-03 0.005459
## 2762 -3.33e-04 -9.61e-05 -2.20e-03 -3.52e-03 1.007 1.24e-06 0.002626
## 2765 -4.46e-03 1.30e-02 2.68e-02 -4.43e-02 1.001 1.96e-04 0.001791
        1.09e-02 3.15e-02 -4.44e-02 -7.73e-02 1.003 5.98e-04 0.004350
## 2767
## 2768
        1.31e-05 9.74e-05 8.58e-04 1.10e-03 1.007 1.21e-07 0.002043
## 2770
        5.82e-03 5.75e-04 8.44e-03 1.70e-02 1.008 2.89e-05 0.003398
        1.45e-02 -7.76e-04 3.58e-02 5.40e-02 1.004 2.92e-04 0.003483
## 2772
## 2775 -1.38e-02 -3.34e-03
                            2.12e-02 -5.64e-02 1.017 3.18e-04 0.013436
## 2776 3.37e-02 -4.03e-02 3.99e-03 -6.07e-02 1.012 3.68e-04 0.009409
## 2778 -6.30e-03 -2.08e-03 -1.48e-03 1.22e-02 1.007 1.48e-05 0.002864
## 2779 -1.57e-02 6.77e-03 -1.04e-03 2.61e-02 1.006 6.83e-05 0.002806
## 2780 -4.18e-02 -4.02e-02 -6.41e-03 6.64e-02 1.002 4.41e-04 0.003562
## 2787
        1.67e-02 -2.00e-03 6.97e-03 -3.54e-02 1.005 1.25e-04 0.002357
        3.84e-02 -4.06e-02 8.34e-03 -7.63e-02 0.998 5.82e-04 0.002954
## 2788
        2.29e-02 -4.10e-03 -1.79e-02 -1.12e-01 0.989 1.26e-03 0.003102
       1.10e-02 5.86e-03 -3.91e-04 -1.69e-02 1.007 2.86e-05 0.002785
## 2792
## 2793 -1.01e-02 2.75e-03 -4.95e-03 2.02e-02 1.008 4.06e-05 0.003455
        1.49e-02 -3.72e-02 1.96e-03 -4.29e-02 1.021 1.84e-04 0.015958
## 2794
        3.08e-02 - 3.60e-02 \ 3.47e-03 - 6.40e-02 \ 1.012 \ 4.09e-04 \ 0.008928
        1.36e-02 1.67e-02 -3.03e-03 -4.72e-02 1.011 2.23e-04 0.007784
## 2797
        5.09e-03 -2.04e-02 -4.21e-03 -3.01e-02 1.011 9.08e-05 0.006616
## 2798
## 2799
        2.40e-02 2.36e-02 -3.92e-03 -5.42e-02 1.007 2.93e-04 0.004785
## 2800
        2.23e-02 6.05e-03 -1.62e-03 -4.44e-02 1.006 1.97e-04 0.003983
        1.73e-03 -1.83e-03 9.71e-04 -5.87e-03 1.009 3.45e-06 0.004124
## 2801
        3.08e-02 -1.92e-02 5.02e-03 -6.70e-02 0.999 4.48e-04 0.002464
        2.35e-02 -1.97e-02 -3.63e-03 -3.99e-02 1.010 1.60e-04 0.006314
## 2804
## 2805
        2.49e-02 -9.84e-03 -2.35e-03 -8.53e-02 1.008 7.27e-04 0.007856
## 2806 -5.13e-04 -2.75e-03 -1.96e-03 1.16e-02 1.008 1.35e-05 0.003170
## 2809 5.02e-02 -1.03e-03 6.22e-02 -1.60e-01 0.980 2.56e-03 0.004156
## 2810 -5.36e-02 2.84e-02 4.08e-03 1.04e-01 0.986 1.07e-03 0.002450
## 2811 -1.01e-02 -2.22e-01 1.84e-02 -2.78e-01 0.998 7.73e-03 0.015780
## 2812 -7.42e-02 1.31e-02 -9.51e-03 1.00e-01 1.000 1.00e-03 0.004961
## 2813 3.37e-03 -6.47e-03 -8.81e-04 -1.10e-02 1.009 1.20e-05 0.003952
## 2815 -9.00e-03 6.84e-02 -2.42e-04 9.33e-02 1.000 8.71e-04 0.004408
```

```
## 2817 6.50e-03 3.95e-02 -5.15e-03 4.73e-02 1.008 2.24e-04 0.004950
## 2818 3.32e-03 -8.87e-04 3.08e-03 -8.29e-03 1.006 6.88e-06 0.001802
## 2819 -2.94e-02 1.03e-01 -1.81e-03 1.40e-01 0.984 1.97e-03 0.003867
## 2821 -6.05e-03 9.04e-03 -1.26e-02 3.72e-02 1.007 1.39e-04 0.003668
        3.00e-02 -5.24e-02 -9.87e-04 -8.59e-02 1.008 7.38e-04 0.007823
## 2825 -2.37e-02 1.62e-01 7.46e-03 1.94e-01 0.999 3.75e-03 0.010593
## 2827 -8.71e-03 1.13e-03 -1.15e-03 1.39e-02 1.010 1.93e-05 0.005623
        4.40e-03 -6.44e-03 5.43e-04 -2.08e-02 1.008 4.33e-05 0.004001
## 2831
        2.04e-02 -6.49e-03 9.71e-03 -4.35e-02 1.004 1.90e-04 0.002592
        8.90e-04 2.10e-03 2.43e-03 -7.44e-03 1.006 5.54e-06 0.001491
## 2833
## 2834
        6.04e-02 -7.63e-04 -3.31e-02 9.84e-02 1.003 9.68e-04 0.005859
        8.65e-03 -4.50e-02 2.70e-02 -1.05e-01 1.004 1.10e-03 0.006687
## 2835
## 2839
        5.06e-02 1.83e-02 -2.23e-02 6.28e-02 1.004 3.95e-04 0.003784
## 2840
        5.72e-03 -4.37e-03 1.32e-02 2.10e-02 1.007 4.43e-05 0.003076
## 2841 -7.36e-03 -1.97e-02 -1.08e-02 4.82e-02 1.007 2.32e-04 0.004510
        4.45e-03 -4.78e-03 -6.00e-03 1.41e-02 1.005 1.99e-05 0.001259
        3.87e-03 2.56e-03 -8.41e-03 -1.13e-02 1.008 1.27e-05 0.003120
## 2848
## 2849 -4.52e-03 2.91e-03 3.20e-03 -1.21e-02 1.006 1.46e-05 0.001853
        1.20e-03 1.05e-03 1.45e-03 -5.66e-03 1.007 3.21e-06 0.001837
## 2850
        9.28e-03 -7.26e-03 -1.96e-02 4.10e-02 1.004 1.68e-04 0.002290
## 2855 -4.25e-03 -3.69e-04 -7.97e-03 3.62e-02 1.004 1.31e-04 0.002132
       3.71e-03 -8.77e-04 -2.44e-03 1.21e-02 1.008 1.48e-05 0.003764
## 2857
## 2858 -4.52e-02 -3.10e-02 2.98e-04 1.34e-01 0.986 1.78e-03 0.003822
## 2859 -2.62e-03 -3.50e-04 1.38e-03 -8.94e-03 1.006 8.00e-06 0.001397
       2.59e-02 4.99e-03 -8.96e-03 2.88e-02 1.014 8.29e-05 0.009607
        2.03e-03 -7.00e-03 -1.12e-03 1.32e-02 1.007 1.75e-05 0.002354
## 2861
## 2862 -4.77e-04 6.59e-04 -3.49e-03 1.77e-02 1.005 3.13e-05 0.001452
## 2863 -4.01e-04 -1.26e-03 1.88e-03 -6.41e-03 1.006 4.11e-06 0.001328
## 2864 1.17e-02 1.33e-02 -9.62e-03 -7.29e-02 1.011 5.32e-04 0.009278
        1.22e-03 -1.49e-03 1.40e-03 -1.96e-02 1.006 3.85e-05 0.001932
## 2866 -9.90e-04 5.98e-04 5.09e-03 -1.14e-02 1.007 1.31e-05 0.002490
## 2867 -2.41e-03 5.30e-03 1.70e-03 -9.20e-03 1.007 8.47e-06 0.002671
## 2869 -1.96e-02 7.47e-03 1.82e-02 -3.89e-02 1.003 1.51e-04 0.002103
## 2870 -2.68e-03 -6.49e-04
                           2.29e-03 -7.23e-03 1.007 5.23e-06 0.002402
## 2871 -1.21e-03 9.27e-04 -4.67e-03 -8.23e-03 1.008 6.78e-06 0.003353
## 2873 5.97e-03 6.32e-04 9.82e-03 -1.98e-02 1.007 3.93e-05 0.002639
       1.22e-02 3.89e-04 -7.94e-03 3.06e-02 1.009 9.39e-05 0.004628
## 2875 -5.10e-03
                 1.02e-03 4.99e-03 -1.31e-02 1.007 1.71e-05 0.002911
        2.41e-03 1.33e-03 -5.52e-03 2.06e-02 1.007 4.26e-05 0.003135
## 2877
        6.10e-04 -4.01e-03 -5.92e-03 -1.19e-02 1.010 1.42e-05 0.005006
        3.76e-04 3.60e-03 6.91e-03 -1.41e-02 1.011 1.98e-05 0.005800
## 2880
## 2882 -3.52e-03 -1.35e-03 -2.69e-02 8.81e-02 1.007 7.77e-04 0.007435
## 2883 -6.51e-04 -3.64e-04 -1.14e-03 -2.47e-03 1.009 6.10e-07 0.003922
## 2884 -4.14e-03 5.37e-04 2.26e-03 -7.07e-03 1.007 5.00e-06 0.002138
        1.02e-02 1.19e-04 -1.16e-02 2.40e-02 1.005 5.74e-05 0.001914
## 2885
## 2886
        9.86e-03 9.59e-03 -1.84e-02 4.71e-02 1.004 2.21e-04 0.002826
## 2888
       4.03e-03 -1.52e-03 -4.21e-03 1.24e-02 1.007 1.53e-05 0.002753
## 2889 -9.21e-04 6.70e-03 2.16e-02 -4.45e-02 1.001 1.98e-04 0.001762
## 2891 -2.78e-04 1.24e-03 1.81e-05 -3.00e-03 1.008 9.00e-07 0.002686
## 2892 -9.43e-03 2.47e-03 -6.94e-05 -4.01e-02 1.006 1.61e-04 0.003538
## 2893 -2.08e-02 2.87e-02 -9.97e-03 5.15e-02 1.004 2.65e-04 0.003219
## 2896 -4.64e-03 -2.53e-04 2.54e-03 -1.04e-02 1.006 1.09e-05 0.001596
## 2899 -8.53e-03 -4.77e-03 7.01e-04 -2.62e-02 1.008 6.88e-05 0.003979
```

```
## 2900 2.57e-03 4.79e-04 1.38e-03 -6.76e-03 1.006 4.57e-06 0.001075
        2.01e-02 -1.32e-03 -2.65e-03 3.61e-02 1.008 1.30e-04 0.004899
## 2903
        1.99e-02 2.42e-02 -3.62e-02 -6.90e-02 1.007 4.76e-04 0.005753
        1.98e-03 7.12e-04 1.95e-03 -5.89e-03 1.007 3.47e-06 0.001851
## 2905
        2.82e-03 -2.91e-03 -1.49e-02 -1.96e-02 1.006 3.85e-05 0.002196
## 2907 -1.46e-03 -5.20e-04 7.88e-03 1.33e-02 1.007 1.77e-05 0.002338
## 2908 -1.36e-02 -3.92e-03 1.01e-02 -2.17e-02 1.008 4.70e-05 0.003625
## 2909 -2.93e-04 1.24e-04 1.03e-02 1.94e-02 1.008 3.77e-05 0.003462
## 2910 -2.72e-02 -8.57e-03 -1.56e-02 7.11e-02 0.995 5.05e-04 0.001985
## 2911 -2.27e-02 2.51e-02 1.23e-02 -5.92e-02 1.003 3.51e-04 0.003464
## 2912 -1.38e-03 1.51e-02 8.10e-04 -3.61e-02 1.004 1.30e-04 0.001972
        2.77e-03 -3.32e-03 6.81e-03 1.07e-02 1.009 1.14e-05 0.004242
## 2914
## 2915
        1.64e-03 2.83e-03 -7.51e-03 3.98e-02 1.003 1.59e-04 0.002102
## 2917 -9.04e-04 -3.99e-04 -3.91e-03 -7.45e-03 1.008 5.55e-06 0.003070
        4.15e-03 -1.46e-03 -3.31e-03 1.23e-02 1.007 1.51e-05 0.002151
        2.27e-03 -1.17e-03 3.05e-04 -8.10e-03 1.007 6.57e-06 0.001966
        3.06e-02 -3.52e-02 -1.24e-02 9.86e-02 0.993 9.71e-04 0.003153
## 2922
## 2923
        3.05e-03 6.30e-04 -3.44e-03 1.14e-02 1.006 1.31e-05 0.001956
        6.05e-03 1.11e-04 1.65e-02 2.89e-02 1.009 8.37e-05 0.005233
## 2924
## 2925 -3.21e-03 3.06e-03 -1.51e-02 3.78e-02 1.000 1.43e-04 0.001170
## 2926
        7.79e-03 1.27e-03 9.78e-03 1.64e-02 1.007 2.69e-05 0.002716
        2.59e-03 -3.10e-02 2.76e-03 -4.32e-02 1.004 1.87e-04 0.002733
## 2930 -4.45e-03 -3.94e-03 -1.13e-02 3.62e-02 1.001 1.31e-04 0.001186
## 2931 -2.16e-03 2.52e-03 -1.66e-03 8.23e-03 1.007 6.78e-06 0.002352
## 2933 1.06e-02 3.26e-02 -1.91e-03 1.56e-01 0.983 2.43e-03 0.004447
## 2934 -3.94e-03 -2.18e-02 -4.87e-03 3.33e-02 1.005 1.11e-04 0.002224
## 2935 -6.65e-03 7.16e-04 1.73e-03 -1.44e-02 1.007 2.09e-05 0.002249
## 2937
        8.23e-04 3.06e-03 -1.17e-02 3.68e-02 1.006 1.36e-04 0.003220
## 2938 -4.84e-04 -1.30e-03 3.44e-04 -2.27e-03 1.007 5.15e-07 0.002461
## 2940
        7.11e-03 5.01e-03 4.20e-03 -1.89e-02 1.006 3.59e-05 0.002362
        7.78e-04 8.08e-05 -4.65e-05 -3.12e-03 1.007 9.73e-07 0.001995
## 2943 -2.37e-03 -7.21e-03 -3.53e-03 1.73e-02 1.006 3.00e-05 0.001653
        1.00e-03 -2.77e-03 -1.35e-03 6.56e-03 1.008 4.31e-06 0.003374
## 2946 -9.11e-03 5.26e-03 1.10e-03 2.93e-02 1.006 8.61e-05 0.002726
## 2947 -1.13e-03 -4.81e-03 3.78e-03 -1.03e-02 1.006 1.06e-05 0.001398
        4.75e-02 -4.64e-02 -3.10e-02 1.01e-01 1.000 1.01e-03 0.004891
## 2948
        1.46e-03 -7.29e-04 -3.49e-03 8.50e-03 1.007 7.23e-06 0.001962
## 2950
        1.25e-03 -4.34e-04 1.00e-03 -3.67e-03 1.007 1.35e-06 0.001857
        1.14e-02 1.09e-02 4.42e-03 -3.24e-02 1.005 1.05e-04 0.002474
        2.36e-02 -2.61e-02 1.50e-02 -5.63e-02 0.997 3.17e-04 0.001623
## 2952
        2.25e-02 3.97e-02 3.35e-03 -5.99e-02 1.003 3.59e-04 0.003407
        2.59e-04 1.89e-02 -1.30e-03 2.83e-02 1.009 8.01e-05 0.004843
## 2956
## 2958
        4.62e-04 1.39e-03 1.97e-04 -4.35e-03 1.006 1.89e-06 0.001348
        1.47e-02 3.86e-02 -2.72e-04 -5.46e-02 1.004 2.98e-04 0.003376
## 2959
## 2960
        9.43e-03 -8.67e-04 -1.17e-03 -1.68e-02 1.008 2.83e-05 0.003613
        8.37e-03 6.35e-03 4.59e-03 -2.53e-02 1.005 6.40e-05 0.001701
## 2961
## 2962
        8.12e-04 6.36e-04 1.48e-04 -1.62e-03 1.007 2.61e-07 0.002289
## 2963 -3.25e-03 7.43e-04 -2.72e-03 8.38e-03 1.006 7.03e-06 0.001527
## 2964
        2.95e-02 -6.51e-03 3.16e-04 -5.55e-02 1.003 3.08e-04 0.003184
        1.07e-02 1.33e-02 1.15e-03 -7.59e-02 0.991 5.75e-04 0.001769
## 2965
        1.41e-02 -4.70e-02 -3.46e-04 -9.49e-02 1.005 9.01e-04 0.006451
## 2966
        1.16e-02 2.38e-03 -2.74e-03 -2.38e-02 1.007 5.69e-05 0.003269
## 2968 3.16e-03 -1.26e-03 7.99e-04 -1.06e-02 1.008 1.13e-05 0.003793
## 2969 -2.24e-03 6.44e-03 -3.81e-03 1.62e-02 1.006 2.63e-05 0.001560
```

```
## 2970 2.48e-03 6.76e-03 4.37e-03 -1.19e-02 1.008 1.41e-05 0.003101
## 2973 8.48e-03 1.13e-03 2.89e-03 -2.21e-02 1.004 4.88e-05 0.001318
       4.83e-02 -1.86e-02 -3.97e-03 -9.01e-02 0.993 8.11e-04 0.002750
## 2975 -3.22e-03 -7.33e-03 1.32e-02 -2.75e-02 1.005 7.55e-05 0.001928
2.49e-02 -2.49e-02 6.71e-03 -9.16e-02 0.991 8.37e-04 0.002486
## 2978 -6.48e-03 -7.48e-03 -3.86e-03 1.83e-02 1.005 3.34e-05 0.001184
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## 2980
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        9.63e-03 -1.02e-02 -1.04e-02 2.76e-02 1.005 7.61e-05 0.001769
## 2981
## 2982 -5.55e-03 -5.22e-03 -1.81e-03 1.66e-02 1.006 2.76e-05 0.001771
       2.62e-04 6.44e-03 -2.66e-03 1.06e-02 1.006 1.13e-05 0.001399
## 2983
## 2988 -3.56e-02 -2.59e-02 3.11e-02 -1.03e-01 0.986 1.05e-03 0.002417
## 2989
       4.45e-03 -3.19e-03 1.93e-03 -1.36e-02 1.006 1.85e-05 0.001573
## 2990 -6.36e-03 3.02e-03 1.24e-03 1.43e-02 1.007 2.05e-05 0.002374
        3.26e-03 2.26e-05 -1.09e-03 -1.01e-02 1.007 1.03e-05 0.002135
        2.00e-02 1.11e-02 4.50e-04 -3.36e-02 1.004 1.13e-04 0.001936
## 2993
        7.45e-03 1.74e-03 -6.89e-04 -2.98e-02 1.005 8.89e-05 0.002211
## 2997 -3.32e-03 2.21e-04 -2.87e-03 8.98e-03 1.007 8.06e-06 0.001998
## 2999 -3.62e-03 6.54e-03 -9.41e-04 1.31e-02 1.007 1.71e-05 0.002720
## 3000 -3.43e-03 7.50e-03 -2.32e-04 1.40e-02 1.006 1.96e-05 0.002081
## 3001 -5.79e-03 -2.12e-04 -1.33e-02 3.57e-02 1.004 1.27e-04 0.002291
       3.37e-02 3.28e-02 2.12e-03 -7.02e-02 0.997 4.93e-04 0.002379
## 3002
        2.24e-03 1.31e-03 3.52e-03 -9.93e-03 1.014 9.87e-06 0.008862
## 3004
## 3005
        4.52e-03 -6.64e-03 2.93e-03 -2.98e-02 1.004 8.88e-05 0.001853
## 3006
        1.68e-03 1.37e-03 -2.95e-04 -5.37e-03 1.008 2.88e-06 0.002761
## 3007
        3.24e-04 -5.56e-04
                           2.73e-04 -1.30e-03 1.007 1.70e-07 0.002537
## 3009 -1.20e-03 -4.76e-03 9.96e-03 -2.52e-02 1.005 6.36e-05 0.001880
## 3010 5.94e-04 -1.62e-03 -1.35e-03 1.01e-02 1.008 1.01e-05 0.003139
## 3011
       6.39e-03 -2.69e-02 1.60e-03 -3.84e-02 1.006 1.47e-04 0.003381
## 3012
        2.79e-02 -7.92e-03 3.52e-03 -4.78e-02 1.002 2.28e-04 0.002165
## 3013 -2.99e-03 -1.23e-02 2.11e-02 -4.16e-02 1.004 1.73e-04 0.002536
## 3014 -4.73e-04 -1.79e-03 9.89e-05 -2.22e-03 1.009 4.95e-07 0.004357
        3.21e-02 3.29e-02 6.05e-03 -7.10e-02 0.999 5.04e-04 0.002917
## 3015
        2.36e-02 -5.93e-02
                            8.96e-03 -1.07e-01 0.986 1.14e-03 0.002538
## 3018 3.13e-03 -5.87e-03 4.15e-03 -3.00e-02 1.002 8.97e-05 0.001196
## 3019 -6.76e-03 3.28e-02 -1.52e-02 9.09e-02 1.005 8.27e-04 0.006524
## 3020 -1.22e-04 9.56e-04 5.15e-05 3.67e-03 1.011 1.34e-06 0.006247
## 3021 -1.47e-03 4.16e-04 -3.60e-03
                                     1.48e-02 1.011 2.19e-05 0.006481
## 3022 -3.44e-02 2.84e-02 1.02e-02 1.23e-01 1.001 1.52e-03 0.006797
## 3023 -9.76e-04 1.99e-03 -1.81e-03
                                    1.53e-02 1.010 2.36e-05 0.005436
## 3024 -1.80e-03 3.40e-03 -3.21e-04 5.65e-03 1.016 3.19e-06 0.011470
## 3025 -1.45e-02 1.03e-02 -1.57e-03 5.18e-02 1.010 2.69e-04 0.006696
## 3028 -1.70e-02 -4.80e-02 5.37e-04 1.02e-01 1.008 1.03e-03 0.008745
## 3029 7.13e-03 -1.35e-02 -2.10e-03 -2.76e-02 1.014 7.61e-05 0.009133
## 3030 -1.13e-02 2.30e-03 -2.23e-04 3.28e-02 1.013 1.08e-04 0.008938
## 3031 -1.28e-02 6.77e-04 3.95e-03 3.82e-02 1.011 1.46e-04 0.006687
## 3032 -2.29e-04 6.12e-04 -6.41e-04 4.18e-03 1.011 1.75e-06 0.006575
## 3033 -3.91e-04 8.93e-03 -1.24e-04 4.95e-02 1.008 2.45e-04 0.005312
## 3034
       5.89e-03 -4.35e-02 1.32e-03 1.90e-01 0.983 3.59e-03 0.006077
        2.55e-04 8.67e-03 -6.28e-03 4.01e-02 1.008 1.61e-04 0.004925
## 3035
## 3036 -5.57e-02 3.29e-02 -1.65e-02 2.25e-01 0.972 5.06e-03 0.006173
## 3038 9.07e-03 1.54e-02 3.62e-03 -6.21e-02 1.007 3.86e-04 0.005720
## 3040 -6.83e-02 -6.01e-02 1.66e-02 1.91e-01 0.987 3.65e-03 0.007081
```

```
## 3041 -3.34e-02 -8.36e-02 2.33e-03 1.96e-01 0.994 3.83e-03 0.008985
## 3042 1.08e-02 9.01e-03 1.08e-02 -4.98e-02 1.011 2.48e-04 0.007948
## 3043 1.48e-02 -1.61e-02 6.86e-03 -6.50e-02 1.008 4.22e-04 0.006291
## 3044 3.28e-02 -2.41e-02 9.58e-03 -9.45e-02 1.005 8.93e-04 0.006586
## 3045 1.86e-03 -1.63e-02 6.20e-03 -6.42e-02 1.006 4.12e-04 0.004937
## 3047 5.10e-02 6.47e-02 1.09e-01 2.04e-01 0.994 4.17e-03 0.009693
##
## Call:
## lm(formula = target_death_rate ~ avg_ann_count + incidence_rate +
##
      pop_est2015 + poverty_percent + percent_married + pct_bach_deg25_over +
      pct_unemployed16_over + birth_rate + black_high_ind, data = num_df)
##
##
## Residuals:
       Min
                 1Q
                     Median
                                   3Q
                                           Max
## -107.709 -11.216
                     -0.381
                               10.930 137.013
## Coefficients:
                          Estimate Std. Error t value Pr(>|t|)
                         1.259e+02 9.250e+00 13.613 < 2e-16 ***
## (Intercept)
                        -2.305e-03 7.834e-04 -2.943 0.003291 **
## avg_ann_count
## incidence_rate
                         1.854e-01 8.747e-03 21.200 < 2e-16 ***
## pop_est2015
                         6.015e-06 3.294e-06
                                               1.826 0.067964 .
## poverty percent
                         3.262e-01 1.361e-01
                                               2.397 0.016622 *
## percent_married
                        -2.282e-01 1.012e-01 -2.255 0.024235 *
## pct bach deg25 over -1.934e+00 1.055e-01 -18.329 < 2e-16 ***
## pct_unemployed16_over 6.671e-01 1.851e-01
                                               3.604 0.000321 ***
## birth_rate
                        -7.549e-01 2.185e-01 -3.454 0.000562 ***
## black_high_ind
                         3.871e+00 1.127e+00
                                              3.435 0.000604 ***
## ---
## Signif. codes: 0 '***' 0.001 '**' 0.05 '.' 0.1 ' ' 1
## Residual standard error: 19.58 on 2082 degrees of freedom
## Multiple R-squared: 0.4172, Adjusted R-squared: 0.4147
## F-statistic: 165.6 on 9 and 2082 DF, p-value: < 2.2e-16
```



## Remove Outliers for First Model

```
# remove observation 282 only
num df no 282 = cancer df %>%
  dplyr::select(-county, -state, -median_age_male, -median_age_female,-pct_white,-pct_black,-pct_asian,
  tibble::rowid_to_column() %>%
  filter(rowid != 282) %>%
  na.omit()
num_df_no_1000 = cancer_df %>%
  dplyr::select(-county, -state, -median_age_male, -median_age_female, -pct_white, -pct_black, -pct_asian,
  tibble::rowid_to_column() %>%
  filter(rowid != 1000) %>%
  na.omit()
num_df_no_1221 = cancer_df %>%
  dplyr::select(-county, -state, -median_age_male, -median_age_female, -pct_white, -pct_black, -pct_asian,
  tibble::rowid_to_column() %>%
  filter(rowid != 1221) %>%
  na.omit()
num_df_no_1366 = cancer_df %>%
  dplyr::select(-county, -state, -median_age_male, -median_age_female, -pct_white, -pct_black, -pct_asian,
  tibble::rowid_to_column() %>%
  filter(rowid != 1366) %>%
  na.omit()
step_no_282 = update(step_model_ours, . ~ ., data = num_df_no_282)
summary(step_no_282)
```

```
##
## Call:
  lm(formula = target_death_rate ~ avg_ann_count + incidence_rate +
      poverty_percent + percent_married + pct_bach_deg25_over +
##
##
      pct_unemployed16_over + birth_rate + black_high_ind, data = num_df_no_282)
##
## Residuals:
##
      Min
               1Q Median
                               3Q
                                      Max
## -90.239 -11.348 -0.421 10.752 136.414
##
## Coefficients:
##
                          Estimate Std. Error t value Pr(>|t|)
## (Intercept)
                         1.219e+02 9.216e+00 13.227 < 2e-16 ***
## avg_ann_count
                        -1.080e-03 3.048e-04
                                              -3.542 0.000406 ***
## incidence_rate
                         1.952e-01 8.857e-03 22.044 < 2e-16 ***
## poverty_percent
                         3.684e-01
                                    1.349e-01
                                                2.730 0.006377 **
                        -2.604e-01 1.005e-01
                                              -2.590 0.009670 **
## percent_married
## pct_bach_deg25_over
                        -1.879e+00 1.048e-01 -17.930 < 2e-16 ***
## pct_unemployed16_over 6.533e-01 1.836e-01
                                                3.558 0.000382 ***
## birth rate
                        -7.712e-01 2.166e-01
                                               -3.560 0.000380 ***
## black_high_ind
                         3.882e+00 1.117e+00
                                               3.474 0.000523 ***
## ---
## Signif. codes: 0 '***' 0.001 '**' 0.05 '.' 0.1 ' ' 1
## Residual standard error: 19.44 on 2082 degrees of freedom
## Multiple R-squared: 0.4252, Adjusted R-squared: 0.423
## F-statistic: 192.5 on 8 and 2082 DF, p-value: < 2.2e-16
summary(step_model_ours)
##
## Call:
  lm(formula = target_death_rate ~ avg_ann_count + incidence_rate +
      poverty_percent + percent_married + pct_bach_deg25_over +
##
##
      pct_unemployed16_over + birth_rate + black_high_ind, data = num_df)
##
## Residuals:
##
       Min
                 1Q
                      Median
                                   3Q
                                           Max
                      -0.425
## -106.944 -11.216
                               10.734 137.092
## Coefficients:
##
                          Estimate Std. Error t value Pr(>|t|)
## (Intercept)
                         1.266e+02 9.249e+00 13.684 < 2e-16 ***
## avg_ann_count
                        -9.887e-04 3.067e-04 -3.223 0.001286 **
## incidence rate
                         1.832e-01 8.667e-03 21.139 < 2e-16 ***
## poverty_percent
                         3.425e-01 1.359e-01
                                                2.520 0.011797 *
## percent married
                        -2.343e-01 1.012e-01
                                              -2.315 0.020707 *
                        -1.921e+00 1.054e-01 -18.238 < 2e-16 ***
## pct_bach_deg25_over
## pct_unemployed16_over 6.863e-01
                                    1.849e-01
                                                3.711 0.000212 ***
                        -7.779e-01 2.183e-01
                                              -3.564 0.000374 ***
## birth_rate
                         3.994e+00 1.126e+00
                                               3.548 0.000397 ***
## black_high_ind
## ---
## Signif. codes: 0 '***' 0.001 '**' 0.05 '.' 0.1 ' ' 1
## Residual standard error: 19.59 on 2083 degrees of freedom
```

```
## Multiple R-squared: 0.4163, Adjusted R-squared: 0.4141
## F-statistic: 185.7 on 8 and 2083 DF, p-value: < 2.2e-16
step_no_1000 = update(step_model_ours, . ~ ., data = num_df_no_1000)
summary(step_no_1000)
##
## Call:
## lm(formula = target_death_rate ~ avg_ann_count + incidence_rate +
       poverty_percent + percent_married + pct_bach_deg25_over +
##
       pct unemployed16 over + birth rate + black high ind, data = num df no 1000)
##
## Residuals:
##
       Min
                 1Q
                      Median
                                   3Q
                                           Max
## -107.973 -11.153
                      -0.397
                               10.744
                                       136.676
##
## Coefficients:
##
                          Estimate Std. Error t value Pr(>|t|)
                         1.266e+02 9.246e+00 13.687 < 2e-16 ***
## (Intercept)
                        -1.307e-03 3.747e-04 -3.488 0.000496 ***
## avg_ann_count
## incidence_rate
                         1.839e-01 8.677e-03 21.194 < 2e-16 ***
## poverty_percent
                         3.299e-01 1.361e-01
                                                2.424 0.015442 *
## percent_married
                        -2.418e-01 1.013e-01
                                              -2.387 0.017083 *
                        -1.900e+00 1.063e-01 -17.872 < 2e-16 ***
## pct_bach_deg25_over
## pct_unemployed16_over 7.006e-01 1.851e-01
                                                3.785 0.000158 ***
## birth_rate
                         -7.682e-01 2.183e-01
                                               -3.519 0.000443 ***
## black high ind
                         4.096e+00 1.127e+00
                                               3.633 0.000287 ***
## ---
## Signif. codes: 0 '***' 0.001 '**' 0.05 '.' 0.1 ' ' 1
## Residual standard error: 19.58 on 2082 degrees of freedom
## Multiple R-squared: 0.4166, Adjusted R-squared: 0.4143
## F-statistic: 185.8 on 8 and 2082 DF, p-value: < 2.2e-16
summary(step model ours)
##
## Call:
## lm(formula = target_death_rate ~ avg_ann_count + incidence_rate +
##
       poverty_percent + percent_married + pct_bach_deg25_over +
##
       pct_unemployed16_over + birth_rate + black_high_ind, data = num_df)
##
## Residuals:
##
       Min
                  10
                      Median
                                    30
                                           Max
## -106.944 -11.216
                      -0.425
                               10.734 137.092
## Coefficients:
                          Estimate Std. Error t value Pr(>|t|)
## (Intercept)
                         1.266e+02 9.249e+00 13.684 < 2e-16 ***
## avg_ann_count
                        -9.887e-04 3.067e-04 -3.223 0.001286 **
## incidence_rate
                         1.832e-01 8.667e-03 21.139 < 2e-16 ***
## poverty_percent
                         3.425e-01 1.359e-01
                                                2.520 0.011797 *
## percent_married
                        -2.343e-01 1.012e-01 -2.315 0.020707 *
## pct_bach_deg25_over
                        -1.921e+00 1.054e-01 -18.238 < 2e-16 ***
## pct_unemployed16_over 6.863e-01 1.849e-01
                                                3.711 0.000212 ***
```

```
## birth rate
                        -7.779e-01 2.183e-01 -3.564 0.000374 ***
                         3.994e+00 1.126e+00
                                               3.548 0.000397 ***
## black_high_ind
## ---
## Signif. codes: 0 '***' 0.001 '**' 0.05 '.' 0.1 ' ' 1
## Residual standard error: 19.59 on 2083 degrees of freedom
## Multiple R-squared: 0.4163, Adjusted R-squared: 0.4141
## F-statistic: 185.7 on 8 and 2083 DF, p-value: < 2.2e-16
step_no_1221 = update(step_model_ours, . ~ ., data = num_df_no_1221)
summary(step no 1221)
##
## Call:
## lm(formula = target_death_rate ~ avg_ann_count + incidence_rate +
##
      poverty_percent + percent_married + pct_bach_deg25_over +
##
      pct_unemployed16_over + birth_rate + black_high_ind, data = num_df_no_1221)
##
## Residuals:
       Min
                 1Q
                     Median
                                   30
                                           Max
                     -0.317
## -106.132 -11.142
                               10.702 118.969
##
## Coefficients:
##
                          Estimate Std. Error t value Pr(>|t|)
## (Intercept)
                         1.282e+02 9.144e+00 14.018 < 2e-16 ***
                        -9.428e-04 3.032e-04 -3.109 0.001900 **
## avg_ann_count
                         1.828e-01 8.566e-03 21.339 < 2e-16 ***
## incidence rate
## poverty percent
                         3.249e-01 1.343e-01
                                               2.419 0.015666 *
                        -2.482e-01 1.000e-01 -2.481 0.013180 *
## percent_married
## pct bach deg25 over -1.961e+00 1.043e-01 -18.810 < 2e-16 ***
## pct_unemployed16_over 6.970e-01 1.828e-01
                                               3.814 0.000141 ***
## birth_rate
                        -7.736e-01 2.157e-01 -3.586 0.000344 ***
                         3.678e+00 1.113e+00
                                               3.303 0.000972 ***
## black_high_ind
## Signif. codes: 0 '***' 0.001 '**' 0.05 '.' 0.1 ' ' 1
## Residual standard error: 19.36 on 2082 degrees of freedom
## Multiple R-squared: 0.4244, Adjusted R-squared: 0.4222
## F-statistic: 191.9 on 8 and 2082 DF, p-value: < 2.2e-16
summary(step_model_ours)
##
## Call:
## lm(formula = target_death_rate ~ avg_ann_count + incidence_rate +
      poverty_percent + percent_married + pct_bach_deg25_over +
##
      pct_unemployed16_over + birth_rate + black_high_ind, data = num_df)
## Residuals:
       Min
                 10
                      Median
                                   30
## -106.944 -11.216
                      -0.425
                               10.734 137.092
##
## Coefficients:
                          Estimate Std. Error t value Pr(>|t|)
                         1.266e+02 9.249e+00 13.684 < 2e-16 ***
## (Intercept)
```

```
## avg_ann_count
                       -9.887e-04 3.067e-04 -3.223 0.001286 **
                        1.832e-01 8.667e-03 21.139 < 2e-16 ***
## incidence_rate
## poverty percent
                        3.425e-01 1.359e-01
                                              2.520 0.011797 *
## percent_married
                        -2.343e-01 1.012e-01 -2.315 0.020707 *
## pct bach deg25 over -1.921e+00 1.054e-01 -18.238 < 2e-16 ***
## pct unemployed16 over 6.863e-01 1.849e-01
                                               3.711 0.000212 ***
                        -7.779e-01 2.183e-01 -3.564 0.000374 ***
## birth rate
                         3.994e+00 1.126e+00 3.548 0.000397 ***
## black_high_ind
## ---
## Signif. codes: 0 '***' 0.001 '**' 0.05 '.' 0.1 ' ' 1
## Residual standard error: 19.59 on 2083 degrees of freedom
## Multiple R-squared: 0.4163, Adjusted R-squared: 0.4141
## F-statistic: 185.7 on 8 and 2083 DF, p-value: < 2.2e-16
step_no_1366 = update(step_model_ours, . ~ ., data = num_df_no_1366)
summary(step_no_1366)
##
## Call:
## lm(formula = target_death_rate ~ avg_ann_count + incidence_rate +
##
      poverty_percent + percent_married + pct_bach_deg25_over +
##
      pct_unemployed16_over + birth_rate + black_high_ind, data = num_df_no_1366)
##
## Residuals:
##
       \mathtt{Min}
                 1Q
                    Median
                                   3Q
                              10.734 137.073
## -106.817 -11.185 -0.414
## Coefficients:
##
                          Estimate Std. Error t value Pr(>|t|)
                         1.271e+02 9.169e+00 13.865 < 2e-16 ***
## (Intercept)
## avg_ann_count
                        -1.038e-03 3.042e-04 -3.414 0.000653 ***
                        1.828e-01 8.592e-03 21.271 < 2e-16 ***
## incidence_rate
## poverty_percent
                         3.185e-01 1.348e-01
                                               2.363 0.018202 *
## percent_married
                        -2.388e-01 1.003e-01 -2.380 0.017399 *
## pct_bach_deg25_over -1.920e+00 1.044e-01 -18.387 < 2e-16 ***
## pct_unemployed16_over 7.207e-01 1.834e-01
                                               3.930 8.77e-05 ***
## birth_rate
                        -7.891e-01 2.164e-01 -3.647 0.000272 ***
                         4.066e+00 1.116e+00 3.643 0.000276 ***
## black_high_ind
## Signif. codes: 0 '***' 0.001 '**' 0.05 '.' 0.1 ' ' 1
## Residual standard error: 19.42 on 2082 degrees of freedom
## Multiple R-squared: 0.4208, Adjusted R-squared: 0.4186
## F-statistic: 189.1 on 8 and 2082 DF, p-value: < 2.2e-16
summary(step model ours)
##
## Call:
## lm(formula = target_death_rate ~ avg_ann_count + incidence_rate +
##
      poverty_percent + percent_married + pct_bach_deg25_over +
##
      pct_unemployed16_over + birth_rate + black_high_ind, data = num_df)
## Residuals:
```

```
Median
                 1Q
## -106.944 -11.216
                      -0.425
                               10.734 137.092
##
## Coefficients:
##
                          Estimate Std. Error t value Pr(>|t|)
                         1.266e+02 9.249e+00 13.684 < 2e-16 ***
## (Intercept)
## avg ann count
                        -9.887e-04 3.067e-04 -3.223 0.001286 **
## incidence rate
                         1.832e-01 8.667e-03 21.139 < 2e-16 ***
## poverty_percent
                         3.425e-01 1.359e-01
                                               2.520 0.011797 *
## percent_married
                        -2.343e-01
                                   1.012e-01
                                              -2.315 0.020707 *
## pct_bach_deg25_over
                        -1.921e+00 1.054e-01 -18.238 < 2e-16 ***
## pct_unemployed16_over 6.863e-01 1.849e-01
                                                3.711 0.000212 ***
                                              -3.564 0.000374 ***
## birth_rate
                        -7.779e-01 2.183e-01
## black_high_ind
                         3.994e+00 1.126e+00
                                              3.548 0.000397 ***
## ---
## Signif. codes: 0 '***' 0.001 '**' 0.05 '.' 0.1 ' ' 1
## Residual standard error: 19.59 on 2083 degrees of freedom
## Multiple R-squared: 0.4163, Adjusted R-squared: 0.4141
## F-statistic: 185.7 on 8 and 2083 DF, p-value: < 2.2e-16
```

## Remove influential points for Second Model

```
step_no_282_plus = update(step_model_plus, . ~ ., data = num_df_no_282)
summary(step_no_282_plus)
##
## Call:
  lm(formula = target_death_rate ~ avg_ann_count + incidence_rate +
##
      poverty_percent + percent_married + pct_bach_deg25_over +
##
      pct_unemployed16_over + birth_rate + black_high_ind + pct_no_cov +
      incidence_rate:black_high_ind, data = num_df_no_282)
##
##
## Residuals:
      Min
               10 Median
                               3Q
## -89.936 -11.344 -0.462 10.635 136.238
##
## Coefficients:
                                  Estimate Std. Error t value Pr(>|t|)
## (Intercept)
                                 1.228e+02 9.651e+00 12.724 < 2e-16 ***
## avg_ann_count
                                -1.092e-03 3.056e-04 -3.572 0.000362 ***
## incidence_rate
                                 1.946e-01 1.007e-02 19.320 < 2e-16 ***
## poverty_percent
                                 3.994e-01 1.443e-01
                                                        2.767 0.005702 **
## percent married
                                -2.451e-01 1.039e-01 -2.359 0.018408 *
## pct_bach_deg25_over
                                -1.891e+00 1.075e-01 -17.594 < 2e-16 ***
## pct_unemployed16_over
                                 6.648e-01 1.849e-01
                                                        3.596 0.000331 ***
## birth_rate
                                -7.651e-01 2.170e-01
                                                      -3.526 0.000432 ***
## black_high_ind
                                 5.137e+00 1.011e+01
                                                        0.508 0.611405
## pct_no_cov
                                -5.807e-02 9.760e-02 -0.595 0.551899
## incidence_rate:black_high_ind -2.745e-03 2.206e-02 -0.124 0.900998
## Signif. codes: 0 '***' 0.001 '**' 0.05 '.' 0.1 ' ' 1
##
```

```
## Residual standard error: 19.45 on 2080 degrees of freedom
## Multiple R-squared: 0.4253, Adjusted R-squared: 0.4225
## F-statistic: 153.9 on 10 and 2080 DF, p-value: < 2.2e-16
summary(step_model_plus)
##
## Call:
## lm(formula = target_death_rate ~ avg_ann_count + incidence_rate +
      poverty_percent + percent_married + pct_bach_deg25_over +
##
      pct unemployed16 over + birth rate + black high ind + pct no cov +
##
      incidence_rate:black_high_ind, data = num_df)
##
## Residuals:
     Min
             1Q Median
                           3Q
                                 Max
## -89.73 -11.36 -0.49 10.78 136.59
## Coefficients:
                                  Estimate Std. Error t value Pr(>|t|)
                                 1.224e+02 9.707e+00 12.609 < 2e-16 ***
## (Intercept)
                                -1.023e-03 3.071e-04 -3.330 0.000885 ***
## avg_ann_count
                                 1.941e-01 1.013e-02 19.155 < 2e-16 ***
## incidence_rate
## poverty_percent
                                 3.984e-01 1.452e-01
                                                       2.745 0.006112 **
                                -2.228e-01 1.044e-01 -2.134 0.032964 *
## percent_married
## pct_bach_deg25_over
                                -1.909e+00 1.081e-01 -17.666 < 2e-16 ***
                                 6.850e-01 1.859e-01
                                                       3.684 0.000235 ***
## pct_unemployed16_over
## birth rate
                                -7.546e-01 2.183e-01 -3.457 0.000557 ***
## black high ind
                                 2.720e+01 9.172e+00 2.965 0.003060 **
                                -7.527e-02 9.811e-02 -0.767 0.443086
## pct_no_cov
## incidence_rate:black_high_ind -5.099e-02 2.001e-02 -2.548 0.010900 *
## ---
## Signif. codes: 0 '***' 0.001 '**' 0.05 '.' 0.1 ' ' 1
## Residual standard error: 19.56 on 2081 degrees of freedom
## Multiple R-squared: 0.4183, Adjusted R-squared: 0.4155
## F-statistic: 149.7 on 10 and 2081 DF, p-value: < 2.2e-16
step_no_1000_plus = update(step_model_plus, . ~ ., data = num_df_no_1000)
summary(step_no_1000_plus)
##
## Call:
## lm(formula = target_death_rate ~ avg_ann_count + incidence_rate +
##
      poverty_percent + percent_married + pct_bach_deg25_over +
##
      pct_unemployed16_over + birth_rate + black_high_ind + pct_no_cov +
##
      incidence_rate:black_high_ind, data = num_df_no_1000)
##
## Residuals:
      Min
               1Q Median
                               3Q
                                      Max
## -89.630 -11.291 -0.507 10.770 136.123
##
## Coefficients:
##
                                  Estimate Std. Error t value Pr(>|t|)
## (Intercept)
                                 1.225e+02 9.704e+00 12.619 < 2e-16 ***
                                -1.362e-03 3.756e-04 -3.627 0.000294 ***
## avg_ann_count
```

```
## incidence rate
                                1.948e-01 1.014e-02 19.215 < 2e-16 ***
                                3.887e-01 1.452e-01 2.676 0.007504 **
## poverty_percent
## percent married
                               -2.292e-01 1.045e-01 -2.194 0.028366 *
## pct_bach_deg25_over
                               -1.887e+00 1.089e-01 -17.332 < 2e-16 ***
                                7.013e-01 1.861e-01
## pct_unemployed16_over
                                                     3.768 0.000169 ***
## birth rate
                               -7.435e-01 2.183e-01 -3.406 0.000672 ***
                                2.758e+01 9.172e+00 3.007 0.002668 **
## black high ind
                                -8.185e-02 9.817e-02 -0.834 0.404536
## pct no cov
## incidence_rate:black_high_ind -5.159e-02 2.001e-02 -2.579 0.009975 **
## Signif. codes: 0 '***' 0.001 '**' 0.05 '.' 0.1 ' ' 1
## Residual standard error: 19.56 on 2080 degrees of freedom
## Multiple R-squared: 0.4187, Adjusted R-squared: 0.4159
## F-statistic: 149.8 on 10 and 2080 DF, p-value: < 2.2e-16
summary(step_model_plus)
##
## Call:
## lm(formula = target_death_rate ~ avg_ann_count + incidence_rate +
##
      poverty_percent + percent_married + pct_bach_deg25_over +
##
      pct_unemployed16_over + birth_rate + black_high_ind + pct_no_cov +
##
      incidence_rate:black_high_ind, data = num_df)
##
## Residuals:
     Min
             1Q Median
                           30
                                 Max
## -89.73 -11.36 -0.49 10.78 136.59
##
## Coefficients:
##
                                 Estimate Std. Error t value Pr(>|t|)
## (Intercept)
                                1.224e+02 9.707e+00 12.609 < 2e-16 ***
                               -1.023e-03 3.071e-04 -3.330 0.000885 ***
## avg_ann_count
                                1.941e-01 1.013e-02 19.155 < 2e-16 ***
## incidence rate
## poverty_percent
                                3.984e-01 1.452e-01 2.745 0.006112 **
                               -2.228e-01 1.044e-01 -2.134 0.032964 *
## percent_married
                               -1.909e+00 1.081e-01 -17.666 < 2e-16 ***
## pct_bach_deg25_over
## pct_unemployed16_over
                                6.850e-01 1.859e-01 3.684 0.000235 ***
                               -7.546e-01 2.183e-01 -3.457 0.000557 ***
## birth_rate
## black high ind
                                2.720e+01 9.172e+00 2.965 0.003060 **
                               -7.527e-02 9.811e-02 -0.767 0.443086
## pct_no_cov
## incidence_rate:black_high_ind -5.099e-02 2.001e-02 -2.548 0.010900 *
## ---
## Signif. codes: 0 '***' 0.001 '**' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 19.56 on 2081 degrees of freedom
## Multiple R-squared: 0.4183, Adjusted R-squared: 0.4155
## F-statistic: 149.7 on 10 and 2081 DF, p-value: < 2.2e-16
step_no_1221_plus = update(step_model_plus, . ~ ., data = num_df_no_1221)
summary(step_no_1221_plus)
##
## Call:
## lm(formula = target_death_rate ~ avg_ann_count + incidence_rate +
```

```
##
      poverty_percent + percent_married + pct_bach_deg25_over +
##
      pct_unemployed16_over + birth_rate + black_high_ind + pct_no_cov +
##
      incidence_rate:black_high_ind, data = num_df_no_1221)
##
## Residuals:
##
      Min
               1Q Median
                               3Q
                                      Max
  -89.830 -11.245 -0.484 10.853 119.160
##
## Coefficients:
##
                                  Estimate Std. Error t value Pr(>|t|)
## (Intercept)
                                 1.239e+02 9.597e+00 12.910 < 2e-16 ***
                                -9.744e-04 3.036e-04 -3.209 0.001351 **
## avg_ann_count
## incidence_rate
                                 1.937e-01 1.001e-02 19.341 < 2e-16 ***
## poverty_percent
                                 3.754e-01 1.435e-01
                                                        2.616 0.008973 **
                                -2.392e-01 1.032e-01 -2.317 0.020580 *
## percent_married
## pct_bach_deg25_over
                                -1.947e+00 1.069e-01 -18.208 < 2e-16 ***
## pct_unemployed16_over
                                 6.939e-01 1.838e-01
                                                        3.776 0.000164 ***
## birth rate
                                -7.515e-01 2.157e-01 -3.483 0.000505 ***
                                 2.657e+01 9.066e+00
                                                       2.930 0.003424 **
## black_high_ind
                                -6.521e-02 9.699e-02 -0.672 0.501394
## pct no cov
## incidence_rate:black_high_ind -5.029e-02 1.978e-02 -2.543 0.011062 *
## Signif. codes: 0 '***' 0.001 '**' 0.05 '.' 0.1 ' ' 1
## Residual standard error: 19.34 on 2080 degrees of freedom
## Multiple R-squared: 0.4264, Adjusted R-squared: 0.4236
## F-statistic: 154.6 on 10 and 2080 DF, p-value: < 2.2e-16
summary(step_model_plus)
##
## Call:
## lm(formula = target_death_rate ~ avg_ann_count + incidence_rate +
      poverty_percent + percent_married + pct_bach_deg25_over +
##
##
      pct_unemployed16_over + birth_rate + black_high_ind + pct_no_cov +
##
      incidence_rate:black_high_ind, data = num_df)
##
## Residuals:
##
     Min
             1Q Median
                           3Q
                                 Max
  -89.73 -11.36 -0.49 10.78 136.59
##
## Coefficients:
##
                                  Estimate Std. Error t value Pr(>|t|)
## (Intercept)
                                 1.224e+02 9.707e+00 12.609 < 2e-16 ***
                                -1.023e-03 3.071e-04 -3.330 0.000885 ***
## avg ann count
                                 1.941e-01 1.013e-02 19.155 < 2e-16 ***
## incidence_rate
## poverty percent
                                 3.984e-01 1.452e-01 2.745 0.006112 **
                                -2.228e-01 1.044e-01 -2.134 0.032964 *
## percent_married
## pct_bach_deg25_over
                                -1.909e+00 1.081e-01 -17.666 < 2e-16 ***
## pct_unemployed16_over
                                 6.850e-01 1.859e-01 3.684 0.000235 ***
## birth_rate
                                -7.546e-01 2.183e-01 -3.457 0.000557 ***
                                 2.720e+01 9.172e+00
                                                        2.965 0.003060 **
## black_high_ind
                                -7.527e-02 9.811e-02 -0.767 0.443086
## pct_no_cov
## incidence_rate:black_high_ind -5.099e-02 2.001e-02 -2.548 0.010900 *
```

```
## Signif. codes: 0 '***' 0.001 '**' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 19.56 on 2081 degrees of freedom
## Multiple R-squared: 0.4183, Adjusted R-squared: 0.4155
## F-statistic: 149.7 on 10 and 2081 DF, p-value: < 2.2e-16
step_no_1366_plus = update(step_model_plus, . ~ ., data = num_df_no_1366)
summary(step_no_1366_plus)
##
## Call:
## lm(formula = target_death_rate ~ avg_ann_count + incidence_rate +
      poverty percent + percent married + pct bach deg25 over +
##
      pct_unemployed16_over + birth_rate + black_high_ind + pct_no_cov +
##
      incidence_rate:black_high_ind, data = num_df_no_1366)
##
## Residuals:
##
               1Q Median
      Min
                               3Q
## -89.400 -11.331 -0.494 10.906 136.522
##
## Coefficients:
##
                                  Estimate Std. Error t value Pr(>|t|)
## (Intercept)
                                 1.234e+02 9.624e+00 12.818 < 2e-16 ***
                                -1.076e-03 3.046e-04 -3.533 0.000421 ***
## avg_ann_count
## incidence_rate
                                 1.931e-01 1.004e-02 19.231 < 2e-16 ***
## poverty_percent
                                 3.829e-01 1.439e-01
                                                       2.661 0.007856 **
                                -2.228e-01 1.035e-01 -2.153 0.031444 *
## percent_married
## pct bach deg25 over
                                -1.912e+00 1.071e-01 -17.849 < 2e-16 ***
                                7.231e-01 1.844e-01 3.922 9.08e-05 ***
## pct_unemployed16_over
## birth rate
                                -7.645e-01 2.164e-01 -3.534 0.000419 ***
## black_high_ind
                                 2.700e+01 9.092e+00
                                                        2.970 0.003011 **
                                -9.198e-02 9.729e-02 -0.945 0.344575
## pct_no_cov
## incidence_rate:black_high_ind -5.040e-02 1.983e-02 -2.541 0.011118 *
## Signif. codes: 0 '***' 0.001 '**' 0.05 '.' 0.1 ' ' 1
## Residual standard error: 19.39 on 2080 degrees of freedom
## Multiple R-squared: 0.4229, Adjusted R-squared: 0.4202
## F-statistic: 152.4 on 10 and 2080 DF, p-value: < 2.2e-16
summary(step_model_plus)
##
## Call:
## lm(formula = target_death_rate ~ avg_ann_count + incidence_rate +
      poverty_percent + percent_married + pct_bach_deg25_over +
      pct_unemployed16_over + birth_rate + black_high_ind + pct_no_cov +
##
##
      incidence rate:black high ind, data = num df)
##
## Residuals:
##
     Min
             1Q Median
                           3Q
                                 Max
## -89.73 -11.36 -0.49 10.78 136.59
##
## Coefficients:
##
                                  Estimate Std. Error t value Pr(>|t|)
```

```
## (Intercept)
                               1.224e+02 9.707e+00 12.609 < 2e-16 ***
## avg_ann_count
                              -1.023e-03 3.071e-04 -3.330 0.000885 ***
## incidence rate
                               1.941e-01 1.013e-02 19.155 < 2e-16 ***
## poverty_percent
                               3.984e-01 1.452e-01 2.745 0.006112 **
                              -2.228e-01 1.044e-01 -2.134 0.032964 *
## percent_married
## pct_bach_deg25_over
## pct_unemployed16_over
                              -1.909e+00 1.081e-01 -17.666 < 2e-16 ***
                               6.850e-01 1.859e-01 3.684 0.000235 ***
                               -7.546e-01 2.183e-01 -3.457 0.000557 ***
## birth_rate
                                2.720e+01 9.172e+00 2.965 0.003060 **
## black_high_ind
## pct_no_cov
                               -7.527e-02 9.811e-02 -0.767 0.443086
## incidence_rate:black_high_ind -5.099e-02 2.001e-02 -2.548 0.010900 *
## Signif. codes: 0 '***' 0.001 '**' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 19.56 on 2081 degrees of freedom
## Multiple R-squared: 0.4183, Adjusted R-squared: 0.4155
## F-statistic: 149.7 on 10 and 2081 DF, p-value: < 2.2e-16
```