

# ADM Assignment 3

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```
library(ISLR)
library(dplyr)
```

```
##
## Attaching package: 'dplyr'
## The following objects are masked from 'package:stats':
##
##   filter, lag
## The following objects are masked from 'package:base':
##
##   intersect, setdiff, setequal, union
```

```
library(glmnet)
```

```
## Loading required package: Matrix
## Loaded glmnet 4.1-6
```

```
library(caret)
```

```
## Loading required package: ggplot2
## Loading required package: lattice
```

```
library(kernlab)
```

```
##
## Attaching package: 'kernlab'
## The following object is masked from 'package:ggplot2':
##
##   alpha
```

```
Carseats_Filtered <- Carseats %>% select("Sales", "Price", "Advertising", "Population", "Age", "Income", "Education")
```

**\*\*QB1.** Build a linear SVM regression model to predict Sales based on all other attributes (“Price”, “Advertising”, “Population”, “Age”, “Income” and “Education”). Hint: use caret train() with method set to “svmLinear”. What is the R-squared of the model?

```
myctrl <- trainControl(method = "repeatedcv", number = 10, repeats = 3)
set.seed(33)
svm_Linear <- train(Sales~., data = Carseats_Filtered, method = "svmLinear",
                    trControl=myctrl,
                    preProcess = c("center", "scale"),
                    tuneLength = 10)

svm_Linear
```

```
## Support Vector Machines with Linear Kernel
##
## 400 samples
## 6 predictor
##
## Pre-processing: centered (6), scaled (6)
## Resampling: Cross-Validated (10 fold, repeated 3 times)
## Summary of sample sizes: 360, 360, 360, 360, 360, 360, ...
## Resampling results:
##
## RMSE      Rsquared    MAE
## 2.266556  0.3702692  1.826177
##
## Tuning parameter 'C' was held constant at a value of 1
```

In the above model, I added a train control section that adds cross validation to the model. the R square of the model is 0.3702692

**\*\*QB2** Customize the search grid by checking the model's performance for C parameter of 0.1, 0.5, 1 and 10 using 2 repeats of 5-fold cross validation.

```
grid <- expand.grid(C = c(0.1, 0.5, 1, 10))
myctrl2 <- trainControl(method = "repeatedcv", number = 5, repeats = 2)
svm_Linear_Grid <- train(Sales~., data = Carseats_Filtered, method = "svmLinear",
                        trControl=myctrl2,
                        preProcess = c("center", "scale"),
                        tuneGrid = grid,
                        tuneLength = 10)

svm_Linear_Grid
```

```
## Support Vector Machines with Linear Kernel
##
## 400 samples
## 6 predictor
##
## Pre-processing: centered (6), scaled (6)
## Resampling: Cross-Validated (5 fold, repeated 2 times)
## Summary of sample sizes: 320, 320, 319, 320, 321, 320, ...
## Resampling results across tuning parameters:
##
## C      RMSE      Rsquared    MAE
## 0.1  2.261443  0.3572556  1.814723
## 0.5  2.262722  0.3572088  1.815372
## 1.0  2.262918  0.3571380  1.815725
## 10.0 2.263355  0.3571151  1.815768
##
## RMSE was used to select the optimal model using the smallest value.
## The final value used for the model was C = 0.1.
```

#In this step we have added a search grid at the desired points. We have also adjusted the cross validation as instructed. The interesting outcome is that as we increase C, the change decreases. The difference between 1 and 10 is much less than between 0.1 and 0.5. With this, we can see that **0.1** is the best C available.

**\*\* QB3** Train a neural network model to predict Sales based on all other attributes (“Price”, “Advertising”, “Population”, “Age”, “Income” and “Education”). Hint: use caret train() with method set to “nnet”. What is

the R-square of the model with the best hyper parameters (using default caret search grid) – hint: don't forget to scale the data.

```
set.seed(23)
numfolds <- trainControl(method = 'LOOCV', verboseIter = FALSE)
nnet_Cars <- train(Sales~., data = Carseats_Filtered, method = "nnet",
  preProcess = c("center", "scale"),
  trControl = numfolds)
```

```
## # weights:  9
## initial  value 22079.681855
## final  value 19990.920100
## converged
## # weights: 25
## initial  value 23294.046231
## final  value 19990.920100
## converged
## # weights: 41
## initial  value 22946.130470
## final  value 19990.920100
## converged
## # weights:  9
## initial  value 22964.596510
## iter 10 value 19996.699121
## final  value 19996.428871
## converged
## # weights: 25
## initial  value 23374.135659
## iter 10 value 19996.230359
## iter 20 value 19994.895174
## iter 20 value 19994.895060
## iter 20 value 19994.895032
## final  value 19994.895032
## converged
## # weights: 41
## initial  value 23546.140799
## iter 10 value 20004.427706
## iter 20 value 19994.236210
## final  value 19994.235763
## converged
## # weights:  9
## initial  value 23062.672151
## iter 10 value 20000.932754
## iter 20 value 19991.035538
## iter 20 value 19991.035492
## final  value 19991.035492
## converged
## # weights: 25
## initial  value 23197.430881
## iter 10 value 20006.113255
## iter 20 value 19991.095265
## final  value 19990.932482
## converged
## # weights: 41
## initial  value 22255.387411
```

```

## iter 10 value 20012.320571
## iter 20 value 19991.166831
## final value 19990.929556
## converged
## # weights: 9
## initial value 23326.051345
## final value 19958.721700
## converged
## # weights: 25
## initial value 22642.865779
## final value 19958.721700
## converged
## # weights: 41
## initial value 22748.278816
## final value 19958.721700
## converged
## # weights: 9
## initial value 23348.110751
## iter 10 value 19964.381455
## final value 19964.229903
## converged
## # weights: 25
## initial value 21997.696541
## iter 10 value 19963.776380
## final value 19962.696278
## converged
## # weights: 41
## initial value 22382.233769
## iter 10 value 19963.086908
## final value 19962.037040
## converged
## # weights: 9
## initial value 22703.648584
## iter 10 value 19969.258470
## iter 20 value 19958.843181
## iter 20 value 19958.843132
## final value 19958.843132
## converged
## # weights: 25
## initial value 23047.961795
## iter 10 value 19974.255353
## iter 20 value 19958.900791
## final value 19958.737247
## converged
## # weights: 41
## initial value 23138.299811
## iter 10 value 19977.858870
## iter 20 value 19958.942337
## final value 19958.731844
## converged
## # weights: 9
## initial value 21824.314173
## final value 19981.086500
## converged

```

```

## # weights: 25
## initial value 23771.441833
## final value 19981.086500
## converged
## # weights: 41
## initial value 21418.027902
## final value 19981.086500
## converged
## # weights: 9
## initial value 23351.963526
## iter 10 value 19987.121872
## final value 19986.595082
## converged
## # weights: 25
## initial value 21854.349404
## iter 10 value 19985.793433
## final value 19985.061374
## converged
## # weights: 41
## initial value 21503.127900
## iter 10 value 19995.909222
## iter 20 value 19984.402841
## final value 19984.402081
## converged
## # weights: 9
## initial value 22946.159803
## iter 10 value 19992.998671
## iter 20 value 19981.223838
## iter 20 value 19981.223783
## final value 19981.223783
## converged
## # weights: 25
## initial value 22365.346048
## iter 10 value 19993.933432
## iter 20 value 19981.234615
## final value 19981.098678
## converged
## # weights: 41
## initial value 23434.040635
## iter 10 value 19999.016325
## iter 20 value 19981.293217
## final value 19981.097286
## converged
## # weights: 9
## initial value 23285.202195
## final value 20022.210100
## converged
## # weights: 25
## initial value 22209.913385
## final value 20022.210100
## converged
## # weights: 41
## initial value 23481.085226
## final value 20022.210100

```

```

## converged
## # weights: 9
## initial value 22984.023346
## iter 10 value 20029.938865
## final value 20027.719632
## converged
## # weights: 25
## initial value 22001.163639
## iter 10 value 20028.040315
## iter 20 value 20026.185853
## iter 20 value 20026.185676
## iter 20 value 20026.185604
## final value 20026.185604
## converged
## # weights: 41
## initial value 22325.987310
## iter 10 value 20027.977068
## iter 20 value 20025.527479
## final value 20025.526140
## converged
## # weights: 9
## initial value 23421.026893
## iter 10 value 20032.265024
## iter 20 value 20022.326025
## iter 20 value 20022.325979
## final value 20022.325979
## converged
## # weights: 25
## initial value 22592.318060
## iter 10 value 20036.136659
## iter 20 value 20022.370662
## final value 20022.220800
## converged
## # weights: 41
## initial value 22590.772227
## iter 10 value 20039.416203
## iter 20 value 20022.408473
## final value 20022.222573
## converged
## # weights: 9
## initial value 22205.556667
## final value 20053.247600
## converged
## # weights: 25
## initial value 23403.754348
## final value 20053.247600
## converged
## # weights: 41
## initial value 21399.832743
## final value 20053.247600
## converged
## # weights: 9
## initial value 23182.666002
## iter 10 value 20059.904533

```

```

## final value 20058.758376
## converged
## # weights: 25
## initial value 23451.204475
## iter 10 value 20058.581830
## final value 20057.223891
## converged
## # weights: 41
## initial value 24228.289890
## iter 10 value 20070.501280
## iter 20 value 20056.564529
## iter 20 value 20056.564405
## iter 20 value 20056.564365
## final value 20056.564365
## converged
## # weights: 9
## initial value 23559.715061
## iter 10 value 20062.117081
## iter 20 value 20053.349858
## iter 20 value 20053.349817
## final value 20053.349817
## converged
## # weights: 25
## initial value 21686.248834
## iter 10 value 20062.859238
## iter 20 value 20053.358415
## final value 20053.259921
## converged
## # weights: 41
## initial value 24286.849892
## iter 10 value 20063.485355
## iter 20 value 20053.365633
## final value 20053.260785
## converged
## # weights: 9
## initial value 22890.346590
## final value 19966.934000
## converged
## # weights: 25
## initial value 23150.138025
## final value 19966.934000
## converged
## # weights: 41
## initial value 22804.227511
## final value 19966.934000
## converged
## # weights: 9
## initial value 23025.274447
## iter 10 value 19972.810855
## final value 19972.442338
## converged
## # weights: 25
## initial value 22697.630506
## iter 10 value 19971.764311

```

```

## final value 19970.908657
## converged
## # weights: 41
## initial value 22266.371672
## iter 10 value 19971.135025
## final value 19970.249433
## converged
## # weights: 9
## initial value 22892.708368
## iter 10 value 19977.795907
## iter 20 value 19967.059229
## iter 20 value 19967.059179
## final value 19967.059179
## converged
## # weights: 25
## initial value 23133.630136
## iter 10 value 19981.706645
## iter 20 value 19967.104317
## final value 19966.949809
## converged
## # weights: 41
## initial value 21315.757687
## iter 10 value 19976.716568
## iter 20 value 19967.046785
## final value 19966.943378
## converged
## # weights: 9
## initial value 23349.919398
## final value 20031.473200
## converged
## # weights: 25
## initial value 21475.710928
## final value 20031.473200
## converged
## # weights: 41
## initial value 23350.329289
## final value 20031.473200
## converged
## # weights: 9
## initial value 23217.969059
## iter 10 value 20040.737807
## final value 20036.983085
## converged
## # weights: 25
## initial value 21819.618795
## iter 10 value 20042.046777
## iter 20 value 20035.449100
## final value 20035.448829
## converged
## # weights: 41
## initial value 22304.205432
## iter 10 value 20035.770290
## final value 20034.789417
## converged

```



```

## # weights: 9
## initial value 23800.904600
## iter 10 value 20039.588031
## iter 20 value 20031.566758
## iter 20 value 20031.566720
## final value 20031.566720
## converged
## # weights: 25
## initial value 22874.336142
## iter 10 value 20048.013511
## iter 20 value 20031.663897
## final value 20031.487273
## converged
## # weights: 41
## initial value 22976.852599
## iter 10 value 20051.700015
## iter 20 value 20031.706399
## final value 20031.484718
## converged
## # weights: 9
## initial value 21944.986628
## final value 19945.447600
## converged
## # weights: 25
## initial value 22135.803318
## final value 19945.447600
## converged
## # weights: 41
## initial value 23545.833862
## final value 19945.447600
## converged
## # weights: 9
## initial value 22195.616246
## iter 10 value 19952.172245
## final value 19950.955489
## converged
## # weights: 25
## initial value 23258.427394
## iter 10 value 19949.974303
## final value 19949.421945
## converged
## # weights: 41
## initial value 22141.659736
## iter 10 value 19951.780518
## iter 20 value 19948.770099
## final value 19948.762854
## converged
## # weights: 9
## initial value 22418.714130
## iter 10 value 19957.284281
## iter 20 value 19945.584068
## iter 20 value 19945.584013
## final value 19945.584013
## converged

```

```

## # weights: 25
## initial value 22970.188737
## iter 10 value 19962.405047
## iter 20 value 19945.643106
## final value 19945.460973
## converged
## # weights: 41
## initial value 22137.233048
## iter 10 value 19965.268676
## iter 20 value 19945.676121
## final value 19945.457736
## converged
## # weights: 9
## initial value 22999.365170
## final value 20032.478500
## converged
## # weights: 25
## initial value 22689.436829
## final value 20032.478500
## converged
## # weights: 41
## initial value 23472.770991
## final value 20032.478500
## converged
## # weights: 9
## initial value 22324.744266
## iter 10 value 20040.023843
## final value 20037.988371
## converged
## # weights: 25
## initial value 23432.966616
## iter 10 value 20039.163161
## iter 20 value 20036.454392
## iter 20 value 20036.454258
## iter 20 value 20036.454228
## final value 20036.454228
## converged
## # weights: 41
## initial value 21893.347456
## iter 10 value 20054.976231
## iter 20 value 20035.798015
## final value 20035.794701
## converged
## # weights: 9
## initial value 22863.480532
## iter 10 value 20042.539088
## iter 20 value 20032.594491
## iter 20 value 20032.594444
## final value 20032.594444
## converged
## # weights: 25
## initial value 22949.790629
## iter 10 value 20047.540232
## iter 20 value 20032.652150

```

```

## final value 20032.493222
## converged
## # weights: 41
## initial value 24117.762593
## iter 10 value 20044.766031
## iter 20 value 20032.620166
## final value 20032.491935
## converged
## # weights: 9
## initial value 23810.843300
## final value 20049.554000
## converged
## # weights: 25
## initial value 22288.923186
## final value 20049.554000
## converged
## # weights: 41
## initial value 23497.397529
## final value 20049.554000
## converged
## # weights: 9
## initial value 23356.252396
## iter 10 value 20057.733660
## final value 20055.064614
## converged
## # weights: 25
## initial value 21909.381402
## iter 10 value 20056.111665
## iter 20 value 20053.530272
## iter 20 value 20053.530212
## iter 20 value 20053.530207
## final value 20053.530207
## converged
## # weights: 41
## initial value 22178.891029
## iter 10 value 20055.113488
## final value 20052.870691
## converged
## # weights: 9
## initial value 21708.295316
## iter 10 value 20056.533626
## iter 20 value 20049.634470
## iter 20 value 20049.634437
## final value 20049.634437
## converged
## # weights: 25
## initial value 22276.399943
## iter 10 value 20062.213561
## iter 20 value 20049.699955
## final value 20049.570823
## converged
## # weights: 41
## initial value 23744.695527
## iter 10 value 20065.360577

```

```

## iter 20 value 20049.736237
## final value 20049.567220
## converged
## # weights: 9
## initial value 22287.841219
## final value 19999.010000
## converged
## # weights: 25
## initial value 23915.042912
## final value 19999.010000
## converged
## # weights: 41
## initial value 23706.082454
## final value 19999.010000
## converged
## # weights: 9
## initial value 22950.149532
## iter 10 value 20006.235819
## iter 20 value 20004.518982
## iter 20 value 20004.518965
## final value 20004.518965
## converged
## # weights: 25
## initial value 22323.817854
## iter 10 value 20004.608821
## iter 20 value 20002.985107
## iter 20 value 20002.985052
## iter 20 value 20002.985046
## final value 20002.985046
## converged
## # weights: 41
## initial value 24139.374250
## iter 10 value 20006.858668
## iter 20 value 20002.325963
## iter 20 value 20002.325802
## iter 20 value 20002.325790
## final value 20002.325790
## converged
## # weights: 9
## initial value 22866.489320
## iter 10 value 20010.115072
## iter 20 value 19999.138033
## iter 20 value 19999.137982
## final value 19999.137982
## converged
## # weights: 25
## initial value 22488.079528
## iter 10 value 20014.154619
## iter 20 value 19999.184606
## final value 19999.022986
## converged
## # weights: 41
## initial value 22217.547715
## iter 10 value 20017.449907

```

```

## iter 20 value 19999.222598
## final value 19999.021256
## converged
## # weights: 9
## initial value 22484.294966
## final value 19943.048500
## converged
## # weights: 25
## initial value 22337.308813
## final value 19943.048500
## converged
## # weights: 41
## initial value 23612.314235
## final value 19943.048500
## converged
## # weights: 9
## initial value 23402.097581
## iter 10 value 19949.321283
## final value 19948.556406
## converged
## # weights: 25
## initial value 23721.144647
## iter 10 value 19955.762991
## iter 20 value 19947.027777
## final value 19947.022916
## converged
## # weights: 41
## initial value 23127.018317
## iter 10 value 19948.910727
## iter 20 value 19946.364377
## final value 19946.363730
## converged
## # weights: 9
## initial value 22846.000396
## iter 10 value 19953.160031
## iter 20 value 19943.165078
## iter 20 value 19943.165031
## final value 19943.165031
## converged
## # weights: 25
## initial value 22722.326002
## iter 10 value 19955.962119
## iter 20 value 19943.197384
## final value 19943.064642
## converged
## # weights: 41
## initial value 21860.361354
## iter 10 value 19958.960758
## iter 20 value 19943.231956
## final value 19943.058444
## converged
## # weights: 9
## initial value 21881.563986
## final value 20054.289700

```

```

## converged
## # weights: 25
## initial value 23062.962249
## final value 20054.289700
## converged
## # weights: 41
## initial value 23412.710467
## final value 20054.289700
## converged
## # weights: 9
## initial value 22223.225674
## iter 10 value 20060.806132
## final value 20059.800630
## converged
## # weights: 25
## initial value 24565.398550
## iter 10 value 20059.221307
## final value 20058.266157
## converged
## # weights: 41
## initial value 22390.330938
## iter 10 value 20059.954889
## iter 20 value 20057.606658
## iter 20 value 20057.606566
## iter 20 value 20057.606565
## final value 20057.606565
## converged
## # weights: 9
## initial value 21815.216916
## iter 10 value 20062.300269
## iter 20 value 20054.382056
## iter 20 value 20054.382019
## final value 20054.382019
## converged
## # weights: 25
## initial value 21398.783620
## iter 10 value 20061.655173
## iter 20 value 20054.374618
## final value 20054.301014
## converged
## # weights: 41
## initial value 21808.930373
## iter 10 value 20068.206625
## iter 20 value 20054.450151
## final value 20054.299062
## converged
## # weights: 9
## initial value 22438.835437
## final value 19963.968500
## converged
## # weights: 25
## initial value 23292.574692
## final value 19963.968500
## converged

```

```

## # weights: 41
## initial value 21520.936748
## final value 19963.968500
## converged
## # weights: 9
## initial value 23498.596598
## iter 10 value 19971.141435
## final value 19969.476763
## converged
## # weights: 25
## initial value 21389.053293
## iter 10 value 19969.033398
## final value 19967.943128
## converged
## # weights: 41
## initial value 21983.642445
## iter 10 value 19997.020620
## iter 20 value 19967.297962
## final value 19967.283860
## converged
## # weights: 9
## initial value 21818.850380
## iter 10 value 19972.275407
## iter 20 value 19964.064272
## iter 20 value 19964.064234
## final value 19964.064234
## converged
## # weights: 25
## initial value 22558.672050
## iter 10 value 19979.677262
## iter 20 value 19964.149610
## final value 19963.979905
## converged
## # weights: 41
## initial value 22249.871959
## iter 10 value 19983.010499
## iter 20 value 19964.188039
## final value 19963.979224
## converged
## # weights: 9
## initial value 22272.338371
## final value 19959.741200
## converged
## # weights: 25
## initial value 22055.626236
## final value 19959.741200
## converged
## # weights: 41
## initial value 24246.988335
## final value 19959.741200
## converged
## # weights: 9
## initial value 22522.642050
## iter 10 value 19965.753000

```

```

## final value 19965.249369
## converged
## # weights: 25
## initial value 22344.058654
## iter 10 value 19963.988476
## final value 19963.715773
## converged
## # weights: 41
## initial value 21309.572273
## iter 10 value 19973.051018
## iter 20 value 19963.056730
## iter 20 value 19963.056557
## iter 20 value 19963.056545
## final value 19963.056545
## converged
## # weights: 9
## initial value 22661.777462
## iter 10 value 19969.851453
## iter 20 value 19959.857763
## iter 20 value 19959.857717
## final value 19959.857717
## converged
## # weights: 25
## initial value 22895.108666
## iter 10 value 19976.536696
## iter 20 value 19959.934839
## final value 19959.753313
## converged
## # weights: 41
## initial value 22184.534791
## iter 10 value 19978.064988
## iter 20 value 19959.952459
## final value 19959.752136
## converged
## # weights: 9
## initial value 21891.852019
## final value 20003.726000
## converged
## # weights: 25
## initial value 23303.580871
## final value 20003.726000
## converged
## # weights: 41
## initial value 22007.112818
## final value 20003.726000
## converged
## # weights: 9
## initial value 22198.152101
## iter 10 value 20010.555173
## final value 20009.234933
## converged
## # weights: 25
## initial value 24196.055187
## iter 10 value 20009.491740

```



```

## final value 20007.701077
## converged
## # weights: 41
## initial value 22176.177755
## iter 10 value 20008.962113
## iter 20 value 20007.041817
## iter 20 value 20007.041662
## iter 20 value 20007.041630
## final value 20007.041630
## converged
## # weights: 9
## initial value 23155.754869
## iter 10 value 20014.093559
## iter 20 value 20003.845530
## iter 20 value 20003.845482
## final value 20003.845482
## converged
## # weights: 25
## initial value 22820.863769
## iter 10 value 20019.616361
## iter 20 value 20003.909203
## final value 20003.740283
## converged
## # weights: 41
## initial value 23537.697376
## iter 10 value 20020.877378
## iter 20 value 20003.923742
## final value 20003.738212
## converged
## # weights: 9
## initial value 22495.019164
## final value 20019.873700
## converged
## # weights: 25
## initial value 23171.326803
## final value 20019.873700
## converged
## # weights: 41
## initial value 22849.438241
## final value 20019.873700
## converged
## # weights: 9
## initial value 22592.029066
## iter 10 value 20027.108576
## final value 20025.383151
## converged
## # weights: 25
## initial value 23708.987610
## iter 10 value 20025.699678
## final value 20023.849068
## converged
## # weights: 41
## initial value 23597.299465
## iter 10 value 20038.065877

```

```

## iter 20 value 20023.191482
## final value 20023.189657
## converged
## # weights: 9
## initial value 22734.471567
## iter 10 value 20030.947434
## iter 20 value 20020.001371
## iter 20 value 20020.001320
## final value 20020.001320
## converged
## # weights: 25
## initial value 22865.932781
## iter 10 value 20035.159784
## iter 20 value 20020.049937
## final value 20019.890476
## converged
## # weights: 41
## initial value 23674.857385
## iter 10 value 20036.110373
## iter 20 value 20020.060896
## final value 20019.885712
## converged
## # weights: 9
## initial value 23479.974497
## final value 19935.706000
## converged
## # weights: 25
## initial value 21266.331667
## final value 19935.706000
## converged
## # weights: 41
## initial value 21919.544304
## final value 19935.706000
## converged
## # weights: 9
## initial value 21643.113790
## iter 10 value 19941.413718
## final value 19941.213712
## converged
## # weights: 25
## initial value 22723.630166
## iter 10 value 19940.506805
## final value 19939.680284
## converged
## # weights: 41
## initial value 20955.182823
## iter 10 value 19949.867717
## iter 20 value 19939.021265
## iter 20 value 19939.021136
## iter 20 value 19939.021106
## final value 19939.021106
## converged
## # weights: 9
## initial value 22540.356005

```

```

## iter 10 value 19945.831098
## iter 20 value 19935.822734
## iter 20 value 19935.822688
## final value 19935.822688
## converged
## # weights: 25
## initial value 22298.397688
## iter 10 value 19950.398586
## iter 20 value 19935.875394
## final value 19935.717513
## converged
## # weights: 41
## initial value 21486.769240
## iter 10 value 19949.180251
## iter 20 value 19935.861348
## final value 19935.714973
## converged
## # weights: 9
## initial value 23642.074066
## final value 19896.502000
## converged
## # weights: 25
## initial value 22149.388003
## final value 19896.502000
## converged
## # weights: 41
## initial value 21739.188600
## final value 19896.502000
## converged
## # weights: 9
## initial value 23451.254096
## iter 10 value 19903.114761
## final value 19902.009268
## converged
## # weights: 25
## initial value 22034.015628
## iter 10 value 19904.514115
## final value 19900.476024
## converged
## # weights: 41
## initial value 22402.132602
## iter 10 value 19900.860541
## iter 20 value 19899.816981
## iter 20 value 19899.816911
## iter 20 value 19899.816894
## final value 19899.816894
## converged
## # weights: 9
## initial value 23198.468641
## iter 10 value 19907.440933
## iter 20 value 19896.628117
## iter 20 value 19896.628067
## final value 19896.628067
## converged

```

```

## # weights: 25
## initial value 22538.826036
## iter 10 value 19909.962488
## iter 20 value 19896.657189
## final value 19896.514217
## converged
## # weights: 41
## initial value 22354.009141
## iter 10 value 19913.605506
## iter 20 value 19896.699190
## final value 19896.511258
## converged
## # weights: 9
## initial value 22632.872941
## final value 20003.417200
## converged
## # weights: 25
## initial value 23017.156335
## final value 20003.417200
## converged
## # weights: 41
## initial value 23758.384005
## final value 20003.417200
## converged
## # weights: 9
## initial value 22012.934082
## iter 10 value 20010.857330
## final value 20008.926247
## converged
## # weights: 25
## initial value 22477.632427
## iter 10 value 20014.753626
## iter 20 value 20007.415296
## final value 20007.392319
## converged
## # weights: 41
## initial value 22741.998772
## iter 10 value 20007.225195
## final value 20006.732939
## converged
## # weights: 9
## initial value 22560.107849
## iter 10 value 20013.998009
## iter 20 value 20003.539188
## iter 20 value 20003.539140
## final value 20003.539140
## converged
## # weights: 25
## initial value 22554.722596
## iter 10 value 20019.223531
## iter 20 value 20003.599435
## final value 20003.429836
## converged
## # weights: 41

```

```

## initial value 21883.772756
## iter 10 value 20017.741495
## iter 20 value 20003.582348
## final value 20003.428364
## converged
## # weights: 9
## initial value 23203.937417
## final value 20033.902000
## converged
## # weights: 25
## initial value 22414.594366
## final value 20033.902000
## converged
## # weights: 41
## initial value 22767.791888
## final value 20033.902000
## converged
## # weights: 9
## initial value 21892.411301
## iter 10 value 20040.298495
## final value 20039.411912
## converged
## # weights: 25
## initial value 23334.783337
## iter 10 value 20038.904694
## final value 20037.877727
## converged
## # weights: 41
## initial value 23434.958592
## iter 10 value 20039.674239
## iter 20 value 20037.218313
## iter 20 value 20037.218237
## iter 20 value 20037.218210
## final value 20037.218210
## converged
## # weights: 9
## initial value 22510.954834
## iter 10 value 20043.774630
## iter 20 value 20034.015824
## iter 20 value 20034.015778
## final value 20034.015778
## converged
## # weights: 25
## initial value 22651.807102
## iter 10 value 20049.144193
## iter 20 value 20034.077731
## final value 20033.914485
## converged
## # weights: 41
## initial value 22304.326448
## iter 10 value 20051.940110
## iter 20 value 20034.109965
## final value 20033.913694
## converged

```

```

## # weights: 9
## initial value 21834.394509
## final value 19939.293200
## converged
## # weights: 25
## initial value 22800.759542
## final value 19939.293200
## converged
## # weights: 41
## initial value 22915.459726
## final value 19939.293200
## converged
## # weights: 9
## initial value 22473.746244
## iter 10 value 19945.552705
## final value 19944.800957
## converged
## # weights: 25
## initial value 23660.875022
## iter 10 value 19944.991818
## final value 19943.267484
## converged
## # weights: 41
## initial value 23246.713492
## iter 10 value 19946.894374
## iter 20 value 19942.608726
## final value 19942.608263
## converged
## # weights: 9
## initial value 22301.903005
## iter 10 value 19949.680481
## iter 20 value 19939.412957
## iter 20 value 19939.412909
## final value 19939.412909
## converged
## # weights: 25
## initial value 22211.061611
## iter 10 value 19952.853630
## iter 20 value 19939.449541
## final value 19939.305467
## converged
## # weights: 41
## initial value 23996.300793
## iter 10 value 19953.140919
## iter 20 value 19939.452853
## final value 19939.305353
## converged
## # weights: 9
## initial value 22156.166219
## final value 20046.523700
## converged
## # weights: 25
## initial value 22815.889693
## final value 20046.523700

```

```

## converged
## # weights: 41
## initial value 23821.176220
## final value 20046.523700
## converged
## # weights: 9
## initial value 23484.356454
## iter 10 value 20052.603330
## final value 20052.034136
## converged
## # weights: 25
## initial value 21278.229599
## iter 10 value 20051.357052
## final value 20050.499768
## converged
## # weights: 41
## initial value 22631.076576
## iter 10 value 20063.009261
## iter 20 value 20049.841555
## final value 20049.840254
## converged
## # weights: 9
## initial value 23273.199390
## iter 10 value 20056.321959
## iter 20 value 20046.636666
## iter 20 value 20046.636621
## final value 20046.636621
## converged
## # weights: 25
## initial value 22907.689341
## iter 10 value 20064.209632
## iter 20 value 20046.727605
## final value 20046.536210
## converged
## # weights: 41
## initial value 21553.251234
## iter 10 value 20059.250178
## iter 20 value 20046.670426
## final value 20046.533168
## converged
## # weights: 9
## initial value 23418.033156
## final value 20039.453200
## converged
## # weights: 25
## initial value 22368.049112
## final value 20039.453200
## converged
## # weights: 41
## initial value 23782.745825
## final value 20039.453200
## converged
## # weights: 9
## initial value 23372.765267

```

```

## iter 10 value 20045.027573
## final value 20044.963356
## converged
## # weights: 25
## initial value 22740.296467
## iter 10 value 20044.509468
## final value 20043.429198
## converged
## # weights: 41
## initial value 22345.733486
## iter 10 value 20044.223599
## iter 20 value 20042.770037
## final value 20042.769581
## converged
## # weights: 9
## initial value 21739.621209
## iter 10 value 20047.298090
## iter 20 value 20039.543645
## iter 20 value 20039.543609
## final value 20039.543609
## converged
## # weights: 25
## initial value 23869.885575
## iter 10 value 20050.388259
## iter 20 value 20039.579273
## final value 20039.471932
## converged
## # weights: 41
## initial value 22999.585532
## iter 10 value 20061.924820
## iter 20 value 20039.712280
## final value 20039.463530
## converged
## # weights: 9
## initial value 22827.877143
## final value 19979.630500
## converged
## # weights: 25
## initial value 22670.733379
## final value 19979.630500
## converged
## # weights: 41
## initial value 22968.131743
## final value 19979.630500
## converged
## # weights: 9
## initial value 22298.910159
## iter 10 value 19988.206585
## final value 19985.139123
## converged
## # weights: 25
## initial value 21994.865620
## iter 10 value 19985.290914
## iter 20 value 19983.605429

```



```

## iter 20 value 19983.605362
## iter 20 value 19983.605359
## final value 19983.605359
## converged
## # weights: 41
## initial value 22873.020900
## iter 10 value 19986.268199
## iter 20 value 19982.946215
## iter 20 value 19982.946104
## iter 20 value 19982.946078
## final value 19982.946078
## converged
## # weights: 9
## initial value 22120.346992
## iter 10 value 19988.731422
## iter 20 value 19979.735426
## iter 20 value 19979.735385
## final value 19979.735385
## converged
## # weights: 25
## initial value 24396.264056
## iter 10 value 19986.125172
## iter 20 value 19979.705378
## final value 19979.654812
## converged
## # weights: 41
## initial value 23345.615579
## iter 10 value 19996.681485
## iter 20 value 19979.827084
## final value 19979.641787
## converged
## # weights: 9
## initial value 22793.578136
## final value 19869.960100
## converged
## # weights: 25
## initial value 22425.249430
## final value 19869.960100
## converged
## # weights: 41
## initial value 22076.354580
## final value 19869.960100
## converged
## # weights: 9
## initial value 22348.268142
## iter 10 value 19875.514951
## final value 19875.466889
## converged
## # weights: 25
## initial value 23270.770377
## iter 10 value 19874.929358
## final value 19873.933793
## converged
## # weights: 41

```

```

## initial value 21344.306097
## iter 10 value 19888.338902
## iter 20 value 19873.277292
## final value 19873.274664
## converged
## # weights: 9
## initial value 23361.170527
## iter 10 value 19879.080069
## iter 20 value 19870.065246
## iter 20 value 19870.065204
## final value 19870.065204
## converged
## # weights: 25
## initial value 22130.318397
## iter 10 value 19885.725278
## iter 20 value 19870.141860
## iter 30 value 19869.973923
## iter 30 value 19869.973897
## iter 30 value 19869.973891
## final value 19869.973891
## converged
## # weights: 41
## initial value 23613.913432
## iter 10 value 19887.829400
## iter 20 value 19870.166119
## final value 19869.971651
## converged
## # weights: 9
## initial value 23302.207866
## final value 20009.441200
## converged
## # weights: 25
## initial value 23303.939568
## final value 20009.441200
## converged
## # weights: 41
## initial value 23657.606337
## final value 20009.441200
## converged
## # weights: 9
## initial value 22384.889530
## iter 10 value 20015.392663
## final value 20014.950392
## converged
## # weights: 25
## initial value 22454.694354
## iter 10 value 20014.681791
## final value 20013.416423
## converged
## # weights: 41
## initial value 23190.836122
## iter 10 value 20016.836621
## iter 20 value 20012.757352
## final value 20012.757058

```

```

## converged
## # weights: 9
## initial value 22229.402921
## iter 10 value 20018.912728
## iter 20 value 20009.550399
## iter 20 value 20009.550356
## final value 20009.550356
## converged
## # weights: 25
## initial value 21362.217506
## iter 10 value 20017.589315
## iter 20 value 20009.535141
## final value 20009.452835
## converged
## # weights: 41
## initial value 22320.742369
## iter 10 value 20027.013597
## iter 20 value 20009.643796
## final value 20009.450979
## converged
## # weights: 9
## initial value 21752.735421
## final value 20044.937200
## converged
## # weights: 25
## initial value 22206.568072
## final value 20044.937200
## converged
## # weights: 41
## initial value 21936.629408
## final value 20044.937200
## converged
## # weights: 9
## initial value 23497.115662
## iter 10 value 20051.496302
## final value 20050.447542
## converged
## # weights: 25
## initial value 22686.511434
## iter 10 value 20050.069375
## final value 20048.913181
## converged
## # weights: 41
## initial value 23736.651462
## iter 10 value 20053.623682
## final value 20048.253691
## converged
## # weights: 9
## initial value 22733.320920
## iter 10 value 20054.857477
## iter 20 value 20045.051573
## iter 20 value 20045.051527
## final value 20045.051527
## converged

```

```

## # weights: 25
## initial value 22837.691599
## iter 10 value 20061.707369
## iter 20 value 20045.130547
## final value 20044.950188
## converged
## # weights: 41
## initial value 22767.461754
## iter 10 value 20067.337164
## iter 20 value 20045.195454
## final value 20044.947497
## converged
## # weights: 9
## initial value 21825.367925
## final value 20059.210000
## converged
## # weights: 25
## initial value 23111.057845
## final value 20059.210000
## converged
## # weights: 41
## initial value 23295.556257
## final value 20059.210000
## converged
## # weights: 9
## initial value 23651.269892
## iter 10 value 20065.896300
## final value 20064.721177
## converged
## # weights: 25
## initial value 23018.284177
## iter 10 value 20064.500640
## final value 20063.186487
## converged
## # weights: 41
## initial value 21926.420775
## iter 10 value 20073.524515
## iter 20 value 20062.526994
## iter 20 value 20062.526904
## iter 20 value 20062.526886
## final value 20062.526886
## converged
## # weights: 9
## initial value 23164.377694
## iter 10 value 20070.492704
## iter 20 value 20059.340081
## iter 20 value 20059.340029
## final value 20059.340029
## converged
## # weights: 25
## initial value 23154.239743
## iter 10 value 20075.903746
## iter 20 value 20059.402466
## final value 20059.223345

```

```

## converged
## # weights: 41
## initial value 21432.670615
## iter 10 value 20068.643630
## iter 20 value 20059.318762
## final value 20059.219839
## converged
## # weights: 9
## initial value 22426.533930
## final value 20016.794000
## converged
## # weights: 25
## initial value 22347.593865
## final value 20016.794000
## converged
## # weights: 41
## initial value 21817.047630
## final value 20016.794000
## converged
## # weights: 9
## initial value 23703.485499
## iter 10 value 20023.910134
## final value 20022.303377
## converged
## # weights: 25
## initial value 23184.444817
## iter 10 value 20021.287536
## final value 20020.769338
## converged
## # weights: 41
## initial value 23433.151942
## iter 10 value 20032.653888
## iter 20 value 20020.110854
## final value 20020.109926
## converged
## # weights: 9
## initial value 22339.898905
## iter 10 value 20028.026722
## iter 20 value 20016.923504
## iter 20 value 20016.923453
## final value 20016.923453
## converged
## # weights: 25
## initial value 22784.444071
## iter 10 value 20032.434818
## iter 20 value 20016.974326
## final value 20016.806415
## converged
## # weights: 41
## initial value 22344.276906
## iter 10 value 20033.909997
## iter 20 value 20016.991334
## final value 20016.804142
## converged

```

```

## # weights: 9
## initial value 21714.849199
## final value 19905.667600
## converged
## # weights: 25
## initial value 21988.056211
## final value 19905.667600
## converged
## # weights: 41
## initial value 22183.288965
## final value 19905.667600
## converged
## # weights: 9
## initial value 22921.866924
## iter 10 value 19911.473027
## final value 19911.174974
## converged
## # weights: 25
## initial value 22837.620125
## iter 10 value 19910.298347
## final value 19909.641685
## converged
## # weights: 41
## initial value 22879.109307
## iter 10 value 19923.978406
## iter 20 value 19908.983031
## final value 19908.982601
## converged
## # weights: 9
## initial value 22832.159255
## iter 10 value 19915.926278
## iter 20 value 19905.785875
## iter 20 value 19905.785827
## final value 19905.785827
## converged
## # weights: 25
## initial value 23446.018448
## iter 10 value 19919.346324
## iter 20 value 19905.825305
## final value 19905.683639
## converged
## # weights: 41
## initial value 23582.630309
## iter 10 value 19920.822634
## iter 20 value 19905.842326
## final value 19905.680748
## converged
## # weights: 9
## initial value 23070.212436
## final value 20010.607600
## converged
## # weights: 25
## initial value 22334.590800
## final value 20010.607600

```

```

## converged
## # weights: 41
## initial value 23244.101101
## final value 20010.607600
## converged
## # weights: 9
## initial value 22223.024144
## iter 10 value 20016.634402
## final value 20016.116819
## converged
## # weights: 25
## initial value 22404.161112
## iter 10 value 20022.986326
## iter 20 value 20014.583289
## iter 20 value 20014.583106
## iter 20 value 20014.583007
## final value 20014.583007
## converged
## # weights: 41
## initial value 23502.866421
## iter 10 value 20014.971409
## final value 20013.923500
## converged
## # weights: 9
## initial value 22131.700967
## iter 10 value 20019.762811
## iter 20 value 20010.713152
## iter 20 value 20010.713110
## final value 20010.713110
## converged
## # weights: 25
## initial value 23699.279956
## iter 10 value 20023.953278
## iter 20 value 20010.761465
## final value 20010.624893
## converged
## # weights: 41
## initial value 21524.070818
## iter 10 value 20024.383035
## iter 20 value 20010.766420
## final value 20010.617417
## converged
## # weights: 9
## initial value 23263.648830
## final value 20036.130100
## converged
## # weights: 25
## initial value 24084.680184
## final value 20036.130100
## converged
## # weights: 41
## initial value 22761.587319
## final value 20036.130100
## converged

```

```

## # weights: 9
## initial value 22469.097547
## iter 10 value 20042.032661
## final value 20041.640098
## converged
## # weights: 25
## initial value 22181.270227
## iter 10 value 20049.922308
## iter 20 value 20040.110468
## final value 20040.105872
## converged
## # weights: 41
## initial value 23486.004136
## iter 10 value 20052.259399
## iter 20 value 20039.446810
## iter 20 value 20039.446618
## iter 20 value 20039.446554
## final value 20039.446554
## converged
## # weights: 9
## initial value 23416.855429
## iter 10 value 20046.179015
## iter 20 value 20036.245956
## iter 20 value 20036.245910
## final value 20036.245910
## converged
## # weights: 25
## initial value 22057.225876
## iter 10 value 20049.243291
## iter 20 value 20036.281285
## final value 20036.142002
## converged
## # weights: 41
## initial value 23031.137792
## iter 10 value 20055.247932
## iter 20 value 20036.350514
## final value 20036.139908
## converged
## # weights: 9
## initial value 22309.825008
## final value 20002.797200
## converged
## # weights: 25
## initial value 22262.190807
## final value 20002.797200
## converged
## # weights: 41
## initial value 23445.046544
## final value 20002.797200
## converged
## # weights: 9
## initial value 22535.690627
## iter 10 value 20009.185693
## final value 20008.306215

```



```

## converged
## # weights: 25
## initial value 21859.438966
## iter 10 value 20007.812301
## final value 20006.772287
## converged
## # weights: 41
## initial value 23159.015596
## iter 10 value 20010.627709
## iter 20 value 20006.117156
## final value 20006.112923
## converged
## # weights: 9
## initial value 23606.177657
## iter 10 value 20010.944081
## iter 20 value 20002.891127
## iter 20 value 20002.891090
## final value 20002.891090
## converged
## # weights: 25
## initial value 23456.224945
## iter 10 value 20015.843638
## iter 20 value 20002.947615
## final value 20002.815956
## converged
## # weights: 41
## initial value 22882.112591
## iter 10 value 20022.296035
## iter 20 value 20003.022006
## final value 20002.809756
## converged
## # weights: 9
## initial value 22274.825611
## final value 20060.381200
## converged
## # weights: 25
## initial value 22514.367376
## final value 20060.381200
## converged
## # weights: 41
## initial value 22404.149730
## final value 20060.381200
## converged
## # weights: 9
## initial value 22604.751033
## iter 10 value 20066.451486
## final value 20065.892595
## converged
## # weights: 25
## initial value 23267.761990
## iter 10 value 20080.671023
## iter 20 value 20064.358628
## final value 20064.357902
## converged

```

```

## # weights: 41
## initial value 23104.063846
## iter 10 value 20079.296832
## iter 20 value 20063.708833
## final value 20063.698308
## converged
## # weights: 9
## initial value 23399.162038
## iter 10 value 20071.114367
## iter 20 value 20060.504945
## iter 20 value 20060.504896
## final value 20060.504896
## converged
## # weights: 25
## initial value 23031.865378
## iter 10 value 20074.166270
## iter 20 value 20060.540131
## final value 20060.399984
## converged
## # weights: 41
## initial value 23928.895845
## iter 10 value 20074.061800
## iter 20 value 20060.538927
## final value 20060.394804
## converged
## # weights: 9
## initial value 22685.158624
## final value 19961.765200
## converged
## # weights: 25
## initial value 22135.419219
## final value 19961.765200
## converged
## # weights: 41
## initial value 23952.630086
## final value 19961.765200
## converged
## # weights: 9
## initial value 22709.555313
## iter 10 value 19969.423487
## final value 19967.273445
## converged
## # weights: 25
## initial value 22016.364076
## iter 10 value 19966.494331
## final value 19965.739834
## converged
## # weights: 41
## initial value 23453.460705
## iter 10 value 19966.068297
## iter 20 value 19965.080709
## iter 20 value 19965.080600
## iter 20 value 19965.080594
## final value 19965.080594

```

```

## converged
## # weights: 9
## initial value 22581.447550
## iter 10 value 19971.951710
## iter 20 value 19961.882642
## iter 20 value 19961.882595
## final value 19961.882595
## converged
## # weights: 25
## initial value 22640.853500
## iter 10 value 19974.860697
## iter 20 value 19961.916181
## final value 19961.777765
## converged
## # weights: 41
## initial value 22608.748856
## iter 10 value 19976.867527
## iter 20 value 19961.939318
## final value 19961.775197
## converged
## # weights: 9
## initial value 22492.450121
## final value 20000.918000
## converged
## # weights: 25
## initial value 21640.568400
## final value 20000.918000
## converged
## # weights: 41
## initial value 24226.527117
## final value 20000.918000
## converged
## # weights: 9
## initial value 22526.765032
## iter 10 value 20010.838737
## iter 20 value 20006.427011
## iter 20 value 20006.426994
## final value 20006.426994
## converged
## # weights: 25
## initial value 23324.715180
## iter 10 value 20007.422321
## iter 20 value 20004.899255
## final value 20004.893097
## converged
## # weights: 41
## initial value 22038.463613
## iter 10 value 20019.648373
## iter 20 value 20004.240948
## final value 20004.233720
## converged
## # weights: 9
## initial value 22007.555870
## iter 10 value 20010.636512

```

```

## iter 20 value 20001.030047
## iter 20 value 20001.030002
## final value 20001.030002
## converged
## # weights: 25
## initial value 22784.606621
## iter 10 value 20015.425445
## iter 20 value 20001.085259
## final value 20000.935385
## converged
## # weights: 41
## initial value 22335.550929
## iter 10 value 20019.242282
## iter 20 value 20001.129265
## final value 20000.927395
## converged
## # weights: 9
## initial value 22825.899777
## final value 20047.567600
## converged
## # weights: 25
## initial value 23115.921210
## final value 20047.567600
## converged
## # weights: 41
## initial value 22078.773910
## final value 20047.567600
## converged
## # weights: 9
## initial value 23719.831826
## iter 10 value 20054.550734
## final value 20053.078066
## converged
## # weights: 25
## initial value 22151.274724
## iter 10 value 20054.349793
## final value 20051.543831
## converged
## # weights: 41
## initial value 22666.470644
## iter 10 value 20052.578397
## iter 20 value 20050.884269
## iter 20 value 20050.884167
## iter 20 value 20050.884139
## final value 20050.884139
## converged
## # weights: 9
## initial value 21624.947740
## iter 10 value 20054.443245
## iter 20 value 20047.646871
## iter 20 value 20047.646839
## final value 20047.646839
## converged
## # weights: 25

```

```

## initial value 22458.090004
## iter 10 value 20062.466563
## iter 20 value 20047.739373
## final value 20047.578384
## converged
## # weights: 41
## initial value 21696.467894
## iter 10 value 20060.230169
## iter 20 value 20047.713589
## final value 20047.577745
## converged
## # weights: 9
## initial value 22973.431145
## final value 20031.922000
## converged
## # weights: 25
## initial value 22455.695640
## final value 20031.922000
## converged
## # weights: 41
## initial value 23789.261173
## final value 20031.922000
## converged
## # weights: 9
## initial value 22967.398854
## iter 10 value 20039.346356
## final value 20037.431843
## converged
## # weights: 25
## initial value 22276.950381
## iter 10 value 20037.621297
## final value 20035.897741
## converged
## # weights: 41
## initial value 22130.485233
## iter 10 value 20035.956689
## final value 20035.238178
## converged
## # weights: 9
## initial value 23868.358917
## iter 10 value 20040.622708
## iter 20 value 20032.022312
## iter 20 value 20032.022272
## final value 20032.022272
## converged
## # weights: 25
## initial value 21514.982017
## iter 10 value 20041.816421
## iter 20 value 20032.036075
## final value 20031.934297
## converged
## # weights: 41
## initial value 23376.651072
## iter 10 value 20049.903890

```

```

## iter 20 value 20032.129317
## final value 20031.935136
## converged
## # weights: 9
## initial value 22111.110337
## final value 20058.152500
## converged
## # weights: 25
## initial value 23173.053854
## final value 20058.152500
## converged
## # weights: 41
## initial value 23156.213187
## final value 20058.152500
## converged
## # weights: 9
## initial value 22714.927053
## iter 10 value 20063.830823
## final value 20063.663664
## converged
## # weights: 25
## initial value 21588.069083
## iter 10 value 20063.256824
## iter 20 value 20062.129107
## iter 20 value 20062.129038
## iter 20 value 20062.129034
## final value 20062.129034
## converged
## # weights: 41
## initial value 22968.742715
## iter 10 value 20061.779344
## final value 20061.469472
## converged
## # weights: 9
## initial value 23222.242473
## iter 10 value 20069.737351
## iter 20 value 20058.286064
## iter 20 value 20058.286011
## final value 20058.286011
## converged
## # weights: 25
## initial value 22251.355998
## iter 10 value 20074.830446
## iter 20 value 20058.344784
## final value 20058.166775
## converged
## # weights: 41
## initial value 23631.829035
## iter 10 value 20077.029464
## iter 20 value 20058.370137
## final value 20058.163888
## converged
## # weights: 9
## initial value 22297.451931

```

```

## final value 20062.025200
## converged
## # weights: 25
## initial value 21452.709461
## final value 20062.025200
## converged
## # weights: 41
## initial value 21845.570047
## final value 20062.025200
## converged
## # weights: 9
## initial value 23732.865286
## iter 10 value 20067.853459
## final value 20067.536882
## converged
## # weights: 25
## initial value 22195.375581
## iter 10 value 20067.012985
## final value 20066.002131
## converged
## # weights: 41
## initial value 22406.875818
## iter 10 value 20077.690552
## iter 20 value 20065.345085
## final value 20065.342529
## converged
## # weights: 9
## initial value 22583.385096
## iter 10 value 20071.941216
## iter 20 value 20062.139524
## iter 20 value 20062.139478
## final value 20062.139478
## converged
## # weights: 25
## initial value 21880.859842
## iter 10 value 20075.702760
## iter 20 value 20062.182892
## final value 20062.038523
## converged
## # weights: 41
## initial value 22867.124679
## iter 10 value 20081.058907
## iter 20 value 20062.244644
## final value 20062.035842
## converged
## # weights: 9
## initial value 22394.124303
## final value 20014.728500
## converged
## # weights: 25
## initial value 21818.567875
## final value 20014.728500
## converged
## # weights: 41

```

```

## initial value 23377.511005
## final value 20014.728500
## converged
## # weights: 9
## initial value 22680.868048
## iter 10 value 20020.390382
## final value 20020.237787
## converged
## # weights: 25
## initial value 23209.320302
## iter 10 value 20019.784408
## final value 20018.703838
## converged
## # weights: 41
## initial value 23230.089597
## iter 10 value 20020.722792
## iter 20 value 20018.044739
## final value 20018.044374
## converged
## # weights: 9
## initial value 21673.908520
## iter 10 value 20022.184301
## iter 20 value 20014.814460
## iter 20 value 20014.814425
## final value 20014.814425
## converged
## # weights: 25
## initial value 23755.607968
## iter 10 value 20026.230436
## iter 20 value 20014.861108
## final value 20014.743182
## converged
## # weights: 41
## initial value 23266.285160
## iter 10 value 20034.669322
## iter 20 value 20014.958402
## final value 20014.738463
## converged
## # weights: 9
## initial value 22817.190319
## final value 19974.245200
## converged
## # weights: 25
## initial value 22931.725098
## final value 19974.245200
## converged
## # weights: 41
## initial value 21886.518570
## final value 19974.245200
## converged
## # weights: 9
## initial value 23518.843890
## iter 10 value 19980.290220
## final value 19979.753628

```



```

## converged
## # weights: 25
## initial value 22918.777716
## iter 10 value 19979.593454
## final value 19978.219913
## converged
## # weights: 41
## initial value 22410.793309
## iter 10 value 19978.407756
## final value 19977.560678
## converged
## # weights: 9
## initial value 22950.216635
## iter 10 value 19985.184021
## iter 20 value 19974.371316
## iter 20 value 19974.371266
## final value 19974.371266
## converged
## # weights: 25
## initial value 22937.789399
## iter 10 value 19986.804852
## iter 20 value 19974.390003
## final value 19974.260903
## converged
## # weights: 41
## initial value 23043.420968
## iter 10 value 19994.124268
## iter 20 value 19974.474390
## final value 19974.255186
## converged
## # weights: 9
## initial value 22227.643852
## final value 20053.435700
## converged
## # weights: 25
## initial value 22705.913597
## final value 20053.435700
## converged
## # weights: 41
## initial value 23410.139707
## final value 20053.435700
## converged
## # weights: 9
## initial value 23345.572178
## iter 10 value 20061.314133
## final value 20058.946515
## converged
## # weights: 25
## initial value 22159.843941
## iter 10 value 20060.020037
## iter 20 value 20057.413791
## final value 20057.411986
## converged
## # weights: 41

```

```

## initial value 22473.271615
## iter 10 value 20059.637032
## iter 20 value 20056.752772
## final value 20056.752426
## converged
## # weights: 9
## initial value 23617.511355
## iter 10 value 20061.991702
## iter 20 value 20053.534344
## iter 20 value 20053.534305
## final value 20053.534305
## converged
## # weights: 25
## initial value 23489.698153
## iter 10 value 20065.469156
## iter 20 value 20053.574436
## final value 20053.452938
## converged
## # weights: 41
## initial value 23732.838015
## iter 10 value 20067.799259
## iter 20 value 20053.601301
## final value 20053.449786
## converged
## # weights: 9
## initial value 23205.194222
## final value 20053.184500
## converged
## # weights: 25
## initial value 22502.671304
## final value 20053.184500
## converged
## # weights: 41
## initial value 24573.772083
## final value 20053.184500
## converged
## # weights: 9
## initial value 23964.349733
## iter 10 value 20060.042318
## final value 20058.695226
## converged
## # weights: 25
## initial value 22649.542189
## iter 10 value 20057.342969
## final value 20057.160695
## converged
## # weights: 41
## initial value 22466.036429
## iter 10 value 20058.830964
## iter 20 value 20056.501482
## final value 20056.501161
## converged
## # weights: 9
## initial value 23648.993506

```

```

## iter 10 value 20061.658744
## iter 20 value 20053.282201
## iter 20 value 20053.282162
## final value 20053.282162
## converged
## # weights: 25
## initial value 22246.220494
## iter 10 value 20065.139532
## iter 20 value 20053.322332
## final value 20053.198096
## converged
## # weights: 41
## initial value 22193.681244
## iter 10 value 20071.688952
## iter 20 value 20053.397842
## final value 20053.194886
## converged
## # weights: 9
## initial value 22285.847987
## final value 20050.496500
## converged
## # weights: 25
## initial value 22364.344644
## final value 20050.496500
## converged
## # weights: 41
## initial value 24415.868721
## final value 20050.496500
## converged
## # weights: 9
## initial value 23196.621162
## iter 10 value 20057.819411
## final value 20056.007154
## converged
## # weights: 25
## initial value 21551.961673
## iter 10 value 20056.090955
## final value 20054.472713
## converged
## # weights: 41
## initial value 22205.547444
## iter 10 value 20054.614326
## final value 20053.813179
## converged
## # weights: 9
## initial value 23183.948516
## iter 10 value 20060.768313
## iter 20 value 20050.614926
## iter 20 value 20050.614879
## final value 20050.614879
## converged
## # weights: 25
## initial value 22386.828450
## iter 10 value 20064.479310

```

```

## iter 20 value 20050.657711
## final value 20050.508966
## converged
## # weights: 41
## initial value 22430.927900
## iter 10 value 20069.871471
## iter 20 value 20050.719878
## final value 20050.506195
## converged
## # weights: 9
## initial value 22752.888872
## final value 19932.296500
## converged
## # weights: 25
## initial value 22581.639965
## final value 19932.296500
## converged
## # weights: 41
## initial value 21959.838982
## final value 19932.296500
## converged
## # weights: 9
## initial value 23548.483699
## iter 10 value 19950.388442
## iter 20 value 19937.804410
## iter 20 value 19937.804342
## final value 19937.804342
## converged
## # weights: 25
## initial value 21822.989176
## iter 10 value 19936.780827
## final value 19936.270883
## converged
## # weights: 41
## initial value 22662.890690
## iter 10 value 19937.271248
## final value 19935.611719
## converged
## # weights: 9
## initial value 21589.618475
## iter 10 value 19940.093764
## iter 20 value 19932.386396
## iter 20 value 19932.386360
## final value 19932.386360
## converged
## # weights: 25
## initial value 24000.640932
## iter 10 value 19942.844644
## iter 20 value 19932.418112
## final value 19932.315754
## converged
## # weights: 41
## initial value 22734.523009
## iter 10 value 19949.393830

```

```

## iter 20 value 19932.493619
## final value 19932.308483
## converged
## # weights: 9
## initial value 23164.928407
## final value 20051.745700
## converged
## # weights: 25
## initial value 22283.468125
## final value 20051.745700
## converged
## # weights: 41
## initial value 23537.490840
## final value 20051.745700
## converged
## # weights: 9
## initial value 22880.526858
## iter 10 value 20057.620210
## final value 20057.256374
## converged
## # weights: 25
## initial value 22813.668637
## iter 10 value 20056.964488
## final value 20055.721951
## converged
## # weights: 41
## initial value 22848.426618
## iter 10 value 20056.201314
## final value 20055.062415
## converged
## # weights: 9
## initial value 22061.626167
## iter 10 value 20060.155280
## iter 20 value 20051.842656
## iter 20 value 20051.842617
## final value 20051.842617
## converged
## # weights: 25
## initial value 23363.083263
## iter 10 value 20066.080540
## iter 20 value 20051.910969
## final value 20051.762698
## converged
## # weights: 41
## initial value 23985.767969
## iter 10 value 20066.126731
## iter 20 value 20051.911502
## final value 20051.769404
## converged
## # weights: 9
## initial value 23002.866456
## final value 20054.702000
## converged
## # weights: 25

```

```

## initial value 23188.238627
## final value 20054.702000
## converged
## # weights: 41
## initial value 21952.347798
## final value 20054.702000
## converged
## # weights: 9
## initial value 23598.241546
## iter 10 value 20060.782532
## final value 20060.212885
## converged
## # weights: 25
## initial value 23135.702221
## iter 10 value 20061.502763
## iter 20 value 20058.678737
## final value 20058.678331
## converged
## # weights: 41
## initial value 23014.831767
## iter 10 value 20059.355461
## final value 20058.018760
## converged
## # weights: 9
## initial value 22353.301175
## iter 10 value 20064.070968
## iter 20 value 20054.810017
## iter 20 value 20054.809974
## final value 20054.809974
## converged
## # weights: 25
## initial value 22956.080570
## iter 10 value 20069.980842
## iter 20 value 20054.878153
## final value 20054.714350
## converged
## # weights: 41
## initial value 23467.497680
## iter 10 value 20072.951549
## iter 20 value 20054.912403
## final value 20054.713459
## converged
## # weights: 9
## initial value 23215.225097
## final value 19970.818000
## converged
## # weights: 25
## initial value 23484.378161
## final value 19970.818000
## converged
## # weights: 41
## initial value 24113.480735
## final value 19970.818000
## converged

```

```

## # weights: 9
## initial value 23098.863335
## iter 10 value 19978.633724
## final value 19976.326232
## converged
## # weights: 25
## initial value 23127.640368
## iter 10 value 19975.022864
## final value 19974.792565
## converged
## # weights: 41
## initial value 22348.290436
## iter 10 value 19987.800029
## iter 20 value 19974.133892
## final value 19974.133267
## converged
## # weights: 9
## initial value 21660.455523
## iter 10 value 19978.870041
## iter 20 value 19970.910834
## iter 20 value 19970.910797
## final value 19970.910797
## converged
## # weights: 25
## initial value 24074.968192
## iter 10 value 19980.004347
## iter 20 value 19970.923911
## final value 19970.835348
## converged
## # weights: 41
## initial value 22693.822830
## iter 10 value 19989.166230
## iter 20 value 19971.029541
## final value 19970.827191
## converged
## # weights: 9
## initial value 21782.678035
## final value 20062.993700
## converged
## # weights: 25
## initial value 21633.548381
## final value 20062.993700
## converged
## # weights: 41
## initial value 23319.731740
## final value 20062.993700
## converged
## # weights: 9
## initial value 23682.715316
## iter 10 value 20070.665463
## final value 20068.505465
## converged
## # weights: 25
## initial value 23452.792475

```

```

## iter 10 value 20068.349702
## final value 20066.970617
## converged
## # weights: 41
## initial value 22933.359463
## iter 10 value 20079.932608
## iter 20 value 20066.311364
## final value 20066.310938
## converged
## # weights: 9
## initial value 22100.488552
## iter 10 value 20071.375120
## iter 20 value 20063.090331
## iter 20 value 20063.090293
## final value 20063.090293
## converged
## # weights: 25
## initial value 23465.016698
## iter 10 value 20076.536351
## iter 20 value 20063.149836
## final value 20063.016326
## converged
## # weights: 41
## initial value 23336.533957
## iter 10 value 20083.283885
## iter 20 value 20063.227630
## final value 20063.003820
## converged
## # weights: 9
## initial value 23479.947494
## final value 20051.473700
## converged
## # weights: 25
## initial value 22593.869353
## final value 20051.473700
## converged
## # weights: 41
## initial value 24722.726069
## final value 20051.473700
## converged
## # weights: 9
## initial value 23204.895511
## iter 10 value 20058.055677
## final value 20056.984403
## converged
## # weights: 25
## initial value 23060.468518
## iter 10 value 20061.632769
## iter 20 value 20055.450254
## final value 20055.449929
## converged
## # weights: 41
## initial value 23289.165351
## iter 10 value 20061.454542

```



```

## iter 20 value 20054.790857
## final value 20054.790388
## converged
## # weights: 9
## initial value 23187.824564
## iter 10 value 20061.423177
## iter 20 value 20051.588410
## iter 20 value 20051.588364
## final value 20051.588364
## converged
## # weights: 25
## initial value 22012.442805
## iter 10 value 20063.875367
## iter 20 value 20051.616681
## final value 20051.486507
## converged
## # weights: 41
## initial value 23759.284778
## iter 10 value 20067.158195
## iter 20 value 20051.654530
## final value 20051.485305
## converged
## # weights: 9
## initial value 22705.956368
## final value 20015.422000
## converged
## # weights: 25
## initial value 21912.358670
## final value 20015.422000
## converged
## # weights: 41
## initial value 22779.639338
## final value 20015.422000
## converged
## # weights: 9
## initial value 22256.642055
## iter 10 value 20021.051469
## final value 20020.931328
## converged
## # weights: 25
## initial value 21478.347906
## iter 10 value 20020.383283
## final value 20019.397337
## converged
## # weights: 41
## initial value 23471.969352
## iter 10 value 20033.248181
## iter 20 value 20018.760019
## final value 20018.737897
## converged
## # weights: 9
## initial value 23621.929654
## iter 10 value 20024.463163
## iter 20 value 20015.526238

```

```

## iter 20 value 20015.526196
## final value 20015.526196
## converged
## # weights: 25
## initial value 23218.786805
## iter 10 value 20030.690560
## iter 20 value 20015.598035
## final value 20015.436636
## converged
## # weights: 41
## initial value 20956.358109
## iter 10 value 20021.770139
## iter 20 value 20015.495189
## final value 20015.430665
## converged
## # weights: 9
## initial value 22353.468122
## final value 20028.123700
## converged
## # weights: 25
## initial value 23034.705444
## final value 20028.123700
## converged
## # weights: 41
## initial value 22516.197540
## final value 20028.123700
## converged
## # weights: 9
## initial value 22044.053658
## iter 10 value 20034.870273
## final value 20033.633427
## converged
## # weights: 25
## initial value 22653.306942
## iter 10 value 20033.062415
## final value 20032.099236
## converged
## # weights: 41
## initial value 22981.613499
## iter 10 value 20046.484590
## iter 20 value 20031.440647
## final value 20031.439823
## converged
## # weights: 9
## initial value 23106.232987
## iter 10 value 20038.736497
## iter 20 value 20028.246057
## iter 20 value 20028.246008
## final value 20028.246008
## converged
## # weights: 25
## initial value 21914.155346
## iter 10 value 20040.239325
## iter 20 value 20028.263384

```

```

## final value 20028.136084
## converged
## # weights: 41
## initial value 22163.843581
## iter 10 value 20047.699147
## iter 20 value 20028.349390
## final value 20028.134677
## converged
## # weights: 9
## initial value 22186.361355
## final value 20047.960100
## converged
## # weights: 25
## initial value 21802.010317
## final value 20047.960100
## converged
## # weights: 41
## initial value 22213.898567
## final value 20047.960100
## converged
## # weights: 9
## initial value 22762.033860
## iter 10 value 20053.788953
## final value 20053.470615
## converged
## # weights: 25
## initial value 22661.950697
## iter 10 value 20052.982363
## final value 20051.936278
## converged
## # weights: 41
## initial value 21456.228335
## iter 10 value 20063.487720
## iter 20 value 20051.278103
## final value 20051.276691
## converged
## # weights: 9
## initial value 23176.617040
## iter 10 value 20057.457307
## iter 20 value 20048.069595
## iter 20 value 20048.069552
## final value 20048.069552
## converged
## # weights: 25
## initial value 21695.320996
## iter 10 value 20058.799074
## iter 20 value 20048.085065
## final value 20047.972753
## converged
## # weights: 41
## initial value 23695.848096
## iter 10 value 20062.948010
## iter 20 value 20048.132899
## final value 20047.971781

```

```

## converged
## # weights: 9
## initial value 23881.181306
## final value 20028.947600
## converged
## # weights: 25
## initial value 22610.122356
## final value 20028.947600
## converged
## # weights: 41
## initial value 21862.557395
## final value 20028.947600
## converged
## # weights: 9
## initial value 22551.249506
## iter 10 value 20035.217999
## final value 20034.457313
## converged
## # weights: 25
## initial value 23687.902210
## iter 10 value 20034.091006
## final value 20032.923155
## converged
## # weights: 41
## initial value 22786.301119
## iter 10 value 20033.546921
## iter 20 value 20032.263868
## iter 20 value 20032.263750
## iter 20 value 20032.263713
## final value 20032.263713
## converged
## # weights: 9
## initial value 22292.530581
## iter 10 value 20039.570663
## iter 20 value 20029.070076
## iter 20 value 20029.070027
## final value 20029.070027
## converged
## # weights: 25
## initial value 22819.689212
## iter 10 value 20044.186410
## iter 20 value 20029.123292
## final value 20028.962117
## converged
## # weights: 41
## initial value 23894.154714
## iter 10 value 20042.674617
## iter 20 value 20029.105862
## final value 20028.962855
## converged
## # weights: 9
## initial value 22831.894788
## final value 19944.142000
## converged

```

```

## # weights: 25
## initial value 23384.673159
## final value 19944.142000
## converged
## # weights: 41
## initial value 22155.543267
## final value 19944.142000
## converged
## # weights: 9
## initial value 23395.537561
## iter 10 value 19949.777951
## final value 19949.649909
## converged
## # weights: 25
## initial value 23360.928949
## iter 10 value 19949.837096
## final value 19948.116422
## converged
## # weights: 41
## initial value 22334.902902
## iter 10 value 19948.119768
## final value 19947.457185
## converged
## # weights: 9
## initial value 23994.336192
## iter 10 value 19951.733522
## iter 20 value 19944.229524
## iter 20 value 19944.229489
## final value 19944.229489
## converged
## # weights: 25
## initial value 23062.725018
## iter 10 value 19960.107257
## iter 20 value 19944.326067
## final value 19944.158640
## converged
## # weights: 41
## initial value 23636.470391
## iter 10 value 19960.433093
## iter 20 value 19944.329824
## final value 19944.152960
## converged
## # weights: 9
## initial value 24106.814685
## final value 20063.162000
## converged
## # weights: 25
## initial value 24106.042436
## final value 20063.162000
## converged
## # weights: 41
## initial value 23688.749145
## final value 20063.162000
## converged

```

```

## # weights: 9
## initial value 23036.529588
## iter 10 value 20068.855944
## final value 20068.674098
## converged
## # weights: 25
## initial value 23348.048587
## iter 10 value 20073.023411
## iter 20 value 20067.140074
## final value 20067.139249
## converged
## # weights: 41
## initial value 21682.419776
## iter 10 value 20067.170006
## final value 20066.479479
## converged
## # weights: 9
## initial value 23491.602030
## iter 10 value 20072.516201
## iter 20 value 20063.269847
## iter 20 value 20063.269803
## final value 20063.269803
## converged
## # weights: 25
## initial value 23078.890576
## iter 10 value 20079.693427
## iter 20 value 20063.352594
## final value 20063.178489
## converged
## # weights: 41
## initial value 22370.458150
## iter 10 value 20080.489996
## iter 20 value 20063.361778
## final value 20063.170841
## converged
## # weights: 9
## initial value 23107.540305
## final value 20043.633700
## converged
## # weights: 25
## initial value 22941.466204
## final value 20043.633700
## converged
## # weights: 41
## initial value 23577.254190
## final value 20043.633700
## converged
## # weights: 9
## initial value 22959.404864
## iter 10 value 20049.919844
## final value 20049.143945
## converged
## # weights: 25
## initial value 22569.309948

```

```

## iter 10 value 20049.223023
## final value 20047.609578
## converged
## # weights: 41
## initial value 21741.291751
## iter 10 value 20049.959749
## iter 20 value 20046.950160
## iter 20 value 20046.950083
## iter 20 value 20046.950077
## final value 20046.950077
## converged
## # weights: 9
## initial value 22775.551099
## iter 10 value 20053.424135
## iter 20 value 20043.746576
## iter 20 value 20043.746531
## final value 20043.746531
## converged
## # weights: 25
## initial value 22429.752365
## iter 10 value 20059.750991
## iter 20 value 20043.819520
## final value 20043.649686
## converged
## # weights: 41
## initial value 21601.623556
## iter 10 value 20057.040132
## iter 20 value 20043.788266
## final value 20043.643716
## converged
## # weights: 9
## initial value 23215.456087
## final value 20045.446000
## converged
## # weights: 25
## initial value 22523.211499
## final value 20045.446000
## converged
## # weights: 41
## initial value 22619.920261
## final value 20045.446000
## converged
## # weights: 9
## initial value 23179.301946
## iter 10 value 20051.764186
## final value 20050.956404
## converged
## # weights: 25
## initial value 22638.080432
## iter 10 value 20051.348392
## final value 20049.422054
## converged
## # weights: 41
## initial value 22442.734202

```

```

## iter 10 value 20049.858072
## iter 20 value 20048.762752
## iter 20 value 20048.762582
## iter 20 value 20048.762535
## final value 20048.762535
## converged
## # weights: 9
## initial value 23369.873213
## iter 10 value 20056.435447
## iter 20 value 20045.572700
## iter 20 value 20045.572649
## final value 20045.572649
## converged
## # weights: 25
## initial value 22890.373538
## iter 10 value 20060.552425
## iter 20 value 20045.620165
## final value 20045.457960
## converged
## # weights: 41
## initial value 22312.107485
## iter 10 value 20065.396775
## iter 20 value 20045.676017
## final value 20045.457609
## converged
## # weights: 9
## initial value 22549.102217
## final value 20009.587700
## converged
## # weights: 25
## initial value 23800.869840
## final value 20009.587700
## converged
## # weights: 41
## initial value 24292.071132
## final value 20009.587700
## converged
## # weights: 9
## initial value 22717.183956
## iter 10 value 20015.509159
## final value 20015.096890
## converged
## # weights: 25
## initial value 23445.707757
## iter 10 value 20014.882367
## iter 20 value 20013.563081
## iter 20 value 20013.562917
## iter 20 value 20013.562896
## final value 20013.562896
## converged
## # weights: 41
## initial value 22127.161930
## iter 10 value 20021.703986
## iter 20 value 20012.905653

```



```

## final value 20012.903552
## converged
## # weights: 9
## initial value 21937.394732
## iter 10 value 20019.084678
## iter 20 value 20009.697193
## iter 20 value 20009.697149
## final value 20009.697149
## converged
## # weights: 25
## initial value 23667.586906
## iter 10 value 20021.778374
## iter 20 value 20009.728249
## final value 20009.602050
## converged
## # weights: 41
## initial value 23758.824341
## iter 10 value 20024.572640
## iter 20 value 20009.760465
## final value 20009.601191
## converged
## # weights: 9
## initial value 22002.490804
## final value 20023.227700
## converged
## # weights: 25
## initial value 22628.924213
## final value 20023.227700
## converged
## # weights: 41
## initial value 24121.511840
## final value 20023.227700
## converged
## # weights: 9
## initial value 21935.692119
## iter 10 value 20029.133687
## final value 20028.737261
## converged
## # weights: 25
## initial value 23459.873323
## iter 10 value 20035.210675
## iter 20 value 20027.204447
## final value 20027.203218
## converged
## # weights: 41
## initial value 22115.745081
## iter 10 value 20027.933721
## final value 20026.543839
## converged
## # weights: 9
## initial value 22266.718635
## iter 10 value 20033.158119
## iter 20 value 20023.342190
## iter 20 value 20023.342144

```

```

## final value 20023.342144
## converged
## # weights: 25
## initial value 22988.795644
## iter 10 value 20041.581328
## iter 20 value 20023.439303
## final value 20023.242217
## converged
## # weights: 41
## initial value 23356.357169
## iter 10 value 20039.152969
## iter 20 value 20023.411306
## final value 20023.238426
## converged
## # weights: 9
## initial value 21938.024071
## final value 20062.497700
## converged
## # weights: 25
## initial value 23070.386418
## final value 20062.497700
## converged
## # weights: 41
## initial value 23058.329046
## final value 20062.497700
## converged
## # weights: 9
## initial value 23167.844239
## iter 10 value 20068.541181
## final value 20068.009582
## converged
## # weights: 25
## initial value 23345.071667
## iter 10 value 20094.031872
## iter 20 value 20066.536250
## final value 20066.474858
## converged
## # weights: 41
## initial value 22916.733982
## iter 10 value 20066.147207
## final value 20065.815151
## converged
## # weights: 9
## initial value 22447.227211
## iter 10 value 20072.606401
## iter 20 value 20062.614245
## iter 20 value 20062.614199
## final value 20062.614199
## converged
## # weights: 25
## initial value 23291.642009
## iter 10 value 20077.300588
## iter 20 value 20062.668366
## final value 20062.512826

```

```

## converged
## # weights: 41
## initial value 23305.181733
## iter 10 value 20079.300817
## iter 20 value 20062.691427
## final value 20062.507766
## converged
## # weights: 9
## initial value 22335.925674
## final value 20007.369200
## converged
## # weights: 25
## initial value 22877.182164
## final value 20007.369200
## converged
## # weights: 41
## initial value 23295.830525
## final value 20007.369200
## converged
## # weights: 9
## initial value 22568.603864
## iter 10 value 20015.155412
## final value 20012.878346
## converged
## # weights: 25
## initial value 23208.404820
## iter 10 value 20011.905833
## final value 20011.344552
## converged
## # weights: 41
## initial value 22154.467185
## iter 10 value 20021.721935
## iter 20 value 20010.685872
## final value 20010.685005
## converged
## # weights: 9
## initial value 23757.505517
## iter 10 value 20017.053795
## iter 20 value 20007.480856
## iter 20 value 20007.480811
## final value 20007.480811
## converged
## # weights: 25
## initial value 23368.945988
## iter 10 value 20021.044087
## iter 20 value 20007.526861
## final value 20007.383009
## converged
## # weights: 41
## initial value 21834.228955
## iter 10 value 20022.483124
## iter 20 value 20007.543452
## final value 20007.378035
## converged

```

```

## # weights: 9
## initial value 23282.753849
## final value 20016.930100
## converged
## # weights: 25
## initial value 22935.690032
## final value 20016.930100
## converged
## # weights: 41
## initial value 24152.690625
## final value 20016.930100
## converged
## # weights: 9
## initial value 22286.990752
## iter 10 value 20022.477473
## final value 20022.439479
## converged
## # weights: 25
## initial value 23717.815798
## iter 10 value 20021.522050
## final value 20020.905500
## converged
## # weights: 41
## initial value 22628.267567
## iter 10 value 20021.289658
## final value 20020.246048
## converged
## # weights: 9
## initial value 22248.958663
## iter 10 value 20027.470558
## iter 20 value 20017.051623
## iter 20 value 20017.051575
## final value 20017.051575
## converged
## # weights: 25
## initial value 21913.931136
## iter 10 value 20031.094907
## iter 20 value 20017.093409
## final value 20016.942778
## converged
## # weights: 41
## initial value 21766.562654
## iter 10 value 20030.933431
## iter 20 value 20017.091547
## final value 20016.940268
## converged
## # weights: 9
## initial value 22671.694886
## final value 20047.960100
## converged
## # weights: 25
## initial value 22416.029056
## final value 20047.960100
## converged

```

```

## # weights: 41
## initial value 22678.848602
## final value 20047.960100
## converged
## # weights: 9
## initial value 21800.487044
## iter 10 value 20057.336542
## final value 20053.470631
## converged
## # weights: 25
## initial value 22600.309719
## iter 10 value 20053.327906
## final value 20051.936263
## converged
## # weights: 41
## initial value 22942.778320
## iter 10 value 20052.456922
## iter 20 value 20051.276824
## iter 20 value 20051.276706
## iter 20 value 20051.276700
## final value 20051.276700
## converged
## # weights: 9
## initial value 23807.488925
## iter 10 value 20056.749715
## iter 20 value 20048.061437
## iter 20 value 20048.061397
## final value 20048.061397
## converged
## # weights: 25
## initial value 22488.024346
## iter 10 value 20065.276134
## iter 20 value 20048.159740
## final value 20047.976469
## converged
## # weights: 41
## initial value 22205.828272
## iter 10 value 20066.047297
## iter 20 value 20048.168631
## final value 20047.970645
## converged
## # weights: 9
## initial value 22450.267708
## final value 20001.547600
## converged
## # weights: 25
## initial value 22584.294823
## final value 20001.547600
## converged
## # weights: 41
## initial value 22875.921768
## final value 20001.547600
## converged
## # weights: 9

```

```

## initial value 22784.693514
## iter 10 value 20007.784648
## final value 20007.056601
## converged
## # weights: 25
## initial value 23192.171616
## iter 10 value 20007.217074
## iter 20 value 20005.522676
## iter 20 value 20005.522663
## iter 20 value 20005.522661
## final value 20005.522661
## converged
## # weights: 41
## initial value 22341.821371
## iter 10 value 20017.458658
## iter 20 value 20004.864068
## final value 20004.863375
## converged
## # weights: 9
## initial value 21714.404315
## iter 10 value 20008.676094
## iter 20 value 20001.629786
## iter 20 value 20001.629753
## final value 20001.629753
## converged
## # weights: 25
## initial value 23391.406702
## iter 10 value 20018.016473
## iter 20 value 20001.737473
## final value 20001.563147
## converged
## # weights: 41
## initial value 23157.302256
## iter 10 value 20020.636813
## iter 20 value 20001.767684
## final value 20001.560550
## converged
## # weights: 9
## initial value 23281.709346
## final value 19999.010000
## converged
## # weights: 25
## initial value 23212.577290
## final value 19999.010000
## converged
## # weights: 41
## initial value 23350.089426
## final value 19999.010000
## converged
## # weights: 9
## initial value 22140.235795
## iter 10 value 20007.681042
## final value 20004.518952
## converged

```

```

## # weights: 25
## initial value 22612.445345
## iter 10 value 20004.983617
## final value 20002.985117
## converged
## # weights: 41
## initial value 22716.710016
## iter 10 value 20014.777519
## iter 20 value 20002.325972
## iter 20 value 20002.325852
## iter 20 value 20002.325842
## final value 20002.325842
## converged
## # weights: 9
## initial value 23320.497551
## iter 10 value 20008.835706
## iter 20 value 19999.123283
## iter 20 value 19999.123237
## final value 19999.123237
## converged
## # weights: 25
## initial value 22062.506301
## iter 10 value 20012.572382
## iter 20 value 19999.166364
## final value 19999.022095
## converged
## # weights: 41
## initial value 22077.978637
## iter 10 value 20016.204579
## iter 20 value 19999.208240
## final value 19999.020088
## converged
## # weights: 9
## initial value 22897.532972
## final value 19909.658000
## converged
## # weights: 25
## initial value 22765.533880
## final value 19909.658000
## converged
## # weights: 41
## initial value 23626.534101
## final value 19909.658000
## converged
## # weights: 9
## initial value 22466.721297
## iter 10 value 19915.428719
## final value 19915.165302
## converged
## # weights: 25
## initial value 23362.984504
## iter 10 value 19914.837005
## final value 19913.631961
## converged

```

```

## # weights: 41
## initial value 21955.361918
## iter 10 value 19913.818349
## final value 19912.972867
## converged
## # weights: 9
## initial value 21888.865058
## iter 10 value 19918.469866
## iter 20 value 19909.759594
## iter 20 value 19909.759553
## final value 19909.759553
## converged
## # weights: 25
## initial value 22050.496064
## iter 10 value 19921.810620
## iter 20 value 19909.798110
## final value 19909.670537
## converged
## # weights: 41
## initial value 23010.855929
## iter 10 value 19925.970407
## iter 20 value 19909.846069
## final value 19909.671473
## converged
## # weights: 9
## initial value 22257.636791
## final value 20014.310000
## converged
## # weights: 25
## initial value 22540.040320
## final value 20014.310000
## converged
## # weights: 41
## initial value 23531.634004
## final value 20014.310000
## converged
## # weights: 9
## initial value 23409.918298
## iter 10 value 20021.337358
## final value 20019.819317
## converged
## # weights: 25
## initial value 21718.908636
## iter 10 value 20024.336730
## iter 20 value 20018.285528
## final value 20018.285265
## converged
## # weights: 41
## initial value 24267.205450
## iter 10 value 20020.809758
## iter 20 value 20017.629528
## final value 20017.625886
## converged
## # weights: 9

```



```

## initial value 22912.487472
## iter 10 value 20025.852432
## iter 20 value 20014.443075
## iter 20 value 20014.443022
## final value 20014.443022
## converged
## # weights: 25
## initial value 22867.410650
## iter 10 value 20028.943957
## iter 20 value 20014.478718
## final value 20014.329645
## converged
## # weights: 41
## initial value 21807.366823
## iter 10 value 20027.604604
## iter 20 value 20014.463276
## final value 20014.320208
## converged
## # weights: 9
## initial value 23264.710066
## final value 19991.598500
## converged
## # weights: 25
## initial value 21258.110203
## final value 19991.598500
## converged
## # weights: 41
## initial value 24090.797094
## final value 19991.598500
## converged
## # weights: 9
## initial value 21885.058665
## iter 10 value 19997.278808
## final value 19997.107289
## converged
## # weights: 25
## initial value 22243.156873
## iter 10 value 19997.799950
## iter 20 value 19995.573519
## iter 20 value 19995.573485
## iter 20 value 19995.573476
## final value 19995.573476
## converged
## # weights: 41
## initial value 22301.043557
## iter 10 value 19995.359561
## final value 19994.914167
## converged
## # weights: 9
## initial value 22575.880914
## iter 10 value 20002.692504
## iter 20 value 19991.726405
## iter 20 value 19991.726354
## final value 19991.726354

```

```

## converged
## # weights: 25
## initial value 23108.286581
## iter 10 value 20006.931669
## iter 20 value 19991.775279
## final value 19991.611659
## converged
## # weights: 41
## initial value 22156.363603
## iter 10 value 20012.105817
## iter 20 value 19991.834933
## final value 19991.609322
## converged
## # weights: 9
## initial value 23678.787966
## final value 20032.920100
## converged
## # weights: 25
## initial value 21948.025122
## final value 20032.920100
## converged
## # weights: 41
## initial value 21647.848127
## final value 20032.920100
## converged
## # weights: 9
## initial value 21736.295520
## iter 10 value 20038.870929
## final value 20038.429973
## converged
## # weights: 25
## initial value 21780.055582
## iter 10 value 20037.281818
## final value 20036.895833
## converged
## # weights: 41
## initial value 23860.072248
## iter 10 value 20054.684980
## iter 20 value 20036.237388
## final value 20036.236303
## converged
## # weights: 9
## initial value 23262.808612
## iter 10 value 20042.353115
## iter 20 value 20033.028855
## iter 20 value 20033.028812
## final value 20033.028812
## converged
## # weights: 25
## initial value 22537.360484
## iter 10 value 20047.451422
## iter 20 value 20033.087635
## final value 20032.930848
## converged

```

```

## # weights: 41
## initial value 21667.780796
## iter 10 value 20045.324299
## iter 20 value 20033.063111
## final value 20032.928911
## converged
## # weights: 9
## initial value 21927.241981
## final value 20042.739700
## converged
## # weights: 25
## initial value 22650.549148
## final value 20042.739700
## converged
## # weights: 41
## initial value 24021.385762
## final value 20042.739700
## converged
## # weights: 9
## initial value 22793.700453
## iter 10 value 20052.701007
## iter 20 value 20048.249945
## iter 20 value 20048.249941
## final value 20048.249941
## converged
## # weights: 25
## initial value 23191.488871
## iter 10 value 20047.410281
## final value 20046.715602
## converged
## # weights: 41
## initial value 22961.648831
## iter 10 value 20054.232521
## iter 20 value 20046.057364
## final value 20046.056130
## converged
## # weights: 9
## initial value 23459.859034
## iter 10 value 20052.556003
## iter 20 value 20042.852874
## iter 20 value 20042.852829
## final value 20042.852829
## converged
## # weights: 25
## initial value 23008.855391
## iter 10 value 20059.407774
## iter 20 value 20042.931870
## final value 20042.758498
## converged
## # weights: 41
## initial value 21627.091040
## iter 10 value 20056.314391
## iter 20 value 20042.896206
## final value 20042.749233

```

```

## converged
## # weights: 9
## initial value 21505.492408
## final value 19928.378000
## converged
## # weights: 25
## initial value 23494.732214
## final value 19928.378000
## converged
## # weights: 41
## initial value 21755.172715
## final value 19928.378000
## converged
## # weights: 9
## initial value 21533.561577
## iter 10 value 19934.013203
## final value 19933.885725
## converged
## # weights: 25
## initial value 22025.204028
## iter 10 value 19933.071551
## final value 19932.352318
## converged
## # weights: 41
## initial value 23526.445435
## iter 10 value 19933.235543
## final value 19931.693275
## converged
## # weights: 9
## initial value 22713.311169
## iter 10 value 19938.214267
## iter 20 value 19928.491404
## iter 20 value 19928.491359
## final value 19928.491359
## converged
## # weights: 25
## initial value 21949.845282
## iter 10 value 19941.651654
## iter 20 value 19928.531035
## final value 19928.390648
## converged
## # weights: 41
## initial value 23382.060072
## iter 10 value 19944.986038
## iter 20 value 19928.569478
## final value 19928.390123
## converged
## # weights: 9
## initial value 21668.706887
## final value 20036.130100
## converged
## # weights: 25
## initial value 23151.124022
## final value 20036.130100

```

```

## converged
## # weights: 41
## initial value 22794.299538
## final value 20036.130100
## converged
## # weights: 9
## initial value 21691.034808
## iter 10 value 20043.713364
## final value 20041.640101
## converged
## # weights: 25
## initial value 22643.864610
## iter 10 value 20040.780251
## final value 20040.105942
## converged
## # weights: 41
## initial value 24825.942834
## iter 10 value 20107.688430
## iter 20 value 20039.617727
## final value 20039.446369
## converged
## # weights: 9
## initial value 21842.980736
## iter 10 value 20043.639562
## iter 20 value 20036.216678
## iter 20 value 20036.216644
## final value 20036.216644
## converged
## # weights: 25
## initial value 22222.804629
## iter 10 value 20050.001287
## iter 20 value 20036.290024
## final value 20036.143416
## converged
## # weights: 41
## initial value 21466.804824
## iter 10 value 20048.012120
## iter 20 value 20036.267090
## final value 20036.140010
## converged
## # weights: 9
## initial value 21758.418184
## final value 20006.167600
## converged
## # weights: 25
## initial value 22561.868180
## final value 20006.167600
## converged
## # weights: 41
## initial value 23016.323977
## final value 20006.167600
## converged
## # weights: 9
## initial value 22330.647531

```

```

## iter 10 value 20011.755316
## final value 20011.676670
## converged
## # weights: 25
## initial value 22368.808096
## iter 10 value 20017.192250
## iter 20 value 20010.143364
## final value 20010.142692
## converged
## # weights: 41
## initial value 22607.292269
## iter 10 value 20010.676419
## final value 20009.483388
## converged
## # weights: 9
## initial value 21706.139637
## iter 10 value 20014.093285
## iter 20 value 20006.258977
## iter 20 value 20006.258940
## final value 20006.258940
## converged
## # weights: 25
## initial value 22476.145163
## iter 10 value 20019.668933
## iter 20 value 20006.323260
## final value 20006.182881
## converged
## # weights: 41
## initial value 23473.936823
## iter 10 value 20023.157857
## iter 20 value 20006.363484
## final value 20006.178664
## converged
## # weights: 9
## initial value 22734.014379
## final value 19970.240500
## converged
## # weights: 25
## initial value 21266.612070
## final value 19970.240500
## converged
## # weights: 41
## initial value 23630.692527
## final value 19970.240500
## converged
## # weights: 9
## initial value 22065.747768
## iter 10 value 19976.421857
## final value 19975.748893
## converged
## # weights: 25
## initial value 23150.622938
## iter 10 value 19975.130018
## iter 20 value 19974.224847

```

```

## final value 19974.215234
## converged
## # weights: 41
## initial value 23225.646831
## iter 10 value 19985.995665
## iter 20 value 19973.556261
## final value 19973.555963
## converged
## # weights: 9
## initial value 21991.577716
## iter 10 value 19979.284621
## iter 20 value 19970.344772
## iter 20 value 19970.344730
## final value 19970.344730
## converged
## # weights: 25
## initial value 23426.460919
## iter 10 value 19983.371511
## iter 20 value 19970.391890
## final value 19970.254728
## converged
## # weights: 41
## initial value 22463.645761
## iter 10 value 19988.535191
## iter 20 value 19970.451423
## final value 19970.250837
## converged
## # weights: 9
## initial value 22064.288231
## final value 20018.280100
## converged
## # weights: 25
## initial value 22326.652914
## final value 20018.280100
## converged
## # weights: 41
## initial value 21846.992120
## final value 20018.280100
## converged
## # weights: 9
## initial value 23116.786881
## iter 10 value 20023.837076
## final value 20023.789521
## converged
## # weights: 25
## initial value 23420.971658
## iter 10 value 20026.125002
## iter 20 value 20022.270332
## final value 20022.255473
## converged
## # weights: 41
## initial value 21680.260660
## iter 10 value 20022.608754
## final value 20021.596081

```

```

## converged
## # weights: 9
## initial value 23327.019236
## iter 10 value 20027.555597
## iter 20 value 20018.387039
## iter 20 value 20018.386996
## final value 20018.386996
## converged
## # weights: 25
## initial value 22036.115523
## iter 10 value 20031.150894
## iter 20 value 20018.428490
## final value 20018.293266
## converged
## # weights: 41
## initial value 23556.703912
## iter 10 value 20034.245225
## iter 20 value 20018.464165
## final value 20018.290744
## converged
## # weights: 9
## initial value 22415.585207
## final value 20051.405200
## converged
## # weights: 25
## initial value 21961.013588
## final value 20051.405200
## converged
## # weights: 41
## initial value 23186.192022
## final value 20051.405200
## converged
## # weights: 9
## initial value 22582.285360
## iter 10 value 20059.321346
## final value 20056.915945
## converged
## # weights: 25
## initial value 23036.427168
## iter 10 value 20056.283264
## iter 20 value 20055.382022
## final value 20055.381478
## converged
## # weights: 41
## initial value 21527.676079
## iter 10 value 20056.121729
## final value 20054.721960
## converged
## # weights: 9
## initial value 22145.405718
## iter 10 value 20061.225823
## iter 20 value 20051.518424
## iter 20 value 20051.518379
## final value 20051.518379

```



```

## converged
## # weights: 25
## initial value 24024.819982
## iter 10 value 20060.399241
## iter 20 value 20051.508894
## final value 20051.421861
## converged
## # weights: 41
## initial value 23341.792189
## iter 10 value 20069.432554
## iter 20 value 20051.613041
## final value 20051.418319
## converged
## # weights: 9
## initial value 22519.527447
## final value 19996.910500
## converged
## # weights: 25
## initial value 22513.094484
## final value 19996.910500
## converged
## # weights: 41
## initial value 23968.734087
## final value 19996.910500
## converged
## # weights: 9
## initial value 22961.285389
## iter 10 value 20003.638151
## final value 20002.419404
## converged
## # weights: 25
## initial value 24163.854597
## iter 10 value 20003.974189
## iter 20 value 20000.890231
## final value 20000.885550
## converged
## # weights: 41
## initial value 21139.959100
## iter 10 value 20002.738977
## final value 20000.226296
## converged
## # weights: 9
## initial value 22505.978206
## iter 10 value 20008.551548
## iter 20 value 19997.044712
## iter 20 value 19997.044658
## final value 19997.044658
## converged
## # weights: 25
## initial value 23932.488938
## iter 10 value 20008.444291
## iter 20 value 19997.043476
## final value 19996.926399
## converged

```

```

## # weights: 41
## initial value 23353.831479
## iter 10 value 20014.605247
## iter 20 value 19997.114507
## final value 19996.920902
## converged
## # weights: 9
## initial value 22677.288267
## final value 20014.030000
## converged
## # weights: 25
## initial value 22346.329632
## final value 20014.030000
## converged
## # weights: 41
## initial value 23012.148025
## final value 20014.030000
## converged
## # weights: 9
## initial value 23486.507793
## iter 10 value 20020.294214
## final value 20019.539284
## converged
## # weights: 25
## initial value 22226.694214
## iter 10 value 20019.166923
## final value 20018.005272
## converged
## # weights: 41
## initial value 23292.735124
## iter 10 value 20018.094205
## final value 20017.345848
## converged
## # weights: 9
## initial value 21983.903575
## iter 10 value 20023.660574
## iter 20 value 20014.141033
## iter 20 value 20014.140989
## final value 20014.140989
## converged
## # weights: 25
## initial value 22825.044205
## iter 10 value 20029.006174
## iter 20 value 20014.202664
## final value 20014.041894
## converged
## # weights: 41
## initial value 21488.022694
## iter 10 value 20026.302711
## iter 20 value 20014.171495
## final value 20014.039339
## converged
## # weights: 9
## initial value 21917.802771

```

```

## final value 20020.659700
## converged
## # weights: 25
## initial value 21863.141845
## final value 20020.659700
## converged
## # weights: 41
## initial value 22709.732467
## final value 20020.659700
## converged
## # weights: 9
## initial value 23093.766984
## iter 10 value 20028.183600
## final value 20026.169155
## converged
## # weights: 25
## initial value 23165.852590
## iter 10 value 20033.573510
## iter 20 value 20024.635145
## iter 20 value 20024.635084
## iter 20 value 20024.635061
## final value 20024.635061
## converged
## # weights: 41
## initial value 24172.293706
## iter 10 value 20033.186747
## iter 20 value 20023.977574
## final value 20023.975636
## converged
## # weights: 9
## initial value 22985.611724
## iter 10 value 20032.397748
## iter 20 value 20020.795030
## iter 20 value 20020.794976
## final value 20020.794976
## converged
## # weights: 25
## initial value 23463.025469
## iter 10 value 20035.420470
## iter 20 value 20020.829880
## final value 20020.675586
## converged
## # weights: 41
## initial value 21082.918268
## iter 10 value 20028.031776
## iter 20 value 20020.744694
## final value 20020.668320
## converged
## # weights: 9
## initial value 23319.586350
## final value 19950.385700
## converged
## # weights: 25
## initial value 21430.033580

```

```

## final value 19950.385700
## converged
## # weights: 41
## initial value 22117.079475
## final value 19950.385700
## converged
## # weights: 9
## initial value 22859.236060
## iter 10 value 19956.004115
## final value 19955.893615
## converged
## # weights: 25
## initial value 23598.137100
## iter 10 value 19954.732374
## final value 19954.360081
## converged
## # weights: 41
## initial value 21393.927815
## iter 10 value 19955.553690
## final value 19953.700893
## converged
## # weights: 9
## initial value 22449.123161
## iter 10 value 19960.273082
## iter 20 value 19950.499694
## iter 20 value 19950.499648
## final value 19950.499648
## converged
## # weights: 25
## initial value 21796.284378
## iter 10 value 19962.004931
## iter 20 value 19950.519661
## final value 19950.397773
## converged
## # weights: 41
## initial value 21301.195992
## iter 10 value 19959.690028
## iter 20 value 19950.492972
## final value 19950.395326
## converged
## # weights: 9
## initial value 22161.682663
## final value 20051.473700
## converged
## # weights: 25
## initial value 22411.589122
## final value 20051.473700
## converged
## # weights: 41
## initial value 23321.411522
## final value 20051.473700
## converged
## # weights: 9
## initial value 21768.925951

```

```

## iter 10 value 20058.337407
## final value 20056.984322
## converged
## # weights: 25
## initial value 22866.637677
## iter 10 value 20060.617967
## iter 20 value 20055.451636
## final value 20055.449826
## converged
## # weights: 41
## initial value 22057.317831
## iter 10 value 20070.456874
## iter 20 value 20054.793061
## final value 20054.790284
## converged
## # weights: 9
## initial value 22449.662955
## iter 10 value 20062.644927
## iter 20 value 20051.602495
## iter 20 value 20051.602444
## final value 20051.602444
## converged
## # weights: 25
## initial value 22930.056751
## iter 10 value 20065.358036
## iter 20 value 20051.633775
## final value 20051.491527
## converged
## # weights: 41
## initial value 22555.821589
## iter 10 value 20069.894605
## iter 20 value 20051.686079
## final value 20051.488260
## converged
## # weights: 9
## initial value 23294.938029
## final value 20061.657200
## converged
## # weights: 25
## initial value 21564.810855
## final value 20061.657200
## converged
## # weights: 41
## initial value 22038.573203
## final value 20061.657200
## converged
## # weights: 9
## initial value 21697.358992
## iter 10 value 20067.550822
## final value 20067.168763
## converged
## # weights: 25
## initial value 23618.849876
## iter 10 value 20065.984157

```

```

## final value 20065.634126
## converged
## # weights: 41
## initial value 24000.563025
## iter 10 value 20072.763156
## iter 20 value 20064.976716
## final value 20064.974382
## converged
## # weights: 9
## initial value 22482.877307
## iter 10 value 20071.841279
## iter 20 value 20061.774614
## iter 20 value 20061.774567
## final value 20061.774567
## converged
## # weights: 25
## initial value 22776.553475
## iter 10 value 20077.230060
## iter 20 value 20061.836743
## final value 20061.675427
## converged
## # weights: 41
## initial value 23013.240687
## iter 10 value 20080.168637
## iter 20 value 20061.870622
## final value 20061.666752
## converged
## # weights: 9
## initial value 23078.929328
## final value 20007.369200
## converged
## # weights: 25
## initial value 23348.661520
## final value 20007.369200
## converged
## # weights: 41
## initial value 22880.939703
## final value 20007.369200
## converged
## # weights: 9
## initial value 23747.960542
## iter 10 value 20013.479111
## final value 20012.878354
## converged
## # weights: 25
## initial value 22858.635674
## iter 10 value 20014.532937
## iter 20 value 20011.344623
## iter 20 value 20011.344442
## iter 20 value 20011.344435
## final value 20011.344435
## converged
## # weights: 41
## initial value 24288.040274

```

```

## iter 10 value 20017.115858
## iter 20 value 20010.685417
## final value 20010.685009
## converged
## # weights: 9
## initial value 22358.378310
## iter 10 value 20017.022677
## iter 20 value 20007.480497
## iter 20 value 20007.480452
## final value 20007.480452
## converged
## # weights: 25
## initial value 22001.469317
## iter 10 value 20020.805797
## iter 20 value 20007.524113
## final value 20007.382120
## converged
## # weights: 41
## initial value 21728.391509
## iter 10 value 20020.602363
## iter 20 value 20007.521768
## final value 20007.377614
## converged
## # weights: 9
## initial value 23774.251372
## final value 20003.880100
## converged
## # weights: 25
## initial value 23332.464638
## final value 20003.880100
## converged
## # weights: 41
## initial value 21916.356611
## final value 20003.880100
## converged
## # weights: 9
## initial value 23162.828972
## iter 10 value 20009.923534
## final value 20009.389124
## converged
## # weights: 25
## initial value 22345.033337
## iter 10 value 20010.882125
## iter 20 value 20007.857375
## final value 20007.855155
## converged
## # weights: 41
## initial value 22990.206845
## iter 10 value 20009.355283
## iter 20 value 20007.196054
## iter 20 value 20007.195897
## iter 20 value 20007.195880
## final value 20007.195880
## converged

```

```

## # weights: 9
## initial value 21640.335508
## iter 10 value 20011.901873
## iter 20 value 20003.972585
## iter 20 value 20003.972548
## final value 20003.972548
## converged
## # weights: 25
## initial value 23927.457080
## iter 10 value 20013.074781
## iter 20 value 20003.986107
## final value 20003.899611
## converged
## # weights: 41
## initial value 23723.804677
## iter 10 value 20019.809896
## iter 20 value 20004.063758
## final value 20003.894625
## converged
## # weights: 9
## initial value 23286.406736
## final value 19948.680100
## converged
## # weights: 25
## initial value 22222.313582
## final value 19948.680100
## converged
## # weights: 41
## initial value 21901.537559
## final value 19948.680100
## converged
## # weights: 9
## initial value 22055.772182
## iter 10 value 19955.228301
## final value 19954.187976
## converged
## # weights: 25
## initial value 22308.858610
## iter 10 value 19953.280624
## iter 20 value 19952.656667
## final value 19952.654401
## converged
## # weights: 41
## initial value 22275.291566
## iter 10 value 19963.327346
## iter 20 value 19952.005522
## final value 19951.995237
## converged
## # weights: 9
## initial value 21971.570068
## iter 10 value 19957.555144
## iter 20 value 19948.782422
## iter 20 value 19948.782381
## final value 19948.782381

```



```

## converged
## # weights: 25
## initial value 23448.381831
## iter 10 value 19960.518949
## iter 20 value 19948.816593
## final value 19948.694648
## converged
## # weights: 41
## initial value 23397.980142
## iter 10 value 19964.859256
## iter 20 value 19948.866633
## final value 19948.691727
## converged
## # weights: 9
## initial value 22514.451030
## final value 20032.256500
## converged
## # weights: 25
## initial value 23943.993258
## final value 20032.256500
## converged
## # weights: 41
## initial value 23100.995094
## final value 20032.256500
## converged
## # weights: 9
## initial value 22892.047777
## iter 10 value 20039.099507
## final value 20037.766357
## converged
## # weights: 25
## initial value 21865.341650
## iter 10 value 20037.486319
## final value 20036.232212
## converged
## # weights: 41
## initial value 22554.541356
## iter 10 value 20044.126184
## final value 20035.572782
## converged
## # weights: 9
## initial value 22199.577434
## iter 10 value 20041.450890
## iter 20 value 20032.362504
## iter 20 value 20032.362462
## final value 20032.362462
## converged
## # weights: 25
## initial value 22347.167749
## iter 10 value 20048.470166
## iter 20 value 20032.443431
## final value 20032.269485
## converged
## # weights: 41

```

```

## initial value 22876.564444
## iter 10 value 20051.754820
## iter 20 value 20032.481300
## final value 20032.266787
## converged
## # weights: 9
## initial value 23194.819956
## final value 20014.867600
## converged
## # weights: 25
## initial value 23008.031967
## final value 20014.867600
## converged
## # weights: 41
## initial value 21463.521704
## final value 20014.867600
## converged
## # weights: 9
## initial value 21846.067877
## iter 10 value 20020.610770
## final value 20020.376925
## converged
## # weights: 25
## initial value 21702.393084
## iter 10 value 20020.507349
## final value 20018.842888
## converged
## # weights: 41
## initial value 23227.667237
## iter 10 value 20033.426366
## iter 20 value 20018.184741
## final value 20018.183514
## converged
## # weights: 9
## initial value 23236.923105
## iter 10 value 20024.505145
## iter 20 value 20014.978713
## iter 20 value 20014.978669
## final value 20014.978669
## converged
## # weights: 25
## initial value 22406.806943
## iter 10 value 20031.780443
## iter 20 value 20015.062592
## final value 20014.879869
## converged
## # weights: 41
## initial value 20993.871033
## iter 10 value 20021.130285
## iter 20 value 20014.939804
## final value 20014.876781
## converged
## # weights: 9
## initial value 22550.026150

```

```

## final value 20044.421200
## converged
## # weights: 25
## initial value 22287.679651
## final value 20044.421200
## converged
## # weights: 41
## initial value 23159.589826
## final value 20044.421200
## converged
## # weights: 9
## initial value 22477.032572
## iter 10 value 20050.200981
## final value 20049.931538
## converged
## # weights: 25
## initial value 23078.624550
## iter 10 value 20049.302113
## final value 20048.397182
## converged
## # weights: 41
## initial value 23512.836235
## iter 10 value 20049.027869
## final value 20047.737816
## converged
## # weights: 9
## initial value 22796.683817
## iter 10 value 20056.603285
## iter 20 value 20044.561650
## iter 20 value 20044.561594
## final value 20044.561594
## converged
## # weights: 25
## initial value 22237.811399
## iter 10 value 20059.083153
## iter 20 value 20044.590241
## final value 20044.433113
## converged
## # weights: 41
## initial value 23901.019417
## iter 10 value 20060.800435
## iter 20 value 20044.610040
## final value 20044.432964
## converged
## # weights: 9
## initial value 22073.664175
## final value 20048.654000
## converged
## # weights: 25
## initial value 23556.636307
## final value 20048.654000
## converged
## # weights: 41
## initial value 21594.529188

```

```

## final value 20048.654000
## converged
## # weights: 9
## initial value 22262.329765
## iter 10 value 20058.403365
## final value 20054.164541
## converged
## # weights: 25
## initial value 23751.841832
## iter 10 value 20063.667480
## iter 20 value 20052.633686
## final value 20052.630124
## converged
## # weights: 41
## initial value 24285.678844
## iter 10 value 20053.684895
## iter 20 value 20051.971168
## final value 20051.970570
## converged
## # weights: 9
## initial value 22292.499012
## iter 10 value 20057.859095
## iter 20 value 20048.760128
## iter 20 value 20048.760085
## final value 20048.760085
## converged
## # weights: 25
## initial value 23557.442920
## iter 10 value 20062.406740
## iter 20 value 20048.812558
## final value 20048.669163
## converged
## # weights: 41
## initial value 22110.112634
## iter 10 value 20066.299146
## iter 20 value 20048.857435
## final value 20048.664267
## converged
## # weights: 9
## initial value 22569.222592
## final value 20050.709200
## converged
## # weights: 25
## initial value 23342.548378
## final value 20050.709200
## converged
## # weights: 41
## initial value 23574.077696
## final value 20050.709200
## converged
## # weights: 9
## initial value 23622.960887
## iter 10 value 20056.378584
## final value 20056.219797

```

```

## converged
## # weights: 25
## initial value 22416.724015
## iter 10 value 20055.960206
## final value 20054.685329
## converged
## # weights: 41
## initial value 21841.167154
## iter 10 value 20055.441115
## iter 20 value 20054.026191
## final value 20054.025760
## converged
## # weights: 9
## initial value 22736.970323
## iter 10 value 20062.388186
## iter 20 value 20050.843850
## iter 20 value 20050.843796
## final value 20050.843796
## converged
## # weights: 25
## initial value 23657.933874
## iter 10 value 20061.798547
## iter 20 value 20050.837051
## final value 20050.724720
## converged
## # weights: 41
## initial value 22994.339255
## iter 10 value 20069.702775
## iter 20 value 20050.928181
## final value 20050.721802
## converged
## # weights: 9
## initial value 23208.713568
## final value 20001.390500
## converged
## # weights: 25
## initial value 23226.676270
## final value 20001.390500
## converged
## # weights: 41
## initial value 21581.525149
## final value 20001.390500
## converged
## # weights: 9
## initial value 23239.503133
## iter 10 value 20008.995610
## final value 20006.899469
## converged
## # weights: 25
## initial value 23090.757811
## iter 10 value 20011.657460
## iter 20 value 20005.366320
## final value 20005.365560
## converged

```

```

## # weights: 41
## initial value 22894.105030
## iter 10 value 20005.871159
## final value 20004.706238
## converged
## # weights: 9
## initial value 23443.771834
## iter 10 value 20010.114129
## iter 20 value 20001.491077
## iter 20 value 20001.491036
## final value 20001.491036
## converged
## # weights: 25
## initial value 23405.468174
## iter 10 value 20014.851735
## iter 20 value 20001.545697
## final value 20001.410581
## converged
## # weights: 41
## initial value 21626.538874
## iter 10 value 20013.538235
## iter 20 value 20001.530554
## final value 20001.399626
## converged
## # weights: 9
## initial value 21935.172040
## final value 20008.558000
## converged
## # weights: 25
## initial value 22218.783247
## final value 20008.558000
## converged
## # weights: 41
## initial value 22512.423434
## final value 20008.558000
## converged
## # weights: 9
## initial value 22965.034658
## iter 10 value 20017.256157
## final value 20014.067189
## converged
## # weights: 25
## initial value 23925.310280
## iter 10 value 20013.970933
## final value 20012.533275
## converged
## # weights: 41
## initial value 22213.775266
## iter 10 value 20025.241729
## iter 20 value 20011.874059
## iter 20 value 20011.873917
## iter 20 value 20011.873912
## final value 20011.873912
## converged

```

```

## # weights: 9
## initial value 23673.475238
## iter 10 value 20017.357046
## iter 20 value 20008.659446
## iter 20 value 20008.659406
## final value 20008.659406
## converged
## # weights: 25
## initial value 22863.904839
## iter 10 value 20027.357314
## iter 20 value 20008.774741
## final value 20008.570593
## converged
## # weights: 41
## initial value 23102.849237
## iter 10 value 20027.428673
## iter 20 value 20008.775564
## final value 20008.570556
## converged
## # weights: 9
## initial value 22847.542107
## final value 20042.193700
## converged
## # weights: 25
## initial value 22374.749165
## final value 20042.193700
## converged
## # weights: 41
## initial value 22885.254711
## final value 20042.193700
## converged
## # weights: 9
## initial value 22722.363564
## iter 10 value 20047.928811
## final value 20047.703948
## converged
## # weights: 25
## initial value 22023.929869
## iter 10 value 20047.642912
## final value 20046.169805
## converged
## # weights: 41
## initial value 22677.897538
## iter 10 value 20046.508622
## iter 20 value 20045.510526
## final value 20045.510160
## converged
## # weights: 9
## initial value 22092.651928
## iter 10 value 20051.287577
## iter 20 value 20042.298545
## iter 20 value 20042.298503
## final value 20042.298503
## converged

```

```

## # weights: 25
## initial value 22972.922653
## iter 10 value 20059.242901
## iter 20 value 20042.390264
## final value 20042.209605
## converged
## # weights: 41
## initial value 23821.698057
## iter 10 value 20057.528732
## iter 20 value 20042.370501
## final value 20042.208850
## converged
## # weights: 9
## initial value 23274.888896
## final value 19991.259700
## converged
## # weights: 25
## initial value 22594.895476
## final value 19991.259700
## converged
## # weights: 41
## initial value 23263.256558
## final value 19991.259700
## converged
## # weights: 9
## initial value 23693.759161
## iter 10 value 19997.586201
## final value 19996.768364
## converged
## # weights: 25
## initial value 22369.683873
## iter 10 value 19995.799693
## final value 19995.234555
## converged
## # weights: 41
## initial value 22879.544692
## iter 10 value 20008.542758
## iter 20 value 19994.575704
## final value 19994.575191
## converged
## # weights: 9
## initial value 23388.864646
## iter 10 value 20000.003027
## iter 20 value 19991.360504
## iter 20 value 19991.360463
## final value 19991.360463
## converged
## # weights: 25
## initial value 22841.213181
## iter 10 value 20005.796784
## iter 20 value 19991.427301
## final value 19991.273042
## converged
## # weights: 41

```



```

## initial value 21329.948824
## iter 10 value 20002.927454
## iter 20 value 19991.394220
## final value 19991.269098
## converged
## # weights: 9
## initial value 22731.735878
## final value 20021.567600
## converged
## # weights: 25
## initial value 23266.302598
## final value 20021.567600
## converged
## # weights: 41
## initial value 22592.339103
## final value 20021.567600
## converged
## # weights: 9
## initial value 23072.635571
## iter 10 value 20027.663579
## final value 20027.077116
## converged
## # weights: 25
## initial value 21778.835935
## iter 10 value 20026.296829
## final value 20025.543027
## converged
## # weights: 41
## initial value 22110.916139
## iter 10 value 20027.398781
## iter 20 value 20024.883711
## iter 20 value 20024.883641
## iter 20 value 20024.883620
## final value 20024.883620
## converged
## # weights: 9
## initial value 21627.304116
## iter 10 value 20028.369671
## iter 20 value 20021.646023
## iter 20 value 20021.645991
## final value 20021.645991
## converged
## # weights: 25
## initial value 23774.968052
## iter 10 value 20032.887251
## iter 20 value 20021.698107
## final value 20021.584673
## converged
## # weights: 41
## initial value 24213.849086
## iter 10 value 20032.463317
## iter 20 value 20021.693219
## final value 20021.583090
## converged

```

```

## # weights: 9
## initial value 22768.818227
## final value 19931.150000
## converged
## # weights: 25
## initial value 22197.040487
## final value 19931.150000
## converged
## # weights: 41
## initial value 22691.221572
## final value 19931.150000
## converged
## # weights: 9
## initial value 22360.353682
## iter 10 value 19937.355277
## final value 19936.657748
## converged
## # weights: 25
## initial value 23547.001345
## iter 10 value 19940.939669
## iter 20 value 19935.127184
## final value 19935.124310
## converged
## # weights: 41
## initial value 23054.979943
## iter 10 value 19935.941001
## iter 20 value 19934.465345
## iter 20 value 19934.465170
## iter 20 value 19934.465159
## final value 19934.465159
## converged
## # weights: 9
## initial value 22130.415264
## iter 10 value 19941.223518
## iter 20 value 19931.266140
## iter 20 value 19931.266093
## final value 19931.266093
## converged
## # weights: 25
## initial value 22320.928963
## iter 10 value 19946.576468
## iter 20 value 19931.327855
## final value 19931.164808
## converged
## # weights: 41
## initial value 22867.043227
## iter 10 value 19954.034571
## iter 20 value 19931.413841
## final value 19931.161414
## converged
## # weights: 9
## initial value 23125.692747
## final value 20048.115700
## converged

```

```

## # weights: 25
## initial value 23174.583810
## final value 20048.115700
## converged
## # weights: 41
## initial value 23522.623294
## final value 20048.115700
## converged
## # weights: 9
## initial value 22853.268901
## iter 10 value 20054.629641
## final value 20053.626202
## converged
## # weights: 25
## initial value 23398.483505
## iter 10 value 20054.742321
## iter 20 value 20052.092055
## iter 20 value 20052.091883
## iter 20 value 20052.091843
## final value 20052.091843
## converged
## # weights: 41
## initial value 21671.597526
## iter 10 value 20063.085518
## iter 20 value 20051.436110
## final value 20051.432243
## converged
## # weights: 9
## initial value 23347.831693
## iter 10 value 20059.087885
## iter 20 value 20048.242201
## iter 20 value 20048.242150
## final value 20048.242150
## converged
## # weights: 25
## initial value 22823.030275
## iter 10 value 20062.863375
## iter 20 value 20048.285729
## final value 20048.127502
## converged
## # weights: 41
## initial value 21976.413395
## iter 10 value 20061.326136
## iter 20 value 20048.268006
## final value 20048.125195
## converged
## # weights: 9
## initial value 21707.828736
## final value 20053.498000
## converged
## # weights: 25
## initial value 22990.790623
## final value 20053.498000
## converged

```

```

## # weights: 41
## initial value 22480.644186
## final value 20053.498000
## converged
## # weights: 9
## initial value 23135.154916
## iter 10 value 20061.559463
## final value 20059.008760
## converged
## # weights: 25
## initial value 23856.538554
## iter 10 value 20059.134558
## final value 20057.474286
## converged
## # weights: 41
## initial value 22898.426726
## iter 10 value 20063.871654
## iter 20 value 20056.815420
## final value 20056.814739
## converged
## # weights: 9
## initial value 22960.734017
## iter 10 value 20063.769958
## iter 20 value 20053.616428
## iter 20 value 20053.616380
## final value 20053.616380
## converged
## # weights: 25
## initial value 22844.586804
## iter 10 value 20065.663474
## iter 20 value 20053.638258
## final value 20053.513572
## converged
## # weights: 41
## initial value 22068.705575
## iter 10 value 20069.261580
## iter 20 value 20053.679742
## final value 20053.507758
## converged
## # weights: 9
## initial value 22036.491963
## final value 20036.130100
## converged
## # weights: 25
## initial value 22960.354019
## final value 20036.130100
## converged
## # weights: 41
## initial value 23384.039767
## final value 20036.130100
## converged
## # weights: 9
## initial value 23014.231024
## iter 10 value 20044.585762

```

```

## final value 20041.640087
## converged
## # weights: 25
## initial value 21472.240449
## iter 10 value 20046.927873
## iter 20 value 20040.106286
## final value 20040.105813
## converged
## # weights: 41
## initial value 22167.264475
## iter 10 value 20040.225179
## final value 20039.446423
## converged
## # weights: 9
## initial value 22974.560267
## iter 10 value 20045.878716
## iter 20 value 20036.242494
## iter 20 value 20036.242449
## final value 20036.242449
## converged
## # weights: 25
## initial value 22227.601345
## iter 10 value 20050.185625
## iter 20 value 20036.292149
## final value 20036.142475
## converged
## # weights: 41
## initial value 22700.987027
## iter 10 value 20056.412780
## iter 20 value 20036.363943
## final value 20036.144265
## converged
## # weights: 9
## initial value 23620.892627
## final value 20044.680100
## converged
## # weights: 25
## initial value 22102.949375
## final value 20044.680100
## converged
## # weights: 41
## initial value 23039.364480
## final value 20044.680100
## converged
## # weights: 9
## initial value 22598.644319
## iter 10 value 20050.702401
## final value 20050.190445
## converged
## # weights: 25
## initial value 22538.729893
## iter 10 value 20049.790545
## final value 20048.656212
## converged

```

```

## # weights: 41
## initial value 21463.908000
## iter 10 value 20049.667022
## iter 20 value 20047.996760
## iter 20 value 20047.996637
## iter 20 value 20047.996619
## final value 20047.996619
## converged
## # weights: 9
## initial value 23286.741874
## iter 10 value 20054.217353
## iter 20 value 20044.790057
## iter 20 value 20044.790013
## final value 20044.790013
## converged
## # weights: 25
## initial value 23630.552401
## iter 10 value 20059.119151
## iter 20 value 20044.846571
## final value 20044.698498
## converged
## # weights: 41
## initial value 23238.009075
## iter 10 value 20062.896591
## iter 20 value 20044.890122
## final value 20044.690301
## converged
## # weights: 9
## initial value 23576.887731
## final value 20046.605200
## converged
## # weights: 25
## initial value 24271.317066
## final value 20046.605200
## converged
## # weights: 41
## initial value 23255.371218
## final value 20046.605200
## converged
## # weights: 9
## initial value 22904.223802
## iter 10 value 20054.852400
## final value 20052.115627
## converged
## # weights: 25
## initial value 22533.502512
## iter 10 value 20051.782114
## final value 20050.581254
## converged
## # weights: 41
## initial value 21984.070457
## iter 10 value 20063.279108
## iter 20 value 20049.922078
## iter 20 value 20049.921898

```

```

## iter 20 value 20049.921820
## final value 20049.921820
## converged
## # weights: 9
## initial value 23131.020765
## iter 10 value 20056.875026
## iter 20 value 20046.723603
## iter 20 value 20046.723556
## final value 20046.723556
## converged
## # weights: 25
## initial value 22254.973894
## iter 10 value 20059.735471
## iter 20 value 20046.756582
## final value 20046.620435
## converged
## # weights: 41
## initial value 22138.639884
## iter 10 value 20063.522066
## iter 20 value 20046.800238
## final value 20046.617096
## converged
## # weights: 9
## initial value 23264.566251
## final value 20050.065700
## converged
## # weights: 25
## initial value 23242.459223
## final value 20050.065700
## converged
## # weights: 41
## initial value 22607.059335
## final value 20050.065700
## converged
## # weights: 9
## initial value 23257.241895
## iter 10 value 20056.103226
## final value 20055.576331
## converged
## # weights: 25
## initial value 22945.297487
## iter 10 value 20054.887746
## final value 20054.041954
## converged
## # weights: 41
## initial value 21496.161202
## iter 10 value 20053.910713
## final value 20053.382374
## converged
## # weights: 9
## initial value 22650.245532
## iter 10 value 20060.164684
## iter 20 value 20050.182133
## iter 20 value 20050.182087

```

```

## final value 20050.182087
## converged
## # weights: 25
## initial value 22582.779050
## iter 10 value 20067.279256
## iter 20 value 20050.264159
## final value 20050.077235
## converged
## # weights: 41
## initial value 22192.453783
## iter 10 value 20066.992640
## iter 20 value 20050.260854
## final value 20050.074957
## converged
## # weights: 9
## initial value 22911.570898
## final value 20042.467600
## converged
## # weights: 25
## initial value 23736.978282
## final value 20042.467600
## converged
## # weights: 41
## initial value 22248.564343
## final value 20042.467600
## converged
## # weights: 9
## initial value 22416.906247
## iter 10 value 20048.477733
## final value 20047.977835
## converged
## # weights: 25
## initial value 21593.223664
## iter 10 value 20047.288321
## final value 20046.443451
## converged
## # weights: 41
## initial value 23380.048326
## iter 10 value 20050.282157
## iter 20 value 20045.785373
## final value 20045.783941
## converged
## # weights: 9
## initial value 23280.056249
## iter 10 value 20051.716245
## iter 20 value 20042.574230
## iter 20 value 20042.574187
## final value 20042.574187
## converged
## # weights: 25
## initial value 23396.457384
## iter 10 value 20054.448203
## iter 20 value 20042.605727
## final value 20042.484174

```



```

## converged
## # weights: 41
## initial value 21668.431280
## iter 10 value 20057.394185
## iter 20 value 20042.639692
## final value 20042.477901
## converged
## # weights: 9
## initial value 22445.641836
## final value 20062.464500
## converged
## # weights: 25
## initial value 22509.511327
## final value 20062.464500
## converged
## # weights: 41
## initial value 21650.389613
## final value 20062.464500
## converged
## # weights: 9
## initial value 22688.182907
## iter 10 value 20068.711872
## final value 20067.977118
## converged
## # weights: 25
## initial value 23627.966756
## iter 10 value 20068.186686
## iter 20 value 20066.445363
## final value 20066.442315
## converged
## # weights: 41
## initial value 22656.200384
## iter 10 value 20070.464636
## iter 20 value 20065.782671
## iter 20 value 20065.782511
## iter 20 value 20065.782463
## final value 20065.782463
## converged
## # weights: 9
## initial value 22098.300467
## iter 10 value 20071.830568
## iter 20 value 20062.572483
## iter 20 value 20062.572440
## final value 20062.572440
## converged
## # weights: 25
## initial value 23005.510827
## iter 10 value 20079.926456
## iter 20 value 20062.665823
## final value 20062.482656
## converged
## # weights: 41
## initial value 20824.505724
## iter 10 value 20067.782927

```

```

## iter 20 value 20062.525817
## final value 20062.473106
## converged
## # weights: 9
## initial value 22816.396493
## final value 20006.167600
## converged
## # weights: 25
## initial value 23619.502464
## final value 20006.167600
## converged
## # weights: 41
## initial value 22454.928967
## final value 20006.167600
## converged
## # weights: 9
## initial value 23668.667526
## iter 10 value 20012.687846
## final value 20011.676703
## converged
## # weights: 25
## initial value 22251.396060
## iter 10 value 20016.518322
## iter 20 value 20010.253441
## final value 20010.142745
## converged
## # weights: 41
## initial value 23797.719873
## iter 10 value 20018.608256
## iter 20 value 20009.484007
## final value 20009.483390
## converged
## # weights: 9
## initial value 22020.044731
## iter 10 value 20015.134554
## iter 20 value 20006.270982
## iter 20 value 20006.270941
## final value 20006.270941
## converged
## # weights: 25
## initial value 22841.455907
## iter 10 value 20019.508105
## iter 20 value 20006.321406
## final value 20006.179904
## converged
## # weights: 41
## initial value 22277.331067
## iter 10 value 20025.323152
## iter 20 value 20006.388448
## final value 20006.178194
## converged
## # weights: 9
## initial value 22271.406487
## final value 20057.069200

```

```

## converged
## # weights: 25
## initial value 22442.365800
## final value 20057.069200
## converged
## # weights: 41
## initial value 23720.587852
## final value 20057.069200
## converged
## # weights: 9
## initial value 22221.096560
## iter 10 value 20065.791488
## final value 20062.580234
## converged
## # weights: 25
## initial value 23569.626194
## iter 10 value 20062.400283
## final value 20061.045669
## converged
## # weights: 41
## initial value 23166.795797
## iter 10 value 20079.896903
## iter 20 value 20060.388733
## final value 20060.386062
## converged
## # weights: 9
## initial value 22168.889580
## iter 10 value 20067.728476
## iter 20 value 20057.192093
## iter 20 value 20057.192044
## final value 20057.192044
## converged
## # weights: 25
## initial value 23012.027717
## iter 10 value 20072.476818
## iter 20 value 20057.246838
## final value 20057.084950
## converged
## # weights: 41
## initial value 22990.523475
## iter 10 value 20076.266589
## iter 20 value 20057.290531
## final value 20057.079486
## converged
## # weights: 9
## initial value 23173.385342
## final value 19999.489700
## converged
## # weights: 25
## initial value 22950.363699
## final value 19999.489700
## converged
## # weights: 41
## initial value 23020.313356

```

```

## final value 19999.489700
## converged
## # weights: 9
## initial value 22263.972073
## iter 10 value 20007.215283
## final value 20004.998643
## converged
## # weights: 25
## initial value 22029.348282
## iter 10 value 20004.059269
## iter 20 value 20003.464844
## iter 20 value 20003.464743
## iter 20 value 20003.464740
## final value 20003.464740
## converged
## # weights: 41
## initial value 22781.346510
## iter 10 value 20020.165258
## iter 20 value 20002.809664
## final value 20002.805412
## converged
## # weights: 9
## initial value 21750.158060
## iter 10 value 20007.626756
## iter 20 value 19999.583514
## iter 20 value 19999.583476
## final value 19999.583476
## converged
## # weights: 25
## initial value 22036.826879
## iter 10 value 20012.364802
## iter 20 value 19999.638140
## final value 19999.503769
## converged
## # weights: 41
## initial value 22995.729389
## iter 10 value 20017.202409
## iter 20 value 19999.693914
## final value 19999.499576
## converged
## # weights: 9
## initial value 22501.359567
## final value 19999.170100
## converged
## # weights: 25
## initial value 23361.566309
## final value 19999.170100
## converged
## # weights: 41
## initial value 21066.368450
## final value 19999.170100
## converged
## # weights: 9
## initial value 22137.464293

```

```

## iter 10 value 20005.958309
## final value 20004.679048
## converged
## # weights: 25
## initial value 24009.716514
## iter 10 value 20005.030262
## final value 20003.145247
## converged
## # weights: 41
## initial value 23656.171553
## iter 10 value 20018.939820
## iter 20 value 20002.491289
## final value 20002.485825
## converged
## # weights: 9
## initial value 22007.059149
## iter 10 value 20008.374018
## iter 20 value 19999.276214
## iter 20 value 19999.276172
## final value 19999.276172
## converged
## # weights: 25
## initial value 21949.102466
## iter 10 value 20010.614045
## iter 20 value 19999.302040
## final value 19999.184001
## converged
## # weights: 41
## initial value 23339.327726
## iter 10 value 20017.861704
## iter 20 value 19999.385600
## final value 19999.182360
## converged
## # weights: 9
## initial value 23208.916469
## final value 20031.585700
## converged
## # weights: 25
## initial value 23771.799147
## final value 20031.585700
## converged
## # weights: 41
## initial value 22841.192343
## final value 20031.585700
## converged
## # weights: 9
## initial value 22737.935715
## iter 10 value 20037.116773
## final value 20037.095534
## converged
## # weights: 25
## initial value 22181.277132
## iter 10 value 20036.738455
## final value 20035.561341

```

```

## converged
## # weights: 41
## initial value 22045.340209
## iter 10 value 20036.053728
## final value 20034.901865
## converged
## # weights: 9
## initial value 23236.711968
## iter 10 value 20041.492653
## iter 20 value 20031.699919
## iter 20 value 20031.699874
## final value 20031.699874
## converged
## # weights: 25
## initial value 23261.212228
## iter 10 value 20047.224089
## iter 20 value 20031.765998
## final value 20031.602310
## converged
## # weights: 41
## initial value 23592.265464
## iter 10 value 20049.763544
## iter 20 value 20031.795276
## final value 20031.599987
## converged
## # weights: 9
## initial value 22317.426134
## final value 20031.021200
## converged
## # weights: 25
## initial value 21936.583960
## final value 20031.021200
## converged
## # weights: 41
## initial value 24256.603731
## final value 20031.021200
## converged
## # weights: 9
## initial value 22555.302329
## iter 10 value 20038.870543
## final value 20036.531014
## converged
## # weights: 25
## initial value 22953.987626
## iter 10 value 20036.276732
## final value 20034.996896
## converged
## # weights: 41
## initial value 23456.716516
## iter 10 value 20047.505813
## iter 20 value 20034.353012
## final value 20034.337437
## converged
## # weights: 9

```

```

## initial value 22424.511335
## iter 10 value 20040.473392
## iter 20 value 20031.130176
## iter 20 value 20031.130133
## final value 20031.130133
## converged
## # weights: 25
## initial value 23012.698673
## iter 10 value 20046.986826
## iter 20 value 20031.205271
## final value 20031.034838
## converged
## # weights: 41
## initial value 23349.331437
## iter 10 value 20047.980070
## iter 20 value 20031.216722
## final value 20031.031484
## converged
## # weights: 9
## initial value 22447.793977
## final value 20038.070000
## converged
## # weights: 25
## initial value 23533.357999
## final value 20038.070000
## converged
## # weights: 41
## initial value 21935.363125
## final value 20038.070000
## converged
## # weights: 9
## initial value 23376.906571
## iter 10 value 20045.306500
## iter 20 value 20043.580104
## iter 20 value 20043.580068
## final value 20043.580068
## converged
## # weights: 25
## initial value 22535.171354
## iter 10 value 20042.885862
## final value 20042.045762
## converged
## # weights: 41
## initial value 21168.588423
## iter 10 value 20042.244969
## final value 20041.386281
## converged
## # weights: 9
## initial value 23421.388787
## iter 10 value 20047.224137
## iter 20 value 20038.175540
## iter 20 value 20038.175498
## final value 20038.175498
## converged

```

```

## # weights: 25
## initial value 22210.899572
## iter 10 value 20052.601780
## iter 20 value 20038.237540
## final value 20038.082692
## converged
## # weights: 41
## initial value 23001.045186
## iter 10 value 20060.038337
## iter 20 value 20038.323278
## final value 20038.080732
## converged
## # weights: 9
## initial value 22861.412680
## final value 19994.114000
## converged
## # weights: 25
## initial value 23335.730021
## final value 19994.114000
## converged
## # weights: 41
## initial value 21333.890262
## final value 19994.114000
## converged
## # weights: 9
## initial value 22201.444060
## iter 10 value 20001.133025
## final value 19999.622837
## converged
## # weights: 25
## initial value 23751.005662
## iter 10 value 20005.820091
## iter 20 value 19998.089595
## final value 19998.088993
## converged
## # weights: 41
## initial value 22008.837189
## iter 10 value 19999.076037
## final value 19997.429886
## converged
## # weights: 9
## initial value 21552.455000
## iter 10 value 20001.017598
## iter 20 value 19994.193593
## iter 20 value 19994.193561
## final value 19994.193561
## converged
## # weights: 25
## initial value 22094.433661
## iter 10 value 20006.965115
## iter 20 value 19994.262163
## final value 19994.127544
## converged
## # weights: 41

```



```

## initial value 22496.982029
## iter 10 value 20011.720195
## iter 20 value 19994.316986
## final value 19994.124956
## converged
## # weights: 9
## initial value 21879.426784
## final value 20006.318500
## converged
## # weights: 25
## initial value 21895.127202
## final value 20006.318500
## converged
## # weights: 41
## initial value 22315.742639
## final value 20006.318500
## converged
## # weights: 9
## initial value 22858.582571
## iter 10 value 20011.951467
## final value 20011.827670
## converged
## # weights: 25
## initial value 22100.480164
## iter 10 value 20011.734486
## iter 20 value 20010.294198
## final value 20010.293621
## converged
## # weights: 41
## initial value 24047.065652
## iter 10 value 20011.028443
## iter 20 value 20009.634360
## iter 20 value 20009.634287
## iter 20 value 20009.634253
## final value 20009.634253
## converged
## # weights: 9
## initial value 21911.895148
## iter 10 value 20014.677130
## iter 20 value 20006.414868
## iter 20 value 20006.414830
## final value 20006.414830
## converged
## # weights: 25
## initial value 23245.169818
## iter 10 value 20021.422359
## iter 20 value 20006.492636
## final value 20006.336680
## converged
## # weights: 41
## initial value 22249.315061
## iter 10 value 20023.899543
## iter 20 value 20006.521196
## final value 20006.329457

```

```

## converged
## # weights: 9
## initial value 21578.585499
## final value 20046.523700
## converged
## # weights: 25
## initial value 22390.316191
## final value 20046.523700
## converged
## # weights: 41
## initial value 23667.687594
## final value 20046.523700
## converged
## # weights: 9
## initial value 23162.413307
## iter 10 value 20053.454952
## final value 20052.034167
## converged
## # weights: 25
## initial value 23440.731833
## iter 10 value 20059.901127
## iter 20 value 20050.507185
## final value 20050.499768
## converged
## # weights: 41
## initial value 24587.474759
## iter 10 value 20061.801669
## iter 20 value 20049.850461
## final value 20049.840296
## converged
## # weights: 9
## initial value 22987.113583
## iter 10 value 20057.366665
## iter 20 value 20046.648711
## iter 20 value 20046.648661
## final value 20046.648661
## converged
## # weights: 25
## initial value 22933.977119
## iter 10 value 20061.806921
## iter 20 value 20046.699904
## final value 20046.535302
## converged
## # weights: 41
## initial value 22294.500266
## iter 10 value 20065.358608
## iter 20 value 20046.740852
## final value 20046.532560
## converged
## # weights: 9
## initial value 22119.250564
## final value 20002.330100
## converged
## # weights: 25

```

```

## initial value 23447.332129
## final value 20002.330100
## converged
## # weights: 41
## initial value 23703.127947
## final value 20002.330100
## converged
## # weights: 9
## initial value 22776.657267
## iter 10 value 20009.724386
## final value 20007.839094
## converged
## # weights: 25
## initial value 23367.367470
## iter 10 value 20006.542025
## iter 20 value 20006.306317
## final value 20006.305148
## converged
## # weights: 41
## initial value 22876.635643
## iter 10 value 20007.078952
## iter 20 value 20005.645908
## iter 20 value 20005.645825
## iter 20 value 20005.645815
## final value 20005.645815
## converged
## # weights: 9
## initial value 22712.320616
## iter 10 value 20012.342700
## iter 20 value 20002.445537
## iter 20 value 20002.445491
## final value 20002.445491
## converged
## # weights: 25
## initial value 21738.383305
## iter 10 value 20012.672738
## iter 20 value 20002.449342
## final value 20002.341794
## converged
## # weights: 41
## initial value 22187.667524
## iter 10 value 20019.549757
## iter 20 value 20002.528629
## final value 20002.341022
## converged
## # weights: 9
## initial value 21851.375623
## final value 20020.005200
## converged
## # weights: 25
## initial value 22624.016659
## final value 20020.005200
## converged
## # weights: 41

```

```

## initial value 23172.589468
## final value 20020.005200
## converged
## # weights: 9
## initial value 23083.735845
## iter 10 value 20026.529032
## final value 20025.514673
## converged
## # weights: 25
## initial value 22549.106546
## iter 10 value 20024.929747
## final value 20023.980636
## converged
## # weights: 41
## initial value 21484.095369
## iter 10 value 20035.513909
## iter 20 value 20023.336695
## final value 20023.321269
## converged
## # weights: 9
## initial value 22403.016332
## iter 10 value 20030.332151
## iter 20 value 20020.124262
## iter 20 value 20020.124214
## final value 20020.124214
## converged
## # weights: 25
## initial value 23600.808294
## iter 10 value 20031.489837
## iter 20 value 20020.137609
## final value 20020.021191
## converged
## # weights: 41
## initial value 23167.876094
## iter 10 value 20039.082560
## iter 20 value 20020.225147
## final value 20020.016666
## converged
## # weights: 9
## initial value 23474.694924
## final value 20022.593200
## converged
## # weights: 25
## initial value 21506.649000
## final value 20022.593200
## converged
## # weights: 41
## initial value 24399.884308
## final value 20022.593200
## converged
## # weights: 9
## initial value 23826.707641
## iter 10 value 20028.561597
## final value 20028.102745

```

```

## converged
## # weights: 25
## initial value 22799.285408
## iter 10 value 20027.669442
## final value 20026.568696
## converged
## # weights: 41
## initial value 22111.907587
## iter 10 value 20031.185577
## final value 20025.909390
## converged
## # weights: 9
## initial value 21847.550312
## iter 10 value 20030.791663
## iter 20 value 20022.687722
## iter 20 value 20022.687684
## final value 20022.687684
## converged
## # weights: 25
## initial value 22361.098871
## iter 10 value 20037.350455
## iter 20 value 20022.763340
## final value 20022.606679
## converged
## # weights: 41
## initial value 22541.090578
## iter 10 value 20043.521644
## iter 20 value 20022.834489
## final value 20022.603754
## converged
## # weights: 9
## initial value 22451.865921
## final value 20028.713200
## converged
## # weights: 25
## initial value 22417.642367
## final value 20028.713200
## converged
## # weights: 41
## initial value 22140.728225
## final value 20028.713200
## converged
## # weights: 9
## initial value 22680.955534
## iter 10 value 20051.030353
## iter 20 value 20034.231861
## final value 20034.222979
## converged
## # weights: 25
## initial value 22365.767509
## iter 10 value 20033.227154
## final value 20032.688754
## converged
## # weights: 41

```

```

## initial value 23513.330341
## iter 10 value 20041.773715
## iter 20 value 20032.030282
## final value 20032.029412
## converged
## # weights: 9
## initial value 23916.508025
## iter 10 value 20037.511236
## iter 20 value 20028.814634
## iter 20 value 20028.814594
## final value 20028.814594
## converged
## # weights: 25
## initial value 22520.070448
## iter 10 value 20042.825590
## iter 20 value 20028.875905
## final value 20028.725943
## converged
## # weights: 41
## initial value 23403.601172
## iter 10 value 20046.711465
## iter 20 value 20028.920706
## final value 20028.723543
## converged
## # weights: 9
## initial value 23585.506378
## final value 19949.321200
## converged
## # weights: 25
## initial value 22462.924553
## final value 19949.321200
## converged
## # weights: 41
## initial value 23471.548712
## final value 19949.321200
## converged
## # weights: 9
## initial value 22219.636420
## iter 10 value 19956.953960
## final value 19954.829272
## converged
## # weights: 25
## initial value 22132.235261
## iter 10 value 19954.648706
## final value 19953.295824
## converged
## # weights: 41
## initial value 22959.271216
## iter 10 value 19965.920841
## iter 20 value 19952.640674
## final value 19952.636527
## converged
## # weights: 9
## initial value 22718.745673

```

```

## iter 10 value 19959.089140
## iter 20 value 19949.433817
## iter 20 value 19949.433772
## final value 19949.433772
## converged
## # weights: 25
## initial value 22760.657444
## iter 10 value 19965.339743
## iter 20 value 19949.505881
## final value 19949.341024
## converged
## # weights: 41
## initial value 23163.574065
## iter 10 value 19967.905801
## iter 20 value 19949.535466
## final value 19949.335271
## converged
## # weights: 9
## initial value 22396.827041
## final value 20028.595700
## converged
## # weights: 25
## initial value 22848.884339
## final value 20028.595700
## converged
## # weights: 41
## initial value 22472.636177
## final value 20028.595700
## converged
## # weights: 9
## initial value 21662.154394
## iter 10 value 20034.508561
## final value 20034.105431
## converged
## # weights: 25
## initial value 22874.164003
## iter 10 value 20033.441711
## final value 20032.571249
## converged
## # weights: 41
## initial value 22871.053370
## iter 10 value 20045.601048
## iter 20 value 20031.912141
## final value 20031.911829
## converged
## # weights: 9
## initial value 22125.669611
## iter 10 value 20038.049949
## iter 20 value 20028.704700
## iter 20 value 20028.704656
## final value 20028.704656
## converged
## # weights: 25
## initial value 22979.200513

```

```

## iter 10 value 20044.526383
## iter 20 value 20028.779368
## final value 20028.612375
## converged
## # weights: 41
## initial value 23649.280358
## iter 10 value 20044.728873
## iter 20 value 20028.781703
## final value 20028.607429
## converged
## # weights: 9
## initial value 22288.469449
## final value 20011.474000
## converged
## # weights: 25
## initial value 22329.805885
## final value 20011.474000
## converged
## # weights: 41
## initial value 23530.833996
## final value 20011.474000
## converged
## # weights: 9
## initial value 21899.047798
## iter 10 value 20017.976805
## final value 20016.983193
## converged
## # weights: 25
## initial value 22299.320672
## iter 10 value 20017.012262
## iter 20 value 20015.450031
## final value 20015.449162
## converged
## # weights: 41
## initial value 23499.042989
## iter 10 value 20025.221146
## iter 20 value 20014.790288
## final value 20014.789830
## converged
## # weights: 9
## initial value 23245.852813
## iter 10 value 20022.852965
## iter 20 value 20011.605191
## iter 20 value 20011.605138
## final value 20011.605138
## converged
## # weights: 25
## initial value 21932.874135
## iter 10 value 20023.618985
## iter 20 value 20011.614022
## final value 20011.485818
## converged
## # weights: 41
## initial value 23634.917920

```



```

## iter 10 value 20025.323975
## iter 20 value 20011.633679
## final value 20011.487097
## converged
## # weights: 9
## initial value 22544.489125
## final value 20001.233200
## converged
## # weights: 25
## initial value 22527.635709
## final value 20001.233200
## converged
## # weights: 41
## initial value 21677.209741
## final value 20001.233200
## converged
## # weights: 9
## initial value 22743.776517
## iter 10 value 20008.098610
## final value 20006.742158
## converged
## # weights: 25
## initial value 23713.723056
## iter 10 value 20007.930651
## iter 20 value 20005.208836
## final value 20005.208293
## converged
## # weights: 41
## initial value 21944.728502
## iter 10 value 20004.951204
## final value 20004.548868
## converged
## # weights: 9
## initial value 22253.109573
## iter 10 value 20010.355412
## iter 20 value 20001.338372
## iter 20 value 20001.338330
## final value 20001.338330
## converged
## # weights: 25
## initial value 23108.643375
## iter 10 value 20016.736628
## iter 20 value 20001.411942
## final value 20001.246270
## converged
## # weights: 41
## initial value 23304.486283
## iter 10 value 20020.860012
## iter 20 value 20001.459482
## final value 20001.244058
## converged
## # weights: 9
## initial value 22256.169043
## final value 19993.614500

```

```

## converged
## # weights: 25
## initial value 23063.889106
## final value 19993.614500
## converged
## # weights: 41
## initial value 23558.269728
## final value 19993.614500
## converged
## # weights: 9
## initial value 23081.400249
## iter 10 value 20000.146771
## final value 19999.123547
## converged
## # weights: 25
## initial value 21894.970631
## iter 10 value 19999.073812
## iter 20 value 19997.589878
## final value 19997.589453
## converged
## # weights: 41
## initial value 21314.045671
## iter 10 value 19997.870914
## final value 19996.930237
## converged
## # weights: 9
## initial value 22654.376976
## iter 10 value 20003.513144
## iter 20 value 19993.728624
## iter 20 value 19993.728578
## final value 19993.728578
## converged
## # weights: 25
## initial value 22102.858650
## iter 10 value 20006.116399
## iter 20 value 19993.758637
## final value 19993.627601
## converged
## # weights: 41
## initial value 22470.158991
## iter 10 value 20012.153443
## iter 20 value 19993.828239
## final value 19993.624885
## converged
## # weights: 9
## initial value 21767.285884
## final value 19957.697200
## converged
## # weights: 25
## initial value 22504.596833
## final value 19957.697200
## converged
## # weights: 41
## initial value 21526.019925

```

```

## final value 19957.697200
## converged
## # weights: 9
## initial value 23555.527484
## iter 10 value 19963.528931
## final value 19963.205140
## converged
## # weights: 25
## initial value 23083.106610
## iter 10 value 19966.218577
## iter 20 value 19961.676842
## final value 19961.671481
## converged
## # weights: 41
## initial value 22715.340064
## iter 10 value 19961.844477
## final value 19961.012327
## converged
## # weights: 9
## initial value 22471.585820
## iter 10 value 19967.093326
## iter 20 value 19957.805530
## iter 20 value 19957.805487
## final value 19957.805487
## converged
## # weights: 25
## initial value 21943.507487
## iter 10 value 19970.519213
## iter 20 value 19957.845028
## final value 19957.710040
## converged
## # weights: 41
## initial value 23624.490188
## iter 10 value 19975.581778
## iter 20 value 19957.903395
## final value 19957.708357
## converged
## # weights: 9
## initial value 22049.755312
## final value 20032.699700
## converged
## # weights: 25
## initial value 24381.164234
## final value 20032.699700
## converged
## # weights: 41
## initial value 21738.604454
## final value 20032.699700
## converged
## # weights: 9
## initial value 22138.708044
## iter 10 value 20039.271215
## final value 20038.209574
## converged

```

```

## # weights: 25
## initial value 22314.400010
## iter 10 value 20037.076417
## final value 20036.675349
## converged
## # weights: 41
## initial value 22565.508033
## iter 10 value 20040.933570
## iter 20 value 20036.016890
## final value 20036.015902
## converged
## # weights: 9
## initial value 22709.471250
## iter 10 value 20042.893517
## iter 20 value 20032.817227
## iter 20 value 20032.817180
## final value 20032.817180
## converged
## # weights: 25
## initial value 23409.365654
## iter 10 value 20045.730224
## iter 20 value 20032.849932
## final value 20032.718553
## converged
## # weights: 41
## initial value 23744.780242
## iter 10 value 20048.609675
## iter 20 value 20032.883130
## final value 20032.713037
## converged
## # weights: 9
## initial value 22389.126479
## final value 20047.488500
## converged
## # weights: 25
## initial value 22507.653356
## final value 20047.488500
## converged
## # weights: 41
## initial value 22504.828937
## final value 20047.488500
## converged
## # weights: 9
## initial value 22763.691153
## iter 10 value 20053.120701
## final value 20052.998976
## converged
## # weights: 25
## initial value 21809.930689
## iter 10 value 20052.077917
## final value 20051.464632
## converged
## # weights: 41
## initial value 23121.136954

```

```

## iter 10 value 20056.660411
## iter 20 value 20050.823550
## final value 20050.805072
## converged
## # weights: 9
## initial value 21836.913520
## iter 10 value 20055.478468
## iter 20 value 20047.580618
## iter 20 value 20047.580581
## final value 20047.580581
## converged
## # weights: 25
## initial value 22648.727938
## iter 10 value 20062.834426
## iter 20 value 20047.665426
## final value 20047.504557
## converged
## # weights: 41
## initial value 23737.169420
## iter 10 value 20062.166776
## iter 20 value 20047.657729
## final value 20047.499939
## converged
## # weights: 9
## initial value 23536.019460
## final value 20051.129200
## converged
## # weights: 25
## initial value 22470.310978
## final value 20051.129200
## converged
## # weights: 41
## initial value 21496.145154
## final value 20051.129200
## converged
## # weights: 9
## initial value 23717.038940
## iter 10 value 20067.433355
## iter 20 value 20056.640577
## final value 20056.639843
## converged
## # weights: 25
## initial value 21976.328503
## iter 10 value 20060.335756
## iter 20 value 20055.105808
## final value 20055.105427
## converged
## # weights: 41
## initial value 23509.318853
## iter 10 value 20060.969062
## iter 20 value 20054.447238
## final value 20054.445853
## converged
## # weights: 9

```

```

## initial value 23208.288695
## iter 10 value 20060.749807
## iter 20 value 20051.240118
## iter 20 value 20051.240074
## final value 20051.240074
## converged
## # weights: 25
## initial value 21755.547718
## iter 10 value 20061.741464
## iter 20 value 20051.251551
## final value 20051.140898
## converged
## # weights: 41
## initial value 24201.271933
## iter 10 value 20062.105184
## iter 20 value 20051.255744
## final value 20051.143264
## converged
## # weights: 9
## initial value 22602.486382
## final value 20008.262000
## converged
## # weights: 25
## initial value 22537.453361
## final value 20008.262000
## converged
## # weights: 41
## initial value 23116.462199
## final value 20008.262000
## converged
## # weights: 9
## initial value 22933.882031
## iter 10 value 20014.585068
## final value 20013.771146
## converged
## # weights: 25
## initial value 21852.188289
## iter 10 value 20013.000252
## final value 20012.237227
## converged
## # weights: 41
## initial value 23561.646151
## iter 10 value 20012.516670
## final value 20011.577802
## converged
## # weights: 9
## initial value 21833.572155
## iter 10 value 20017.272586
## iter 20 value 20008.365885
## iter 20 value 20008.365843
## final value 20008.365843
## converged
## # weights: 25
## initial value 22544.648532

```

```

## iter 10 value 20023.644389
## iter 20 value 20008.439347
## final value 20008.276825
## converged
## # weights: 41
## initial value 22879.367899
## iter 10 value 20028.423172
## iter 20 value 20008.494442
## final value 20008.271328
## converged
## # weights: 9
## initial value 22227.892792
## final value 20032.920100
## converged
## # weights: 25
## initial value 22449.862337
## final value 20032.920100
## converged
## # weights: 41
## initial value 22703.824627
## final value 20032.920100
## converged
## # weights: 9
## initial value 22366.220475
## iter 10 value 20040.388882
## final value 20038.429975
## converged
## # weights: 25
## initial value 22255.070791
## iter 10 value 20039.125014
## iter 20 value 20036.895986
## iter 20 value 20036.895820
## iter 20 value 20036.895814
## final value 20036.895814
## converged
## # weights: 41
## initial value 22237.578790
## iter 10 value 20044.940533
## iter 20 value 20036.238403
## final value 20036.236322
## converged
## # weights: 9
## initial value 22872.649664
## iter 10 value 20042.551964
## iter 20 value 20033.031148
## iter 20 value 20033.031103
## final value 20033.031103
## converged
## # weights: 25
## initial value 21569.108425
## iter 10 value 20040.939435
## iter 20 value 20033.012557
## final value 20032.931307
## converged

```

```

## # weights: 41
## initial value 22362.180343
## iter 10 value 20049.454600
## iter 20 value 20033.110730
## final value 20032.929361
## converged
## # weights: 9
## initial value 22445.550803
## final value 19990.238500
## converged
## # weights: 25
## initial value 22569.422489
## final value 19990.238500
## converged
## # weights: 41
## initial value 21687.645984
## final value 19990.238500
## converged
## # weights: 9
## initial value 22244.046467
## iter 10 value 20000.456201
## final value 19995.747172
## converged
## # weights: 25
## initial value 23299.531290
## iter 10 value 19995.022672
## final value 19994.213323
## converged
## # weights: 41
## initial value 23486.592571
## iter 10 value 19995.819991
## iter 20 value 19993.554259
## iter 20 value 19993.554091
## iter 20 value 19993.554062
## final value 19993.554062
## converged
## # weights: 9
## initial value 23288.704420
## iter 10 value 19999.708656
## iter 20 value 19990.347683
## iter 20 value 19990.347640
## final value 19990.347640
## converged
## # weights: 25
## initial value 21328.084322
## iter 10 value 19999.000500
## iter 20 value 19990.339519
## final value 19990.249745
## converged
## # weights: 41
## initial value 22614.305271
## iter 10 value 20008.554966
## iter 20 value 19990.449674
## final value 19990.247829

```



```

## converged
## # weights: 9
## initial value 22240.044746
## final value 20019.345700
## converged
## # weights: 25
## initial value 22412.038461
## final value 20019.345700
## converged
## # weights: 41
## initial value 22100.278742
## final value 20019.345700
## converged
## # weights: 9
## initial value 21986.182617
## iter 10 value 20026.566361
## final value 20024.855154
## converged
## # weights: 25
## initial value 22755.669797
## iter 10 value 20026.097101
## iter 20 value 20023.355899
## final value 20023.321111
## converged
## # weights: 41
## initial value 21452.254439
## iter 10 value 20023.367736
## final value 20022.661754
## converged
## # weights: 9
## initial value 22966.071104
## iter 10 value 20030.368953
## iter 20 value 20019.472789
## iter 20 value 20019.472739
## final value 20019.472739
## converged
## # weights: 25
## initial value 21592.717107
## iter 10 value 20029.051004
## iter 20 value 20019.457595
## final value 20019.357528
## converged
## # weights: 41
## initial value 22975.613037
## iter 10 value 20036.413839
## iter 20 value 20019.542482
## final value 20019.355974
## converged
## # weights: 9
## initial value 22911.755318
## final value 20056.041200
## converged
## # weights: 25
## initial value 23592.761520

```

```

## final value 20056.041200
## converged
## # weights: 41
## initial value 23353.301110
## final value 20056.041200
## converged
## # weights: 9
## initial value 22477.670057
## iter 10 value 20061.690665
## final value 20061.552297
## converged
## # weights: 25
## initial value 23345.445690
## iter 10 value 20061.854824
## iter 20 value 20060.017780
## iter 20 value 20060.017742
## iter 20 value 20060.017729
## final value 20060.017729
## converged
## # weights: 41
## initial value 22204.318809
## iter 10 value 20059.806065
## final value 20059.358134
## converged
## # weights: 9
## initial value 23865.059814
## iter 10 value 20065.010348
## iter 20 value 20056.144607
## iter 20 value 20056.144566
## final value 20056.144566
## converged
## # weights: 25
## initial value 23087.689453
## iter 10 value 20072.524501
## iter 20 value 20056.231240
## final value 20056.056720
## converged
## # weights: 41
## initial value 23734.975163
## iter 10 value 20070.920129
## iter 20 value 20056.212742
## final value 20056.052796
## converged
## # weights: 9
## initial value 22484.623917
## final value 20033.576500
## converged
## # weights: 25
## initial value 22849.596501
## final value 20033.576500
## converged
## # weights: 41
## initial value 22733.614851
## final value 20033.576500

```

```

## converged
## # weights: 9
## initial value 22830.568979
## iter 10 value 20044.524644
## final value 20039.086364
## converged
## # weights: 25
## initial value 21582.852784
## iter 10 value 20040.645351
## iter 20 value 20037.552451
## final value 20037.552151
## converged
## # weights: 41
## initial value 23579.337552
## iter 10 value 20037.699721
## final value 20036.892677
## converged
## # weights: 9
## initial value 22326.032884
## iter 10 value 20043.518789
## iter 20 value 20033.691127
## iter 20 value 20033.691081
## final value 20033.691081
## converged
## # weights: 25
## initial value 22677.384929
## iter 10 value 20048.201018
## iter 20 value 20033.745109
## final value 20033.589662
## converged
## # weights: 41
## initial value 21588.411004
## iter 10 value 20046.074425
## iter 20 value 20033.720591
## final value 20033.586321
## converged
## # weights: 9
## initial value 22290.419862
## final value 20045.781200
## converged
## # weights: 25
## initial value 22563.768310
## final value 20045.781200
## converged
## # weights: 41
## initial value 22984.839784
## final value 20045.781200
## converged
## # weights: 9
## initial value 23753.407445
## iter 10 value 20051.668936
## final value 20051.291570
## converged
## # weights: 25

```

```

## initial value 22603.661207
## iter 10 value 20050.552164
## iter 20 value 20049.757618
## final value 20049.757183
## converged
## # weights: 41
## initial value 23581.086502
## iter 10 value 20056.853054
## iter 20 value 20049.103623
## final value 20049.097676
## converged
## # weights: 9
## initial value 21958.705294
## iter 10 value 20055.305595
## iter 20 value 20045.891009
## iter 20 value 20045.890965
## final value 20045.890965
## converged
## # weights: 25
## initial value 22189.300952
## iter 10 value 20059.563543
## iter 20 value 20045.940100
## final value 20045.795580
## converged
## # weights: 41
## initial value 23363.549291
## iter 10 value 20063.276151
## iter 20 value 20045.982903
## final value 20045.791809
## converged
## # weights: 9
## initial value 22497.150732
## final value 20032.699700
## converged
## # weights: 25
## initial value 22645.290249
## final value 20032.699700
## converged
## # weights: 41
## initial value 21867.298398
## final value 20032.699700
## converged
## # weights: 9
## initial value 23755.523080
## iter 10 value 20039.739593
## final value 20038.209563
## converged
## # weights: 25
## initial value 23059.601437
## iter 10 value 20037.124130
## final value 20036.675366
## converged
## # weights: 41
## initial value 24775.777704

```

```

## iter 10 value 20044.414241
## iter 20 value 20036.016908
## final value 20036.015874
## converged
## # weights: 9
## initial value 22222.624555
## iter 10 value 20043.304292
## iter 20 value 20032.821963
## iter 20 value 20032.821914
## final value 20032.821914
## converged
## # weights: 25
## initial value 22192.122597
## iter 10 value 20046.284356
## iter 20 value 20032.856320
## final value 20032.713815
## converged
## # weights: 41
## initial value 21025.219674
## iter 10 value 20038.683477
## iter 20 value 20032.768688
## final value 20032.708652
## converged
## # weights: 9
## initial value 22263.139613
## final value 19977.237200
## converged
## # weights: 25
## initial value 23341.173652
## final value 19977.237200
## converged
## # weights: 41
## initial value 22030.323690
## final value 19977.237200
## converged
## # weights: 9
## initial value 22220.235100
## iter 10 value 19994.942175
## iter 20 value 19982.746684
## final value 19982.745724
## converged
## # weights: 25
## initial value 22973.046953
## iter 10 value 19982.093816
## final value 19981.212027
## converged
## # weights: 41
## initial value 21153.688436
## iter 10 value 19992.378188
## iter 20 value 19980.554716
## final value 19980.552746
## converged
## # weights: 9
## initial value 23105.476658

```

```

## iter 10 value 19988.404008
## iter 20 value 19977.365945
## iter 20 value 19977.365893
## final value 19977.365893
## converged
## # weights: 25
## initial value 24008.083727
## iter 10 value 19986.289132
## iter 20 value 19977.341562
## final value 19977.256553
## converged
## # weights: 41
## initial value 22191.907902
## iter 10 value 19995.070060
## iter 20 value 19977.442799
## final value 19977.249016
## converged
## # weights: 9
## initial value 22572.804675
## final value 19935.480100
## converged
## # weights: 25
## initial value 23523.717128
## final value 19935.480100
## converged
## # weights: 41
## initial value 21717.374538
## final value 19935.480100
## converged
## # weights: 9
## initial value 22633.924987
## iter 10 value 19942.227933
## final value 19940.987936
## converged
## # weights: 25
## initial value 22646.332466
## iter 10 value 19951.241577
## iter 20 value 19939.455662
## final value 19939.454620
## converged
## # weights: 41
## initial value 21751.311498
## iter 10 value 19950.755159
## iter 20 value 19938.796666
## final value 19938.795387
## converged
## # weights: 9
## initial value 22189.509434
## iter 10 value 19945.638568
## iter 20 value 19935.597219
## iter 20 value 19935.597172
## final value 19935.597172
## converged
## # weights: 25

```

```

## initial value 22855.139484
## iter 10 value 19950.371707
## iter 20 value 19935.651789
## final value 19935.492107
## converged
## # weights: 41
## initial value 22998.079374
## iter 10 value 19956.038676
## iter 20 value 19935.717124
## final value 19935.495036
## converged
## # weights: 9
## initial value 21933.116289
## final value 20037.869200
## converged
## # weights: 25
## initial value 23229.125492
## final value 20037.869200
## converged
## # weights: 41
## initial value 23818.872063
## final value 20037.869200
## converged
## # weights: 9
## initial value 21757.385608
## iter 10 value 20044.275972
## final value 20043.379254
## converged
## # weights: 25
## initial value 23359.508133
## iter 10 value 20043.494154
## iter 20 value 20041.848393
## final value 20041.844975
## converged
## # weights: 41
## initial value 23707.658118
## iter 10 value 20045.811568
## iter 20 value 20041.185627
## iter 20 value 20041.185520
## iter 20 value 20041.185516
## final value 20041.185516
## converged
## # weights: 9
## initial value 21610.496922
## iter 10 value 20045.783376
## iter 20 value 20037.960444
## iter 20 value 20037.960408
## final value 20037.960408
## converged
## # weights: 25
## initial value 21735.171604
## iter 10 value 20047.462460
## iter 20 value 20037.979803
## final value 20037.881620

```

```

## converged
## # weights: 41
## initial value 22839.405245
## iter 10 value 20058.561697
## iter 20 value 20038.107768
## final value 20037.879867
## converged
## # weights: 9
## initial value 22619.574924
## final value 20032.589200
## converged
## # weights: 25
## initial value 22257.082882
## final value 20032.589200
## converged
## # weights: 41
## initial value 22519.236016
## final value 20032.589200
## converged
## # weights: 9
## initial value 22437.365960
## iter 10 value 20039.605719
## final value 20038.099076
## converged
## # weights: 25
## initial value 21808.901661
## iter 10 value 20038.586727
## iter 20 value 20036.574270
## final value 20036.564920
## converged
## # weights: 41
## initial value 22671.793726
## iter 10 value 20037.646849
## iter 20 value 20035.905688
## iter 20 value 20035.905563
## iter 20 value 20035.905486
## final value 20035.905486
## converged
## # weights: 9
## initial value 22390.014215
## iter 10 value 20043.219744
## iter 20 value 20032.711762
## iter 20 value 20032.711713
## final value 20032.711713
## converged
## # weights: 25
## initial value 22442.412933
## iter 10 value 20047.030007
## iter 20 value 20032.755691
## final value 20032.604516
## converged
## # weights: 41
## initial value 23409.302391
## iter 10 value 20050.248553

```



```

## iter 20 value 20032.792798
## final value 20032.600083
## converged
## # weights: 9
## initial value 21718.565417
## final value 20021.696500
## converged
## # weights: 25
## initial value 22500.751014
## final value 20021.696500
## converged
## # weights: 41
## initial value 22852.596801
## final value 20021.696500
## converged
## # weights: 9
## initial value 23067.611090
## iter 10 value 20027.756066
## final value 20027.206009
## converged
## # weights: 25
## initial value 22081.284135
## iter 10 value 20026.668518
## iter 20 value 20025.672027
## iter 20 value 20025.671923
## iter 20 value 20025.671916
## final value 20025.671916
## converged
## # weights: 41
## initial value 21204.013916
## iter 10 value 20037.801177
## iter 20 value 20025.012817
## iter 20 value 20025.012631
## iter 20 value 20025.012622
## final value 20025.012622
## converged
## # weights: 9
## initial value 21431.286295
## iter 10 value 20028.314049
## iter 20 value 20021.772795
## iter 20 value 20021.772765
## final value 20021.772765
## converged
## # weights: 25
## initial value 23056.526611
## iter 10 value 20035.227934
## iter 20 value 20021.852507
## final value 20021.716282
## converged
## # weights: 41
## initial value 22581.280960
## iter 10 value 20038.769235
## iter 20 value 20021.893335
## final value 20021.708094

```

```

## converged
## # weights: 9
## initial value 22394.261049
## final value 20062.949200
## converged
## # weights: 25
## initial value 22420.049353
## final value 20062.949200
## converged
## # weights: 41
## initial value 23278.733234
## final value 20062.949200
## converged
## # weights: 9
## initial value 21690.662232
## iter 10 value 20068.802784
## final value 20068.461399
## converged
## # weights: 25
## initial value 23837.022952
## iter 10 value 20067.976432
## final value 20066.926486
## converged
## # weights: 41
## initial value 21398.397957
## iter 10 value 20080.237428
## iter 20 value 20066.268399
## final value 20066.266714
## converged
## # weights: 9
## initial value 23151.907141
## iter 10 value 20073.525388
## iter 20 value 20063.071135
## iter 20 value 20063.071086
## final value 20063.071086
## converged
## # weights: 25
## initial value 22031.118524
## iter 10 value 20075.929782
## iter 20 value 20063.098856
## final value 20062.961508
## converged
## # weights: 41
## initial value 22733.427054
## iter 10 value 20080.806996
## iter 20 value 20063.155086
## final value 20062.958467
## converged
## # weights: 9
## initial value 23703.694330
## final value 19997.722000
## converged
## # weights: 25
## initial value 23239.085949

```

```

## final value 19997.722000
## converged
## # weights: 41
## initial value 21660.995154
## final value 19997.722000
## converged
## # weights: 9
## initial value 22232.766046
## iter 10 value 20003.749538
## final value 20003.230900
## converged
## # weights: 25
## initial value 22302.698113
## iter 10 value 20002.364703
## final value 20001.697001
## converged
## # weights: 41
## initial value 22924.255840
## iter 10 value 20002.435628
## final value 20001.037657
## converged
## # weights: 9
## initial value 23315.268014
## iter 10 value 20007.279353
## iter 20 value 19997.832189
## iter 20 value 19997.832145
## final value 19997.832145
## converged
## # weights: 25
## initial value 22974.094330
## iter 10 value 20011.531678
## iter 20 value 19997.881215
## final value 19997.734119
## converged
## # weights: 41
## initial value 22548.975685
## iter 10 value 20016.687733
## iter 20 value 19997.940660
## final value 19997.732465
## converged
## # weights: 9
## initial value 23058.273231
## final value 20002.797200
## converged
## # weights: 25
## initial value 23767.524042
## final value 20002.797200
## converged
## # weights: 41
## initial value 22563.907214
## final value 20002.797200
## converged
## # weights: 9
## initial value 23453.911477

```

```

## iter 10 value 20008.734169
## final value 20008.306236
## converged
## # weights: 25
## initial value 23433.444256
## iter 10 value 20007.367247
## final value 20006.772368
## converged
## # weights: 41
## initial value 21770.621792
## iter 10 value 20007.184323
## final value 20006.113001
## converged
## # weights: 9
## initial value 21377.701546
## iter 10 value 20009.432680
## iter 20 value 20002.873702
## iter 20 value 20002.873671
## final value 20002.873671
## converged
## # weights: 25
## initial value 23854.683307
## iter 10 value 20014.793982
## iter 20 value 20002.935513
## final value 20002.813540
## converged
## # weights: 41
## initial value 23403.404651
## iter 10 value 20020.923078
## iter 20 value 20003.006177
## final value 20002.807358
## converged
## # weights: 9
## initial value 23414.809412
## final value 20054.760100
## converged
## # weights: 25
## initial value 22992.293638
## final value 20054.760100
## converged
## # weights: 41
## initial value 22069.322223
## final value 20054.760100
## converged
## # weights: 9
## initial value 22777.403582
## iter 10 value 20060.731936
## final value 20060.270989
## converged
## # weights: 25
## initial value 22916.157138
## iter 10 value 20059.870774
## final value 20058.736485
## converged

```

```

## # weights: 41
## initial value 22303.976665
## iter 10 value 20072.484294
## iter 20 value 20058.077492
## final value 20058.076926
## converged
## # weights: 9
## initial value 22057.447174
## iter 10 value 20064.387403
## iter 20 value 20054.871095
## iter 20 value 20054.871051
## final value 20054.871051
## converged
## # weights: 25
## initial value 23528.051554
## iter 10 value 20067.899525
## iter 20 value 20054.911587
## final value 20054.775919
## converged
## # weights: 41
## initial value 22831.003258
## iter 10 value 20072.577038
## iter 20 value 20054.965515
## final value 20054.769952
## converged
## # weights: 9
## initial value 21813.993560
## final value 19972.730000
## converged
## # weights: 25
## initial value 22492.427598
## final value 19972.730000
## converged
## # weights: 41
## initial value 22755.604849
## final value 19972.730000
## converged
## # weights: 9
## initial value 22972.425617
## iter 10 value 19979.981847
## final value 19978.238388
## converged
## # weights: 25
## initial value 21418.994993
## iter 10 value 19977.661250
## final value 19976.704717
## converged
## # weights: 41
## initial value 24035.569178
## iter 10 value 19986.263537
## iter 20 value 19976.052943
## final value 19976.045425
## converged
## # weights: 9

```

```

## initial value 22299.166830
## iter 10 value 19983.169209
## iter 20 value 19972.850356
## iter 20 value 19972.850308
## final value 19972.850308
## converged
## # weights: 25
## initial value 21309.786002
## iter 10 value 19980.647953
## iter 20 value 19972.821288
## final value 19972.741876
## converged
## # weights: 41
## initial value 22318.203947
## iter 10 value 19991.998499
## iter 20 value 19972.952151
## final value 19972.739463
## converged
## # weights: 9
## initial value 21989.551730
## final value 20020.136500
## converged
## # weights: 25
## initial value 23652.352382
## final value 20020.136500
## converged
## # weights: 41
## initial value 22653.328535
## final value 20020.136500
## converged
## # weights: 9
## initial value 22968.905177
## iter 10 value 20028.519531
## final value 20025.646024
## converged
## # weights: 25
## initial value 23146.721678
## iter 10 value 20028.654627
## iter 20 value 20024.112382
## final value 20024.111915
## converged
## # weights: 41
## initial value 22756.280533
## iter 10 value 20028.827398
## iter 20 value 20023.457865
## final value 20023.452491
## converged
## # weights: 9
## initial value 22589.605238
## iter 10 value 20031.598571
## iter 20 value 20020.268649
## iter 20 value 20020.268596
## final value 20020.268596
## converged

```

```

## # weights: 25
## initial value 21347.111137
## iter 10 value 20028.959230
## iter 20 value 20020.238219
## final value 20020.148342
## converged
## # weights: 41
## initial value 20976.683512
## iter 10 value 20026.828636
## iter 20 value 20020.213655
## final value 20020.145596
## converged
## # weights: 9
## initial value 23914.592240
## final value 19953.339700
## converged
## # weights: 25
## initial value 21947.987434
## final value 19953.339700
## converged
## # weights: 41
## initial value 22030.522487
## final value 19953.339700
## converged
## # weights: 9
## initial value 21565.693822
## iter 10 value 19960.106249
## final value 19958.847817
## converged
## # weights: 25
## initial value 23777.691649
## iter 10 value 19961.492756
## iter 20 value 19957.315909
## final value 19957.314404
## converged
## # weights: 41
## initial value 21325.029297
## iter 10 value 19959.211510
## iter 20 value 19956.655054
## iter 20 value 19956.655015
## iter 20 value 19956.655012
## final value 19956.655012
## converged
## # weights: 9
## initial value 21902.497868
## iter 10 value 19961.283225
## iter 20 value 19953.431283
## iter 20 value 19953.431246
## final value 19953.431246
## converged
## # weights: 25
## initial value 22675.797338
## iter 10 value 19969.992380
## iter 20 value 19953.531692

```

```

## final value 19953.352727
## converged
## # weights: 41
## initial value 22782.984592
## iter 10 value 19972.332126
## iter 20 value 19953.558668
## final value 19953.349728
## converged
## # weights: 9
## initial value 23191.953326
## final value 19973.110000
## converged
## # weights: 25
## initial value 23532.935563
## final value 19973.110000
## converged
## # weights: 41
## initial value 22552.413575
## final value 19973.110000
## converged
## # weights: 9
## initial value 22043.145265
## iter 10 value 19981.266131
## final value 19978.618400
## converged
## # weights: 25
## initial value 23053.342757
## iter 10 value 19978.834673
## iter 20 value 19977.084717
## iter 20 value 19977.084682
## iter 20 value 19977.084682
## final value 19977.084682
## converged
## # weights: 41
## initial value 22410.992784
## iter 10 value 19982.957110
## iter 20 value 19976.435105
## final value 19976.425461
## converged
## # weights: 9
## initial value 23885.682956
## iter 10 value 19980.877007
## iter 20 value 19973.199547
## iter 20 value 19973.199512
## final value 19973.199512
## converged
## # weights: 25
## initial value 21419.093844
## iter 10 value 19982.011158
## iter 20 value 19973.212623
## final value 19973.121218
## converged
## # weights: 41
## initial value 23828.771955

```



```

## iter 10 value 19986.501022
## iter 20 value 19973.264388
## final value 19973.123607
## converged
## # weights: 9
## initial value 23280.840832
## final value 19967.717200
## converged
## # weights: 25
## initial value 23723.980955
## final value 19967.717200
## converged
## # weights: 41
## initial value 22143.668124
## final value 19967.717200
## converged
## # weights: 9
## initial value 22464.897994
## iter 10 value 19979.550763
## iter 20 value 19973.226133
## final value 19973.225531
## converged
## # weights: 25
## initial value 22794.874377
## iter 10 value 19973.103080
## iter 20 value 19971.691871
## iter 20 value 19971.691841
## iter 20 value 19971.691829
## final value 19971.691829
## converged
## # weights: 41
## initial value 21051.113487
## iter 10 value 19980.244462
## iter 20 value 19971.037996
## final value 19971.032611
## converged
## # weights: 9
## initial value 23900.294799
## iter 10 value 19975.450225
## iter 20 value 19967.806356
## iter 20 value 19967.806320
## final value 19967.806320
## converged
## # weights: 25
## initial value 22423.318883
## iter 10 value 19983.426579
## iter 20 value 19967.898317
## final value 19967.734751
## converged
## # weights: 41
## initial value 22904.707577
## iter 10 value 19987.578231
## iter 20 value 19967.946182
## final value 19967.731954

```

```

## converged
## # weights: 9
## initial value 23400.404850
## final value 20019.080500
## converged
## # weights: 25
## initial value 21320.826909
## final value 20019.080500
## converged
## # weights: 41
## initial value 23747.683574
## final value 20019.080500
## converged
## # weights: 9
## initial value 22816.130814
## iter 10 value 20024.671731
## final value 20024.590002
## converged
## # weights: 25
## initial value 21152.540422
## iter 10 value 20023.693645
## final value 20023.055892
## converged
## # weights: 41
## initial value 24036.260084
## iter 10 value 20036.039444
## iter 20 value 20022.397098
## final value 20022.396512
## converged
## # weights: 9
## initial value 23015.641433
## iter 10 value 20029.167286
## iter 20 value 20019.196793
## iter 20 value 20019.196746
## final value 20019.196746
## converged
## # weights: 25
## initial value 21895.243809
## iter 10 value 20030.900112
## iter 20 value 20019.216771
## final value 20019.095068
## converged
## # weights: 41
## initial value 22092.155436
## iter 10 value 20035.303024
## iter 20 value 20019.267533
## final value 20019.090623
## converged
## # weights: 9
## initial value 23032.490787
## final value 20038.865200
## converged
## # weights: 25
## initial value 23463.643840

```

```

## final value 20038.865200
## converged
## # weights: 41
## initial value 22228.061537
## final value 20038.865200
## converged
## # weights: 9
## initial value 23055.965186
## iter 10 value 20046.601430
## final value 20044.375299
## converged
## # weights: 25
## initial value 23839.899004
## iter 10 value 20049.470598
## iter 20 value 20042.842516
## final value 20042.841046
## converged
## # weights: 41
## initial value 23553.210283
## iter 10 value 20051.820394
## iter 20 value 20042.181869
## final value 20042.181568
## converged
## # weights: 9
## initial value 23298.366277
## iter 10 value 20050.339700
## iter 20 value 20038.997492
## iter 20 value 20038.997439
## final value 20038.997439
## converged
## # weights: 25
## initial value 22663.069542
## iter 10 value 20052.867248
## iter 20 value 20039.026633
## final value 20038.880515
## converged
## # weights: 41
## initial value 21477.519401
## iter 10 value 20049.960635
## iter 20 value 20038.993122
## final value 20038.874658
## converged
## # weights: 9
## initial value 22591.361130
## final value 20028.478000
## converged
## # weights: 25
## initial value 22470.258982
## final value 20028.478000
## converged
## # weights: 41
## initial value 21616.521123
## final value 20028.478000
## converged

```

```

## # weights: 9
## initial value 21818.331403
## iter 10 value 20034.786257
## final value 20033.987720
## converged
## # weights: 25
## initial value 22093.910376
## iter 10 value 20033.554050
## final value 20032.453633
## converged
## # weights: 41
## initial value 21619.158623
## iter 10 value 20044.804001
## iter 20 value 20031.803406
## final value 20031.794175
## converged
## # weights: 9
## initial value 22643.282532
## iter 10 value 20039.797105
## iter 20 value 20028.608500
## iter 20 value 20028.608448
## final value 20028.608448
## converged
## # weights: 25
## initial value 21940.211919
## iter 10 value 20041.024200
## iter 20 value 20028.622648
## final value 20028.491129
## converged
## # weights: 41
## initial value 21766.106035
## iter 10 value 20045.117084
## iter 20 value 20028.669836
## final value 20028.487639
## converged
## # weights: 9
## initial value 21996.256816
## final value 20018.146000
## converged
## # weights: 25
## initial value 22033.335848
## final value 20018.146000
## converged
## # weights: 41
## initial value 22721.920379
## final value 20018.146000
## converged
## # weights: 9
## initial value 22485.977748
## iter 10 value 20026.364183
## final value 20023.655404
## converged
## # weights: 25
## initial value 22978.298624

```

```

## iter 10 value 20023.067426
## final value 20022.121401
## converged
## # weights: 41
## initial value 22967.462306
## iter 10 value 20022.482012
## iter 20 value 20021.462031
## iter 20 value 20021.461959
## iter 20 value 20021.461955
## final value 20021.461955
## converged
## # weights: 9
## initial value 22822.656135
## iter 10 value 20028.617182
## iter 20 value 20018.266725
## iter 20 value 20018.266676
## final value 20018.266676
## converged
## # weights: 25
## initial value 21996.535208
## iter 10 value 20030.168127
## iter 20 value 20018.284606
## final value 20018.157729
## converged
## # weights: 41
## initial value 21809.906723
## iter 10 value 20034.383999
## iter 20 value 20018.333211
## final value 20018.156100
## converged
## # weights: 9
## initial value 23314.737365
## final value 20021.050000
## converged
## # weights: 25
## initial value 22612.916710
## final value 20021.050000
## converged
## # weights: 41
## initial value 22194.783201
## final value 20021.050000
## converged
## # weights: 9
## initial value 21992.596568
## iter 10 value 20027.712274
## final value 20026.559405
## converged
## # weights: 25
## initial value 22989.184778
## iter 10 value 20025.884610
## final value 20025.025328
## converged
## # weights: 41
## initial value 22730.862688

```

```

## iter 10 value 20028.640573
## iter 20 value 20024.366379
## final value 20024.365922
## converged
## # weights: 9
## initial value 22385.990014
## iter 10 value 20032.023235
## iter 20 value 20021.176513
## iter 20 value 20021.176462
## final value 20021.176462
## converged
## # weights: 25
## initial value 22661.251861
## iter 10 value 20037.038299
## iter 20 value 20021.234333
## final value 20021.065626
## converged
## # weights: 41
## initial value 22178.833171
## iter 10 value 20039.195975
## iter 20 value 20021.259209
## final value 20021.062080
## converged
## # weights: 9
## initial value 22356.998285
## final value 19978.346000
## converged
## # weights: 25
## initial value 22158.112953
## final value 19978.346000
## converged
## # weights: 41
## initial value 22323.305339
## final value 19978.346000
## converged
## # weights: 9
## initial value 22163.036820
## iter 10 value 19984.887256
## final value 19983.854535
## converged
## # weights: 25
## initial value 22154.472597
## iter 10 value 19982.799389
## iter 20 value 19982.320972
## iter 20 value 19982.320835
## iter 20 value 19982.320814
## final value 19982.320814
## converged
## # weights: 41
## initial value 24541.192563
## iter 10 value 19984.869693
## iter 20 value 19981.661669
## iter 20 value 19981.661532
## iter 20 value 19981.661525

```

```

## final value 19981.661525
## converged
## # weights: 9
## initial value 23762.231813
## iter 10 value 19987.015168
## iter 20 value 19978.445949
## iter 20 value 19978.445909
## final value 19978.445909
## converged
## # weights: 25
## initial value 23164.208376
## iter 10 value 19991.358377
## iter 20 value 19978.496022
## final value 19978.361016
## converged
## # weights: 41
## initial value 22406.817459
## iter 10 value 19999.620086
## iter 20 value 19978.591274
## final value 19978.357770
## converged
## # weights: 9
## initial value 23566.642925
## final value 19930.229200
## converged
## # weights: 25
## initial value 23122.384632
## final value 19930.229200
## converged
## # weights: 41
## initial value 23085.531463
## final value 19930.229200
## converged
## # weights: 9
## initial value 22708.340930
## iter 10 value 19937.419852
## final value 19935.736854
## converged
## # weights: 25
## initial value 22431.168404
## iter 10 value 19938.816067
## iter 20 value 19934.208395
## final value 19934.203400
## converged
## # weights: 41
## initial value 23993.066376
## iter 10 value 19937.413358
## iter 20 value 19933.544481
## iter 20 value 19933.544319
## iter 20 value 19933.544303
## final value 19933.544303
## converged
## # weights: 9
## initial value 21639.443663

```

```

## iter 10 value 19938.517223
## iter 20 value 19930.324754
## iter 20 value 19930.324716
## final value 19930.324716
## converged
## # weights: 25
## initial value 23031.059638
## iter 10 value 19946.578660
## iter 20 value 19930.417696
## final value 19930.243334
## converged
## # weights: 41
## initial value 22494.624081
## iter 10 value 19949.525123
## iter 20 value 19930.451667
## final value 19930.238533
## converged
## # weights: 9
## initial value 22786.035940
## final value 19993.947700
## converged
## # weights: 25
## initial value 23478.711092
## final value 19993.947700
## converged
## # weights: 41
## initial value 22851.900646
## final value 19993.947700
## converged
## # weights: 9
## initial value 23121.473328
## iter 10 value 20000.005618
## final value 19999.456538
## converged
## # weights: 25
## initial value 22373.398302
## iter 10 value 19998.357618
## final value 19997.922764
## converged
## # weights: 41
## initial value 22779.253832
## iter 10 value 20011.176827
## iter 20 value 19997.268327
## final value 19997.263459
## converged
## # weights: 9
## initial value 23523.329736
## iter 10 value 20003.621961
## iter 20 value 19994.059237
## iter 20 value 19994.059192
## final value 19994.059192
## converged
## # weights: 25
## initial value 21179.510071

```



```

## iter 10 value 20001.187810
## iter 20 value 19994.031173
## final value 19993.959605
## converged
## # weights: 41
## initial value 21548.584032
## iter 10 value 20006.056984
## iter 20 value 19994.087311
## final value 19993.957424
## converged
## # weights: 9
## initial value 22214.001852
## final value 20049.701200
## converged
## # weights: 25
## initial value 22924.047831
## final value 20049.701200
## converged
## # weights: 41
## initial value 23765.580758
## final value 20049.701200
## converged
## # weights: 9
## initial value 23070.149253
## iter 10 value 20058.562910
## final value 20055.211757
## converged
## # weights: 25
## initial value 21695.198066
## iter 10 value 20055.823479
## final value 20053.677305
## converged
## # weights: 41
## initial value 23636.151904
## iter 10 value 20053.442023
## final value 20053.017779
## converged
## # weights: 9
## initial value 21946.781051
## iter 10 value 20058.405197
## iter 20 value 20049.801550
## iter 20 value 20049.801510
## final value 20049.801510
## converged
## # weights: 25
## initial value 22835.132853
## iter 10 value 20065.241083
## iter 20 value 20049.880363
## final value 20049.716684
## converged
## # weights: 41
## initial value 22417.921534
## iter 10 value 20065.814255
## iter 20 value 20049.886971

```

```

## iter 30 value 20049.710927
## iter 30 value 20049.710924
## iter 30 value 20049.710923
## final value 20049.710923
## converged
## # weights: 9
## initial value 23464.928232
## final value 20059.445200
## converged
## # weights: 25
## initial value 22741.893166
## final value 20059.445200
## converged
## # weights: 41
## initial value 23194.584433
## final value 20059.445200
## converged
## # weights: 9
## initial value 23315.981272
## iter 10 value 20065.338582
## final value 20064.956621
## converged
## # weights: 25
## initial value 22960.702041
## iter 10 value 20065.618796
## iter 20 value 20063.422567
## final value 20063.422008
## converged
## # weights: 41
## initial value 21972.405148
## iter 10 value 20077.344728
## iter 20 value 20062.762650
## iter 20 value 20062.762509
## iter 20 value 20062.762493
## final value 20062.762493
## converged
## # weights: 9
## initial value 22582.804941
## iter 10 value 20069.703701
## iter 20 value 20059.563472
## iter 20 value 20059.563425
## final value 20059.563425
## converged
## # weights: 25
## initial value 23641.652555
## iter 10 value 20070.842926
## iter 20 value 20059.576607
## final value 20059.459507
## converged
## # weights: 41
## initial value 23187.719049
## iter 10 value 20080.492838
## iter 20 value 20059.687863
## final value 20059.460352

```

```

## converged
## # weights: 9
## initial value 22416.676857
## final value 20056.253200
## converged
## # weights: 25
## initial value 22963.456393
## final value 20056.253200
## converged
## # weights: 41
## initial value 23298.359331
## final value 20056.253200
## converged
## # weights: 9
## initial value 23333.061735
## iter 10 value 20062.128463
## final value 20061.764268
## converged
## # weights: 25
## initial value 23110.328336
## iter 10 value 20061.706338
## iter 20 value 20060.229930
## iter 20 value 20060.229783
## iter 20 value 20060.229733
## final value 20060.229733
## converged
## # weights: 41
## initial value 22703.491453
## iter 10 value 20060.412992
## final value 20059.570107
## converged
## # weights: 9
## initial value 22987.024649
## iter 10 value 20066.487430
## iter 20 value 20056.371193
## iter 20 value 20056.371145
## final value 20056.371145
## converged
## # weights: 25
## initial value 22109.616552
## iter 10 value 20069.703916
## iter 20 value 20056.408276
## final value 20056.265355
## converged
## # weights: 41
## initial value 21563.450674
## iter 10 value 20067.586571
## iter 20 value 20056.383865
## final value 20056.262288
## converged
## # weights: 9
## initial value 21637.270968
## final value 20041.267700
## converged

```

```

## # weights: 25
## initial value 21828.895992
## final value 20041.267700
## converged
## # weights: 41
## initial value 22490.245255
## final value 20041.267700
## converged
## # weights: 9
## initial value 23688.535632
## iter 10 value 20049.758377
## final value 20046.777876
## converged
## # weights: 25
## initial value 21577.984611
## iter 10 value 20045.947476
## final value 20045.243584
## converged
## # weights: 41
## initial value 22030.212707
## iter 10 value 20045.166968
## final value 20044.584074
## converged
## # weights: 9
## initial value 23692.577587
## iter 10 value 20049.943548
## iter 20 value 20041.367726
## iter 20 value 20041.367686
## final value 20041.367686
## converged
## # weights: 25
## initial value 23106.852753
## iter 10 value 20055.556676
## iter 20 value 20041.432441
## final value 20041.283986
## converged
## # weights: 41
## initial value 22856.407157
## iter 10 value 20060.557268
## iter 20 value 20041.490094
## final value 20041.278587
## converged
## # weights: 9
## initial value 23253.213644
## final value 20011.041700
## converged
## # weights: 25
## initial value 22794.538574
## final value 20011.041700
## converged
## # weights: 41
## initial value 22886.634628
## final value 20011.041700
## converged

```

```

## # weights: 9
## initial value 23245.581014
## iter 10 value 20017.629318
## final value 20016.550959
## converged
## # weights: 25
## initial value 22928.108361
## iter 10 value 20015.942712
## final value 20015.016956
## converged
## # weights: 41
## initial value 23679.226550
## iter 10 value 20029.239546
## iter 20 value 20014.358463
## final value 20014.357550
## converged
## # weights: 9
## initial value 22629.227399
## iter 10 value 20020.779071
## iter 20 value 20011.153964
## iter 20 value 20011.153919
## final value 20011.153919
## converged
## # weights: 25
## initial value 21735.328701
## iter 10 value 20020.781177
## iter 20 value 20011.153989
## final value 20011.054920
## converged
## # weights: 41
## initial value 21665.437365
## iter 10 value 20023.448890
## iter 20 value 20011.184745
## final value 20011.051531
## converged
## # weights: 9
## initial value 23698.935540
## final value 20062.773200
## converged
## # weights: 25
## initial value 22821.180137
## final value 20062.773200
## converged
## # weights: 41
## initial value 23898.771376
## final value 20062.773200
## converged
## # weights: 9
## initial value 22874.508356
## iter 10 value 20069.551565
## final value 20068.285690
## converged
## # weights: 25
## initial value 22219.288670

```

```

## iter 10 value 20067.634551
## final value 20066.750738
## converged
## # weights: 41
## initial value 23584.666109
## iter 10 value 20067.110827
## final value 20066.090971
## converged
## # weights: 9
## initial value 22606.229668
## iter 10 value 20073.606302
## iter 20 value 20062.898097
## iter 20 value 20062.898047
## final value 20062.898047
## converged
## # weights: 25
## initial value 23523.014464
## iter 10 value 20074.859697
## iter 20 value 20062.912548
## final value 20062.787420
## converged
## # weights: 41
## initial value 22527.973170
## iter 10 value 20081.958334
## iter 20 value 20062.994390
## final value 20062.786076
## converged
## # weights: 9
## initial value 23184.219093
## final value 20030.566000
## converged
## # weights: 25
## initial value 22829.931079
## final value 20030.566000
## converged
## # weights: 41
## initial value 21742.340486
## final value 20030.566000
## converged
## # weights: 9
## initial value 22372.741915
## iter 10 value 20036.493916
## final value 20036.075794
## converged
## # weights: 25
## initial value 22177.690421
## iter 10 value 20036.132449
## final value 20034.541688
## converged
## # weights: 41
## initial value 22610.696570
## iter 10 value 20034.387724
## final value 20033.882189
## converged

```

```

## # weights: 9
## initial value 23387.968712
## iter 10 value 20041.240344
## iter 20 value 20030.689067
## iter 20 value 20030.689018
## final value 20030.689018
## converged
## # weights: 25
## initial value 22526.582968
## iter 10 value 20046.553679
## iter 20 value 20030.750325
## final value 20030.584407
## converged
## # weights: 41
## initial value 24036.864403
## iter 10 value 20042.680354
## iter 20 value 20030.705669
## final value 20030.581649
## converged
## # weights: 9
## initial value 22902.278493
## final value 20030.566000
## converged
## # weights: 25
## initial value 22706.970061
## final value 20030.566000
## converged
## # weights: 41
## initial value 22365.983446
## final value 20030.566000
## converged
## # weights: 9
## initial value 23494.534218
## iter 10 value 20037.781027
## final value 20036.075789
## converged
## # weights: 25
## initial value 23025.572309
## iter 10 value 20035.412703
## final value 20034.541610
## converged
## # weights: 41
## initial value 21969.840828
## iter 10 value 20044.797830
## iter 20 value 20033.883229
## final value 20033.882135
## converged
## # weights: 9
## initial value 23723.562370
## iter 10 value 20039.225740
## iter 20 value 20030.665840
## iter 20 value 20030.665800
## final value 20030.665800
## converged

```

```

## # weights: 25
## initial value 23054.988456
## iter 10 value 20045.323358
## iter 20 value 20030.736141
## final value 20030.592496
## converged
## # weights: 41
## initial value 22880.610183
## iter 10 value 20049.219035
## iter 20 value 20030.781055
## final value 20030.576440
## converged
## # weights: 9
## initial value 21756.702668
## final value 20023.480100
## converged
## # weights: 25
## initial value 22709.118131
## final value 20023.480100
## converged
## # weights: 41
## initial value 22960.703258
## final value 20023.480100
## converged
## # weights: 9
## initial value 23526.690565
## iter 10 value 20029.653665
## final value 20028.989674
## converged
## # weights: 25
## initial value 23225.987037
## iter 10 value 20027.785413
## final value 20027.455543
## converged
## # weights: 41
## initial value 23004.795678
## iter 10 value 20028.078599
## final value 20026.796201
## converged
## # weights: 9
## initial value 22076.809663
## iter 10 value 20032.817798
## iter 20 value 20023.587756
## iter 20 value 20023.587713
## final value 20023.587713
## converged
## # weights: 25
## initial value 21621.683529
## iter 10 value 20034.237908
## iter 20 value 20023.604129
## final value 20023.490646
## converged
## # weights: 41
## initial value 23679.051205

```



```

## iter 10 value 20037.535005
## iter 20 value 20023.642142
## final value 20023.492718
## converged
## # weights: 9
## initial value 22276.689185
## final value 19953.339700
## converged
## # weights: 25
## initial value 23057.897855
## final value 19953.339700
## converged
## # weights: 41
## initial value 21528.788703
## final value 19953.339700
## converged
## # weights: 9
## initial value 22085.690907
## iter 10 value 19960.910844
## final value 19958.847774
## converged
## # weights: 25
## initial value 23085.777331
## iter 10 value 19959.487075
## iter 20 value 19957.314630
## final value 19957.314194
## converged
## # weights: 41
## initial value 22005.806969
## iter 10 value 19970.870874
## final value 19956.655102
## converged
## # weights: 9
## initial value 22162.972766
## iter 10 value 19963.299837
## iter 20 value 19953.454533
## iter 20 value 19953.454487
## final value 19953.454487
## converged
## # weights: 25
## initial value 21386.734501
## iter 10 value 19961.488598
## iter 20 value 19953.433650
## final value 19953.350908
## converged
## # weights: 41
## initial value 22045.267429
## iter 10 value 19969.620732
## iter 20 value 19953.527408
## final value 19953.350477
## converged
## # weights: 9
## initial value 23258.307145
## final value 20014.030000

```

```

## converged
## # weights: 25
## initial value 23524.395879
## final value 20014.030000
## converged
## # weights: 41
## initial value 21771.974003
## final value 20014.030000
## converged
## # weights: 9
## initial value 21769.668288
## iter 10 value 20031.016137
## iter 20 value 20019.539375
## iter 20 value 20019.539315
## final value 20019.539315
## converged
## # weights: 25
## initial value 22074.261105
## iter 10 value 20019.397306
## final value 20018.005264
## converged
## # weights: 41
## initial value 22772.037524
## iter 10 value 20032.757052
## iter 20 value 20017.347492
## final value 20017.345891
## converged
## # weights: 9
## initial value 22073.340939
## iter 10 value 20022.559458
## iter 20 value 20014.128338
## iter 20 value 20014.128299
## final value 20014.128299
## converged
## # weights: 25
## initial value 23175.132813
## iter 10 value 20028.771016
## iter 20 value 20014.199952
## final value 20014.044157
## converged
## # weights: 41
## initial value 23984.432288
## iter 10 value 20026.843385
## iter 20 value 20014.177728
## final value 20014.044095
## converged
## # weights: 9
## initial value 23001.078838
## final value 19931.150000
## converged
## # weights: 25
## initial value 22566.569811
## final value 19931.150000
## converged

```

```

## # weights: 41
## initial value 22445.560507
## final value 19931.150000
## converged
## # weights: 9
## initial value 22446.817814
## iter 10 value 19938.719296
## final value 19936.657767
## converged
## # weights: 25
## initial value 21995.162982
## iter 10 value 19936.859793
## final value 19935.124345
## converged
## # weights: 41
## initial value 21572.231818
## iter 10 value 19935.686479
## iter 20 value 19934.465357
## iter 20 value 19934.465205
## iter 20 value 19934.465172
## final value 19934.465172
## converged
## # weights: 9
## initial value 21360.531076
## iter 10 value 19937.126336
## iter 20 value 19931.218902
## iter 20 value 19931.218875
## final value 19931.218875
## converged
## # weights: 25
## initial value 22768.127680
## iter 10 value 19947.903104
## iter 20 value 19931.343150
## final value 19931.162262
## converged
## # weights: 41
## initial value 23609.702824
## iter 10 value 19945.379076
## iter 20 value 19931.314050
## final value 19931.163770
## converged
## # weights: 9
## initial value 21866.555027
## final value 19998.689200
## converged
## # weights: 25
## initial value 21634.241218
## final value 19998.689200
## converged
## # weights: 41
## initial value 21939.890204
## final value 19998.689200
## converged
## # weights: 9

```

```

## initial value 23490.219096
## iter 10 value 20004.777109
## final value 20004.198152
## converged
## # weights: 25
## initial value 23972.947251
## iter 10 value 20003.924024
## final value 20002.664288
## converged
## # weights: 41
## initial value 22484.420956
## iter 10 value 20009.351977
## iter 20 value 20002.006371
## final value 20002.004939
## converged
## # weights: 9
## initial value 22654.933690
## iter 10 value 20008.528734
## iter 20 value 19998.802642
## iter 20 value 19998.802597
## final value 19998.802597
## converged
## # weights: 25
## initial value 23333.898271
## iter 10 value 20012.573325
## iter 20 value 19998.849273
## final value 19998.708407
## converged
## # weights: 41
## initial value 23709.497838
## iter 10 value 20013.707185
## iter 20 value 19998.862346
## final value 19998.703579
## converged
## # weights: 9
## initial value 21570.704085
## final value 20034.225700
## converged
## # weights: 25
## initial value 21770.407973
## final value 20034.225700
## converged
## # weights: 41
## initial value 22893.303995
## final value 20034.225700
## converged
## # weights: 9
## initial value 21929.928689
## iter 10 value 20042.082965
## final value 20039.735629
## converged
## # weights: 25
## initial value 22134.025132
## iter 10 value 20039.632924

```

```

## final value 20038.201455
## converged
## # weights: 41
## initial value 23701.819429
## iter 10 value 20051.236782
## iter 20 value 20037.551085
## final value 20037.541971
## converged
## # weights: 9
## initial value 21936.531797
## iter 10 value 20042.391349
## iter 20 value 20034.319844
## iter 20 value 20034.319806
## final value 20034.319806
## converged
## # weights: 25
## initial value 23429.978397
## iter 10 value 20048.125016
## iter 20 value 20034.385948
## final value 20034.244295
## converged
## # weights: 41
## initial value 22133.399027
## iter 10 value 20051.852826
## iter 20 value 20034.428927
## final value 20034.235808
## converged
## # weights: 9
## initial value 24053.455387
## final value 20062.170100
## converged
## # weights: 25
## initial value 23147.876700
## final value 20062.170100
## converged
## # weights: 41
## initial value 22860.157124
## final value 20062.170100
## converged
## # weights: 9
## initial value 23815.364317
## iter 10 value 20068.310483
## final value 20067.683117
## converged
## # weights: 25
## initial value 23078.905044
## iter 10 value 20067.835882
## iter 20 value 20066.151907
## final value 20066.148279
## converged
## # weights: 41
## initial value 23151.962902
## iter 10 value 20067.260430
## iter 20 value 20065.488699

```

```

## iter 20 value 20065.488576
## iter 20 value 20065.488464
## final value 20065.488464
## converged
## # weights: 9
## initial value 22793.220707
## iter 10 value 20072.754039
## iter 20 value 20062.292125
## iter 20 value 20062.292076
## final value 20062.292076
## converged
## # weights: 25
## initial value 23580.849711
## iter 10 value 20074.711366
## iter 20 value 20062.314691
## final value 20062.184098
## converged
## # weights: 41
## initial value 21912.891894
## iter 10 value 20076.929595
## iter 20 value 20062.340265
## final value 20062.180175
## converged
## # weights: 9
## initial value 22803.925629
## final value 20020.398500
## converged
## # weights: 25
## initial value 23016.886279
## final value 20020.398500
## converged
## # weights: 41
## initial value 23292.233093
## final value 20020.398500
## converged
## # weights: 9
## initial value 21879.491419
## iter 10 value 20026.690384
## final value 20025.907981
## converged
## # weights: 25
## initial value 22879.546332
## iter 10 value 20029.273089
## iter 20 value 20024.374055
## iter 20 value 20024.373940
## iter 20 value 20024.373912
## final value 20024.373912
## converged
## # weights: 41
## initial value 22097.588138
## iter 10 value 20033.689706
## iter 20 value 20023.715538
## final value 20023.714523
## converged

```

```

## # weights: 9
## initial value 23004.715000
## iter 10 value 20030.786125
## iter 20 value 20020.518261
## iter 20 value 20020.518213
## final value 20020.518213
## converged
## # weights: 25
## initial value 21922.963750
## iter 10 value 20031.625075
## iter 20 value 20020.527934
## final value 20020.411985
## converged
## # weights: 41
## initial value 22852.828963
## iter 10 value 20040.886637
## iter 20 value 20020.634712
## final value 20020.408791
## converged
## # weights: 9
## initial value 22940.769647
## final value 20041.918000
## converged
## # weights: 25
## initial value 22541.515034
## final value 20041.918000
## converged
## # weights: 41
## initial value 22341.367379
## final value 20041.918000
## converged
## # weights: 9
## initial value 22155.585815
## iter 10 value 20047.961942
## final value 20047.428223
## converged
## # weights: 25
## initial value 23485.602914
## iter 10 value 20047.775416
## iter 20 value 20045.893935
## iter 20 value 20045.893892
## iter 20 value 20045.893887
## final value 20045.893887
## converged
## # weights: 41
## initial value 23160.602590
## iter 10 value 20046.450570
## final value 20045.234408
## converged
## # weights: 9
## initial value 22695.276619
## iter 10 value 20052.279651
## iter 20 value 20042.037462
## iter 20 value 20042.037414

```

```

## final value 20042.037414
## converged
## # weights: 25
## initial value 23289.209038
## iter 10 value 20057.896505
## iter 20 value 20042.102220
## final value 20041.933536
## converged
## # weights: 41
## initial value 22858.907327
## iter 10 value 20061.577282
## iter 20 value 20042.144656
## final value 20041.928600
## converged
## # weights: 9
## initial value 22712.568465
## final value 19973.299700
## converged
## # weights: 25
## initial value 23032.122690
## final value 19973.299700
## converged
## # weights: 41
## initial value 23664.475005
## final value 19973.299700
## converged
## # weights: 9
## initial value 22518.966889
## iter 10 value 19979.932279
## final value 19978.808132
## converged
## # weights: 25
## initial value 23349.788572
## iter 10 value 19977.803448
## final value 19977.274530
## converged
## # weights: 41
## initial value 21480.987473
## iter 10 value 19991.096512
## iter 20 value 19976.616482
## final value 19976.615175
## converged
## # weights: 9
## initial value 23211.240399
## iter 10 value 19982.883945
## iter 20 value 19973.410199
## iter 20 value 19973.410155
## final value 19973.410155
## converged
## # weights: 25
## initial value 21585.284804
## iter 10 value 19983.586854
## iter 20 value 19973.418303
## final value 19973.312379

```



```

## converged
## # weights: 41
## initial value 21977.142674
## iter 10 value 19992.386344
## iter 20 value 19973.519754
## final value 19973.310047
## converged
## # weights: 9
## initial value 23155.481282
## final value 19969.854500
## converged
## # weights: 25
## initial value 21341.491461
## final value 19969.854500
## converged
## # weights: 41
## initial value 22783.517439
## final value 19969.854500
## converged
## # weights: 9
## initial value 22826.571998
## iter 10 value 19979.901732
## final value 19975.362892
## converged
## # weights: 25
## initial value 21150.443979
## iter 10 value 19975.576000
## final value 19973.829283
## converged
## # weights: 41
## initial value 22634.519311
## iter 10 value 19974.357680
## iter 20 value 19973.170137
## iter 20 value 19973.169985
## iter 20 value 19973.169974
## final value 19973.169974
## converged
## # weights: 9
## initial value 23064.269551
## iter 10 value 19980.875406
## iter 20 value 19969.981562
## iter 20 value 19969.981512
## final value 19969.981512
## converged
## # weights: 25
## initial value 21783.656777
## iter 10 value 19981.092505
## iter 20 value 19969.984065
## final value 19969.866520
## converged
## # weights: 41
## initial value 21892.058547
## iter 10 value 19984.707044
## iter 20 value 19970.025738

```

```

## final value 19969.865206
## converged
## # weights: 9
## initial value 22497.253418
## final value 20017.201700
## converged
## # weights: 25
## initial value 22851.992367
## final value 20017.201700
## converged
## # weights: 41
## initial value 23717.350361
## final value 20017.201700
## converged
## # weights: 9
## initial value 22683.996803
## iter 10 value 20024.700682
## final value 20022.711051
## converged
## # weights: 25
## initial value 22264.451662
## iter 10 value 20021.690955
## final value 20021.177104
## converged
## # weights: 41
## initial value 22106.228029
## iter 10 value 20021.579832
## final value 20020.517627
## converged
## # weights: 9
## initial value 23679.841629
## iter 10 value 20026.920362
## iter 20 value 20017.313749
## iter 20 value 20017.313704
## final value 20017.313704
## converged
## # weights: 25
## initial value 23288.452771
## iter 10 value 20030.086947
## iter 20 value 20017.350257
## final value 20017.214319
## converged
## # weights: 41
## initial value 23027.782853
## iter 10 value 20034.347569
## iter 20 value 20017.399378
## final value 20017.213752
## converged
## # weights: 9
## initial value 22190.290278
## final value 20047.646500
## converged
## # weights: 25
## initial value 24093.539719

```

```

## final value 20047.646500
## converged
## # weights: 41
## initial value 23293.447098
## final value 20047.646500
## converged
## # weights: 9
## initial value 22206.163170
## iter 10 value 20055.375150
## final value 20053.156979
## converged
## # weights: 25
## initial value 21445.931085
## iter 10 value 20052.755511
## final value 20051.622626
## converged
## # weights: 41
## initial value 23143.491056
## iter 10 value 20059.494184
## iter 20 value 20050.964579
## final value 20050.963172
## converged
## # weights: 9
## initial value 22412.001324
## iter 10 value 20057.555024
## iter 20 value 20047.760738
## iter 20 value 20047.760692
## final value 20047.760692
## converged
## # weights: 25
## initial value 23160.739372
## iter 10 value 20061.990612
## iter 20 value 20047.811876
## final value 20047.659234
## converged
## # weights: 41
## initial value 23723.603972
## iter 10 value 20061.960208
## iter 20 value 20047.811526
## final value 20047.657410
## converged
## # weights: 9
## initial value 23571.878683
## final value 20021.825200
## converged
## # weights: 25
## initial value 23767.645536
## final value 20021.825200
## converged
## # weights: 41
## initial value 22635.636298
## final value 20021.825200
## converged
## # weights: 9

```

```

## initial value 22933.864628
## iter 10 value 20028.619845
## final value 20027.334759
## converged
## # weights: 25
## initial value 21610.638497
## iter 10 value 20026.351038
## final value 20025.800614
## converged
## # weights: 41
## initial value 22894.648306
## iter 10 value 20026.947243
## final value 20025.141265
## converged
## # weights: 9
## initial value 22957.746803
## iter 10 value 20032.171397
## iter 20 value 20021.944484
## iter 20 value 20021.944436
## final value 20021.944436
## converged
## # weights: 25
## initial value 23825.121046
## iter 10 value 20034.501103
## iter 20 value 20021.971343
## final value 20021.840937
## converged
## # weights: 41
## initial value 21757.800425
## iter 10 value 20034.872399
## iter 20 value 20021.975624
## final value 20021.834270
## converged
## # weights: 9
## initial value 23018.017064
## final value 20049.182500
## converged
## # weights: 25
## initial value 23692.905550
## final value 20049.182500
## converged
## # weights: 41
## initial value 22154.491897
## final value 20049.182500
## converged
## # weights: 9
## initial value 22346.944326
## iter 10 value 20055.278322
## final value 20054.693048
## converged
## # weights: 25
## initial value 22490.810593
## iter 10 value 20066.232049
## iter 20 value 20053.160659

```

```

## final value 20053.158611
## converged
## # weights: 41
## initial value 22916.553934
## iter 10 value 20053.559420
## final value 20052.499124
## converged
## # weights: 9
## initial value 22928.133887
## iter 10 value 20060.392298
## iter 20 value 20049.311740
## iter 20 value 20049.311688
## final value 20049.311688
## converged
## # weights: 25
## initial value 24172.248800
## iter 10 value 20057.563278
## iter 20 value 20049.279124
## final value 20049.202157
## converged
## # weights: 41
## initial value 22592.200144
## iter 10 value 20071.026578
## iter 20 value 20049.434345
## final value 20049.193506
## converged
## # weights: 9
## initial value 23584.654924
## final value 20044.507700
## converged
## # weights: 25
## initial value 22033.677755
## final value 20044.507700
## converged
## # weights: 41
## initial value 22049.171841
## final value 20044.507700
## converged
## # weights: 9
## initial value 22596.819862
## iter 10 value 20050.872618
## final value 20050.018032
## converged
## # weights: 25
## initial value 22666.697948
## iter 10 value 20049.398507
## final value 20048.483716
## converged
## # weights: 41
## initial value 21964.673090
## iter 10 value 20049.004815
## final value 20047.824187
## converged
## # weights: 9

```

```

## initial value 22922.785585
## iter 10 value 20056.153859
## iter 20 value 20044.641971
## iter 20 value 20044.641917
## final value 20044.641917
## converged
## # weights: 25
## initial value 22940.482763
## iter 10 value 20057.260474
## iter 20 value 20044.654729
## final value 20044.519744
## converged
## # weights: 41
## initial value 22705.364444
## iter 10 value 20063.908338
## iter 20 value 20044.731374
## final value 20044.520597
## converged
## # weights: 9
## initial value 22765.145870
## final value 19983.067600
## converged
## # weights: 25
## initial value 23357.843511
## final value 19983.067600
## converged
## # weights: 41
## initial value 22755.488920
## final value 19983.067600
## converged
## # weights: 9
## initial value 22300.096149
## iter 10 value 19989.654679
## final value 19988.576197
## converged
## # weights: 25
## initial value 22890.298445
## iter 10 value 19988.378978
## iter 20 value 19987.042518
## iter 20 value 19987.042420
## iter 20 value 19987.042404
## final value 19987.042404
## converged
## # weights: 41
## initial value 21413.355886
## iter 10 value 19990.490472
## final value 19986.383273
## converged
## # weights: 9
## initial value 23547.426886
## iter 10 value 19993.021986
## iter 20 value 19983.182366
## iter 20 value 19983.182320
## final value 19983.182320

```

```

## converged
## # weights: 25
## initial value 22863.503666
## iter 10 value 19998.251736
## iter 20 value 19983.242661
## final value 19983.085553
## converged
## # weights: 41
## initial value 21557.289094
## iter 10 value 19996.393969
## iter 20 value 19983.221243
## final value 19983.076586
## converged
## # weights: 9
## initial value 23383.895864
## final value 19980.905200
## converged
## # weights: 25
## initial value 22025.728868
## final value 19980.905200
## converged
## # weights: 41
## initial value 23028.715934
## final value 19980.905200
## converged
## # weights: 9
## initial value 23062.427233
## iter 10 value 19989.829876
## iter 20 value 19986.413934
## iter 20 value 19986.413835
## final value 19986.413835
## converged
## # weights: 25
## initial value 22735.392513
## iter 10 value 19987.093449
## final value 19984.880139
## converged
## # weights: 41
## initial value 21638.816198
## iter 10 value 19995.963268
## iter 20 value 19984.224252
## final value 19984.220727
## converged
## # weights: 9
## initial value 23186.521668
## iter 10 value 19991.679201
## iter 20 value 19981.029416
## iter 20 value 19981.029366
## final value 19981.029366
## converged
## # weights: 25
## initial value 22371.179931
## iter 10 value 19996.376666
## iter 20 value 19981.083574

```

```

## final value 19980.916388
## converged
## # weights: 41
## initial value 22045.218571
## iter 10 value 19996.940974
## iter 20 value 19981.090080
## final value 19980.915815
## converged
## # weights: 9
## initial value 22522.806449
## final value 20004.187700
## converged
## # weights: 25
## initial value 23432.758553
## final value 20004.187700
## converged
## # weights: 41
## initial value 22326.885925
## final value 20004.187700
## converged
## # weights: 9
## initial value 22947.496288
## iter 10 value 20012.353454
## iter 20 value 20009.697042
## iter 20 value 20009.696882
## final value 20009.696882
## converged
## # weights: 25
## initial value 22371.928665
## iter 10 value 20009.054592
## final value 20008.162860
## converged
## # weights: 41
## initial value 21492.322984
## iter 10 value 20022.484238
## iter 20 value 20007.504334
## final value 20007.503491
## converged
## # weights: 9
## initial value 23658.627482
## iter 10 value 20012.808358
## iter 20 value 20004.287089
## iter 20 value 20004.287050
## final value 20004.287050
## converged
## # weights: 25
## initial value 24112.044176
## iter 10 value 20012.811226
## iter 20 value 20004.287122
## final value 20004.207942
## converged
## # weights: 41
## initial value 22560.835305
## iter 10 value 20023.303808

```



```

## iter 20 value 20004.408094
## final value 20004.197525
## converged
## # weights: 9
## initial value 23893.757040
## final value 20037.869200
## converged
## # weights: 25
## initial value 23554.249178
## final value 20037.869200
## converged
## # weights: 41
## initial value 24172.892411
## final value 20037.869200
## converged
## # weights: 9
## initial value 23675.291914
## iter 10 value 20046.010851
## final value 20043.379264
## converged
## # weights: 25
## initial value 22329.984713
## iter 10 value 20043.067689
## final value 20041.844981
## converged
## # weights: 41
## initial value 23529.687301
## iter 10 value 20048.413830
## iter 20 value 20041.186095
## final value 20041.185502
## converged
## # weights: 9
## initial value 23148.467822
## iter 10 value 20049.419512
## iter 20 value 20038.002366
## iter 20 value 20038.002313
## final value 20038.002313
## converged
## # weights: 25
## initial value 23275.536583
## iter 10 value 20051.581985
## iter 20 value 20038.027298
## final value 20037.881658
## converged
## # weights: 41
## initial value 22850.900561
## iter 10 value 20056.254506
## iter 20 value 20038.081168
## final value 20037.880422
## converged
## # weights: 9
## initial value 23183.095312
## final value 20013.185200
## converged

```

```

## # weights: 25
## initial value 22400.844055
## final value 20013.185200
## converged
## # weights: 41
## initial value 21139.959798
## final value 20013.185200
## converged
## # weights: 9
## initial value 21696.504827
## iter 10 value 20018.833084
## final value 20018.694464
## converged
## # weights: 25
## initial value 21824.530379
## iter 10 value 20018.022619
## iter 20 value 20017.160455
## iter 20 value 20017.160429
## iter 20 value 20017.160426
## final value 20017.160426
## converged
## # weights: 41
## initial value 23329.507187
## iter 10 value 20030.603072
## iter 20 value 20016.509295
## final value 20016.501164
## converged
## # weights: 9
## initial value 22942.283341
## iter 10 value 20023.581671
## iter 20 value 20013.305063
## iter 20 value 20013.305015
## final value 20013.305015
## converged
## # weights: 25
## initial value 22808.255718
## iter 10 value 20031.333334
## iter 20 value 20013.394434
## final value 20013.201257
## converged
## # weights: 41
## initial value 22620.735844
## iter 10 value 20031.932145
## iter 20 value 20013.401338
## final value 20013.195177
## converged
## # weights: 9
## initial value 22504.808275
## final value 19939.738000
## converged
## # weights: 25
## initial value 23520.966168
## final value 19939.738000
## converged

```

```

## # weights: 41
## initial value 24061.963316
## final value 19939.738000
## converged
## # weights: 9
## initial value 22208.034571
## iter 10 value 19949.644636
## final value 19945.245919
## converged
## # weights: 25
## initial value 22764.380486
## iter 10 value 19945.196036
## final value 19943.712494
## converged
## # weights: 41
## initial value 22272.308581
## iter 10 value 19955.212170
## iter 20 value 19943.072939
## final value 19943.053258
## converged
## # weights: 9
## initial value 23061.781809
## iter 10 value 19950.454421
## iter 20 value 19939.861552
## iter 20 value 19939.861503
## final value 19939.861503
## converged
## # weights: 25
## initial value 22417.862251
## iter 10 value 19955.152338
## iter 20 value 19939.915715
## final value 19939.750174
## converged
## # weights: 41
## initial value 21801.993677
## iter 10 value 19954.779831
## iter 20 value 19939.911421
## final value 19939.747957
## converged
## # weights: 9
## initial value 22131.222175
## final value 20002.486000
## converged
## # weights: 25
## initial value 23541.791695
## final value 20002.486000
## converged
## # weights: 41
## initial value 24148.175921
## final value 20002.486000
## converged
## # weights: 9
## initial value 23493.949198
## iter 10 value 20010.072735

```

```

## final value 20007.995034
## converged
## # weights: 25
## initial value 22264.661079
## iter 10 value 20007.163645
## final value 20006.461152
## converged
## # weights: 41
## initial value 22599.014633
## iter 10 value 20007.020121
## final value 20005.801776
## converged
## # weights: 9
## initial value 21802.372329
## iter 10 value 20009.968605
## iter 20 value 20002.572269
## iter 20 value 20002.572234
## final value 20002.572234
## converged
## # weights: 25
## initial value 23720.914370
## iter 10 value 20014.019561
## iter 20 value 20002.618973
## final value 20002.503409
## converged
## # weights: 41
## initial value 21961.139672
## iter 10 value 20020.069628
## iter 20 value 20002.688725
## final value 20002.496472
## converged
## # weights: 9
## initial value 21734.481519
## final value 20031.021200
## converged
## # weights: 25
## initial value 21871.361716
## final value 20031.021200
## converged
## # weights: 41
## initial value 23768.100677
## final value 20031.021200
## converged
## # weights: 9
## initial value 22821.827426
## iter 10 value 20040.479701
## iter 20 value 20036.531037
## iter 20 value 20036.530971
## final value 20036.530971
## converged
## # weights: 25
## initial value 22130.308952
## iter 10 value 20035.286814
## final value 20034.996715

```

```

## converged
## # weights: 41
## initial value 23183.359205
## iter 10 value 20035.101579
## final value 20034.337270
## converged
## # weights: 9
## initial value 22391.901439
## iter 10 value 20040.418355
## iter 20 value 20031.129542
## iter 20 value 20031.129498
## final value 20031.129498
## converged
## # weights: 25
## initial value 23320.287479
## iter 10 value 20044.691069
## iter 20 value 20031.178803
## final value 20031.035178
## converged
## # weights: 41
## initial value 23432.452726
## iter 10 value 20050.753777
## iter 20 value 20031.248701
## final value 20031.034979
## converged
## # weights: 9
## initial value 23098.637963
## final value 20020.136500
## converged
## # weights: 25
## initial value 22826.034023
## final value 20020.136500
## converged
## # weights: 41
## initial value 22513.598093
## final value 20020.136500
## converged
## # weights: 9
## initial value 23546.064716
## iter 10 value 20026.599693
## final value 20025.645972
## converged
## # weights: 25
## initial value 22325.404937
## iter 10 value 20025.348731
## iter 20 value 20024.112055
## iter 20 value 20024.111955
## iter 20 value 20024.111940
## final value 20024.111940
## converged
## # weights: 41
## initial value 23694.601929
## iter 10 value 20024.087040
## final value 20023.452496

```

```

## converged
## # weights: 9
## initial value 23665.886714
## iter 10 value 20028.837098
## iter 20 value 20020.236811
## iter 20 value 20020.236771
## final value 20020.236771
## converged
## # weights: 25
## initial value 23064.153576
## iter 10 value 20033.383116
## iter 20 value 20020.289223
## final value 20020.153357
## converged
## # weights: 41
## initial value 22941.151663
## iter 10 value 20039.499476
## iter 20 value 20020.359740
## final value 20020.147569
## converged
## # weights: 9
## initial value 23418.508836
## final value 19912.371700
## converged
## # weights: 25
## initial value 21613.233600
## final value 19912.371700
## converged
## # weights: 41
## initial value 23300.204563
## final value 19912.371700
## converged
## # weights: 9
## initial value 22086.698039
## iter 10 value 19918.009031
## final value 19917.879107
## converged
## # weights: 25
## initial value 24035.144222
## iter 10 value 19918.473202
## final value 19916.345793
## converged
## # weights: 41
## initial value 23796.731027
## iter 10 value 19916.265539
## final value 19915.686634
## converged
## # weights: 9
## initial value 22338.636155
## iter 10 value 19923.171250
## iter 20 value 19912.496210
## iter 20 value 19912.496161
## final value 19912.496161
## converged

```

```

## # weights: 25
## initial value 23810.394203
## iter 10 value 19922.561684
## iter 20 value 19912.489183
## final value 19912.391031
## converged
## # weights: 41
## initial value 22585.381515
## iter 10 value 19933.455103
## iter 20 value 19912.614775
## final value 19912.382216
## converged
## # weights: 9
## initial value 22116.120980
## final value 20024.357200
## converged
## # weights: 25
## initial value 22590.074707
## final value 20024.357200
## converged
## # weights: 41
## initial value 21947.737883
## final value 20024.357200
## converged
## # weights: 9
## initial value 22980.584873
## iter 10 value 20029.914589
## final value 20029.866790
## converged
## # weights: 25
## initial value 21700.944779
## iter 10 value 20030.595945
## iter 20 value 20028.332732
## iter 20 value 20028.332642
## iter 20 value 20028.332640
## final value 20028.332640
## converged
## # weights: 41
## initial value 22382.269440
## iter 10 value 20039.530223
## iter 20 value 20027.673887
## final value 20027.673315
## converged
## # weights: 9
## initial value 22098.754275
## iter 10 value 20032.727438
## iter 20 value 20024.453702
## iter 20 value 20024.453664
## final value 20024.453664
## converged
## # weights: 25
## initial value 22746.892471
## iter 10 value 20041.055629
## iter 20 value 20024.549720

```

```

## final value 20024.371442
## converged
## # weights: 41
## initial value 22307.383233
## iter 10 value 20042.507912
## iter 20 value 20024.566463
## final value 20024.367628
## converged
## # weights: 9
## initial value 22739.409351
## final value 20052.994000
## converged
## # weights: 25
## initial value 22260.653546
## final value 20052.994000
## converged
## # weights: 41
## initial value 24107.613021
## final value 20052.994000
## converged
## # weights: 9
## initial value 23979.457369
## iter 10 value 20060.111858
## final value 20058.504757
## converged
## # weights: 25
## initial value 22877.526233
## iter 10 value 20057.671811
## final value 20056.970283
## converged
## # weights: 41
## initial value 22234.393868
## iter 10 value 20059.058725
## iter 20 value 20056.311806
## final value 20056.310749
## converged
## # weights: 9
## initial value 22139.265458
## iter 10 value 20062.782542
## iter 20 value 20053.106854
## iter 20 value 20053.106809
## final value 20053.106809
## converged
## # weights: 25
## initial value 23424.811961
## iter 10 value 20065.726738
## iter 20 value 20053.140798
## final value 20053.007901
## converged
## # weights: 41
## initial value 23669.364623
## iter 10 value 20069.952946
## iter 20 value 20053.189523
## final value 20053.005480

```



```

## converged
## # weights: 9
## initial value 22265.518151
## final value 20053.560100
## converged
## # weights: 25
## initial value 22572.224939
## final value 20053.560100
## converged
## # weights: 41
## initial value 22414.279856
## final value 20053.560100
## converged
## # weights: 9
## initial value 23681.971425
## iter 10 value 20059.374326
## final value 20059.070979
## converged
## # weights: 25
## initial value 23084.383995
## iter 10 value 20060.240743
## final value 20057.536461
## converged
## # weights: 41
## initial value 22647.904751
## iter 10 value 20057.937487
## final value 20056.876982
## converged
## # weights: 9
## initial value 22306.547686
## iter 10 value 20063.949297
## iter 20 value 20053.679879
## iter 20 value 20053.679831
## final value 20053.679831
## converged
## # weights: 25
## initial value 22157.492933
## iter 10 value 20065.916067
## iter 20 value 20053.702555
## final value 20053.576238
## converged
## # weights: 41
## initial value 23521.334336
## iter 10 value 20069.991782
## iter 20 value 20053.749544
## final value 20053.577591
## converged
## # weights: 9
## initial value 22206.640163
## final value 20060.859700
## converged
## # weights: 25
## initial value 22355.200777
## final value 20060.859700

```

```

## converged
## # weights: 41
## initial value 22046.222095
## final value 20060.859700
## converged
## # weights: 9
## initial value 22133.200904
## iter 10 value 20083.302417
## iter 20 value 20066.393881
## final value 20066.371282
## converged
## # weights: 25
## initial value 21920.871203
## iter 10 value 20065.974360
## final value 20064.836607
## converged
## # weights: 41
## initial value 21716.938619
## iter 10 value 20074.813365
## iter 20 value 20064.179336
## final value 20064.176985
## converged
## # weights: 9
## initial value 22586.751981
## iter 10 value 20071.772295
## iter 20 value 20060.985514
## iter 20 value 20060.985463
## final value 20060.985463
## converged
## # weights: 25
## initial value 22460.029839
## iter 10 value 20076.635203
## iter 20 value 20061.041579
## final value 20060.872074
## converged
## # weights: 41
## initial value 23907.008059
## iter 10 value 20076.712035
## iter 20 value 20061.042465
## final value 20060.872375
## converged
## # weights: 9
## initial value 22368.327845
## final value 20056.305700
## converged
## # weights: 25
## initial value 22338.187663
## final value 20056.305700
## converged
## # weights: 41
## initial value 23981.084866
## final value 20056.305700
## converged
## # weights: 9

```

```

## initial value 22964.821085
## iter 10 value 20087.265497
## iter 20 value 20061.823505
## final value 20061.816727
## converged
## # weights: 25
## initial value 23656.002225
## iter 10 value 20061.885745
## iter 20 value 20060.282458
## iter 20 value 20060.282270
## iter 20 value 20060.282251
## final value 20060.282251
## converged
## # weights: 41
## initial value 23129.531217
## iter 10 value 20060.863353
## iter 20 value 20059.622708
## iter 20 value 20059.622587
## iter 20 value 20059.622562
## final value 20059.622562
## converged
## # weights: 9
## initial value 21981.646654
## iter 10 value 20065.303790
## iter 20 value 20056.409441
## iter 20 value 20056.409399
## final value 20056.409399
## converged
## # weights: 25
## initial value 22115.308214
## iter 10 value 20070.724016
## iter 20 value 20056.471932
## final value 20056.317259
## converged
## # weights: 41
## initial value 23579.794846
## iter 10 value 20073.224883
## iter 20 value 20056.500765
## final value 20056.317567
## converged
## # weights: 9
## initial value 22175.193999
## final value 20033.793700
## converged
## # weights: 25
## initial value 23049.822572
## final value 20033.793700
## converged
## # weights: 41
## initial value 23676.203733
## final value 20033.793700
## converged
## # weights: 9
## initial value 22342.578413

```

```

## iter 10 value 20039.616200
## final value 20039.303616
## converged
## # weights: 25
## initial value 23156.049745
## iter 10 value 20044.598018
## iter 20 value 20037.769629
## final value 20037.769380
## converged
## # weights: 41
## initial value 23144.550505
## iter 10 value 20047.425923
## iter 20 value 20037.111774
## final value 20037.109951
## converged
## # weights: 9
## initial value 23010.848098
## iter 10 value 20044.783703
## iter 20 value 20033.920406
## iter 20 value 20033.920355
## final value 20033.920355
## converged
## # weights: 25
## initial value 22956.608595
## iter 10 value 20048.993195
## iter 20 value 20033.968938
## final value 20033.808213
## converged
## # weights: 41
## initial value 22278.168950
## iter 10 value 20051.457077
## iter 20 value 20033.997345
## final value 20033.803509
## converged
## # weights: 9
## initial value 23329.006903
## final value 20042.376500
## converged
## # weights: 25
## initial value 21419.574428
## final value 20042.376500
## converged
## # weights: 41
## initial value 22037.213991
## final value 20042.376500
## converged
## # weights: 9
## initial value 22016.479097
## iter 10 value 20048.059180
## final value 20047.886759
## converged
## # weights: 25
## initial value 23010.222348
## iter 10 value 20048.248680

```

```

## iter 20 value 20046.352505
## iter 20 value 20046.352440
## iter 20 value 20046.352437
## final value 20046.352437
## converged
## # weights: 41
## initial value 22901.366786
## iter 10 value 20046.768835
## iter 20 value 20045.695422
## final value 20045.692949
## converged
## # weights: 9
## initial value 23496.698671
## iter 10 value 20052.232485
## iter 20 value 20042.490132
## iter 20 value 20042.490086
## final value 20042.490086
## converged
## # weights: 25
## initial value 22778.809109
## iter 10 value 20054.835592
## iter 20 value 20042.520144
## final value 20042.388643
## converged
## # weights: 41
## initial value 21984.074164
## iter 10 value 20060.381418
## iter 20 value 20042.584083
## final value 20042.387520
## converged
## # weights: 9
## initial value 23511.390051
## final value 20038.766500
## converged
## # weights: 25
## initial value 23633.062469
## final value 20038.766500
## converged
## # weights: 41
## initial value 22852.201754
## final value 20038.766500
## converged
## # weights: 9
## initial value 22743.977600
## iter 10 value 20045.044039
## final value 20044.276608
## converged
## # weights: 25
## initial value 21734.914559
## iter 10 value 20044.322053
## iter 20 value 20042.742556
## final value 20042.742308
## converged
## # weights: 41

```

```

## initial value 23040.733145
## iter 10 value 20044.262916
## final value 20042.082992
## converged
## # weights: 9
## initial value 22568.250046
## iter 10 value 20048.820679
## iter 20 value 20038.882417
## iter 20 value 20038.882370
## final value 20038.882370
## converged
## # weights: 25
## initial value 22907.807143
## iter 10 value 20052.536843
## iter 20 value 20038.925261
## final value 20038.778428
## converged
## # weights: 41
## initial value 21906.217535
## iter 10 value 20052.773712
## iter 20 value 20038.927992
## final value 20038.776665
## converged
## # weights: 9
## initial value 22954.832672
## final value 20053.560100
## converged
## # weights: 25
## initial value 23337.712355
## final value 20053.560100
## converged
## # weights: 41
## initial value 22078.839260
## final value 20053.560100
## converged
## # weights: 9
## initial value 22758.843963
## iter 10 value 20082.018570
## iter 20 value 20059.078533
## final value 20059.070990
## converged
## # weights: 25
## initial value 22084.764563
## iter 10 value 20058.713719
## final value 20057.536387
## converged
## # weights: 41
## initial value 21619.453053
## iter 10 value 20070.242165
## iter 20 value 20056.877069
## iter 20 value 20056.876889
## iter 20 value 20056.876864
## final value 20056.876864
## converged

```

```

## # weights: 9
## initial value 22635.283716
## iter 10 value 20063.721857
## iter 20 value 20053.677257
## iter 20 value 20053.677210
## final value 20053.677210
## converged
## # weights: 25
## initial value 24290.696396
## iter 10 value 20062.062468
## iter 20 value 20053.658126
## final value 20053.581205
## converged
## # weights: 41
## initial value 23556.729432
## iter 10 value 20071.050092
## iter 20 value 20053.761746
## final value 20053.573718
## converged
## # weights: 9
## initial value 22671.977729
## final value 20062.067600
## converged
## # weights: 25
## initial value 22787.413446
## final value 20062.067600
## converged
## # weights: 41
## initial value 21835.616919
## final value 20062.067600
## converged
## # weights: 9
## initial value 22131.367264
## iter 10 value 20068.603779
## final value 20067.579248
## converged
## # weights: 25
## initial value 21875.899612
## iter 10 value 20074.511547
## iter 20 value 20066.044718
## iter 20 value 20066.044625
## iter 20 value 20066.044583
## final value 20066.044583
## converged
## # weights: 41
## initial value 23722.299590
## iter 10 value 20080.692355
## iter 20 value 20065.385060
## iter 20 value 20065.384941
## iter 20 value 20065.384913
## final value 20065.384913
## converged
## # weights: 9
## initial value 21742.304770

```

```

## iter 10 value 20070.175524
## iter 20 value 20062.161078
## iter 20 value 20062.161041
## final value 20062.161041
## converged
## # weights: 25
## initial value 23126.417439
## iter 10 value 20076.999494
## iter 20 value 20062.239753
## final value 20062.084247
## converged
## # weights: 41
## initial value 21871.570728
## iter 10 value 20075.253798
## iter 20 value 20062.219627
## final value 20062.077877
## converged
## # weights: 9
## initial value 22190.360249
## final value 20003.262500
## converged
## # weights: 25
## initial value 23535.044833
## final value 20003.262500
## converged
## # weights: 41
## initial value 21302.754821
## final value 20003.262500
## converged
## # weights: 9
## initial value 21895.393360
## iter 10 value 20010.634602
## final value 20008.771523
## converged
## # weights: 25
## initial value 22867.053190
## iter 10 value 20008.332998
## final value 20007.237607
## converged
## # weights: 41
## initial value 23516.141610
## iter 10 value 20006.922170
## final value 20006.578236
## converged
## # weights: 9
## initial value 22807.401955
## iter 10 value 20013.416793
## iter 20 value 20003.379571
## iter 20 value 20003.379524
## final value 20003.379524
## converged
## # weights: 25
## initial value 22907.294129
## iter 10 value 20018.334201

```



```

## iter 20 value 20003.436265
## final value 20003.279016
## converged
## # weights: 41
## initial value 21450.134511
## iter 10 value 20015.582093
## iter 20 value 20003.404535
## final value 20003.271507
## converged
## # weights: 9
## initial value 22436.642118
## final value 20041.267700
## converged
## # weights: 25
## initial value 23577.135057
## final value 20041.267700
## converged
## # weights: 41
## initial value 22774.784490
## final value 20041.267700
## converged
## # weights: 9
## initial value 22408.596741
## iter 10 value 20047.573295
## final value 20046.777899
## converged
## # weights: 25
## initial value 22854.169283
## iter 10 value 20046.462239
## final value 20045.243590
## converged
## # weights: 41
## initial value 22932.144077
## iter 10 value 20045.470764
## final value 20044.584077
## converged
## # weights: 9
## initial value 23241.035358
## iter 10 value 20051.401510
## iter 20 value 20041.384535
## iter 20 value 20041.384488
## final value 20041.384488
## converged
## # weights: 25
## initial value 22651.618011
## iter 10 value 20057.526002
## iter 20 value 20041.455145
## final value 20041.281644
## converged
## # weights: 41
## initial value 22798.443896
## iter 10 value 20059.087263
## iter 20 value 20041.473146
## final value 20041.279320

```

```

## converged
## # weights: 9
## initial value 22451.660477
## final value 20047.409200
## converged
## # weights: 25
## initial value 22627.066320
## final value 20047.409200
## converged
## # weights: 41
## initial value 24268.254320
## final value 20047.409200
## converged
## # weights: 9
## initial value 23361.405309
## iter 10 value 20053.729648
## final value 20052.919722
## converged
## # weights: 25
## initial value 23121.075023
## iter 10 value 20052.688490
## iter 20 value 20051.387793
## final value 20051.385312
## converged
## # weights: 41
## initial value 23457.325362
## iter 10 value 20071.531584
## iter 20 value 20050.726518
## final value 20050.725953
## converged
## # weights: 9
## initial value 22631.379843
## iter 10 value 20057.775948
## iter 20 value 20047.528720
## iter 20 value 20047.528673
## final value 20047.528673
## converged
## # weights: 25
## initial value 22134.883483
## iter 10 value 20061.757713
## iter 20 value 20047.574627
## final value 20047.424426
## converged
## # weights: 41
## initial value 23877.331832
## iter 10 value 20062.670603
## iter 20 value 20047.585152
## final value 20047.422465
## converged
## # weights: 9
## initial value 22083.725609
## final value 20011.474000
## converged
## # weights: 25

```

```

## initial value 22766.191741
## final value 20011.474000
## converged
## # weights: 41
## initial value 21483.658081
## final value 20011.474000
## converged
## # weights: 9
## initial value 23489.184429
## iter 10 value 20017.869235
## final value 20016.983248
## converged
## # weights: 25
## initial value 21644.161527
## iter 10 value 20017.074006
## iter 20 value 20015.449312
## iter 20 value 20015.449234
## iter 20 value 20015.449231
## final value 20015.449231
## converged
## # weights: 41
## initial value 23239.595152
## iter 10 value 20015.465020
## final value 20014.789880
## converged
## # weights: 9
## initial value 22538.976220
## iter 10 value 20021.382574
## iter 20 value 20011.588238
## iter 20 value 20011.588192
## final value 20011.588192
## converged
## # weights: 25
## initial value 22856.785119
## iter 10 value 20025.387338
## iter 20 value 20011.634410
## final value 20011.486568
## converged
## # weights: 41
## initial value 21962.967912
## iter 10 value 20027.315999
## iter 20 value 20011.656646
## final value 20011.485378
## converged
## # weights: 9
## initial value 22213.255509
## final value 20017.201700
## converged
## # weights: 25
## initial value 21323.062059
## final value 20017.201700
## converged
## # weights: 41
## initial value 23202.029953

```

```

## final value 20017.201700
## converged
## # weights: 9
## initial value 21929.134847
## iter 10 value 20022.935955
## final value 20022.711052
## converged
## # weights: 25
## initial value 23036.172183
## iter 10 value 20022.585152
## iter 20 value 20021.177018
## iter 20 value 20021.176983
## iter 20 value 20021.176971
## final value 20021.176971
## converged
## # weights: 41
## initial value 21863.767036
## iter 10 value 20022.901466
## iter 20 value 20020.517903
## final value 20020.517612
## converged
## # weights: 9
## initial value 22560.404901
## iter 10 value 20028.739374
## iter 20 value 20017.334720
## iter 20 value 20017.334667
## final value 20017.334667
## converged
## # weights: 25
## initial value 23053.184347
## iter 10 value 20030.157588
## iter 20 value 20017.351071
## final value 20017.217586
## converged
## # weights: 41
## initial value 22047.648606
## iter 10 value 20031.849689
## iter 20 value 20017.370580
## final value 20017.212229
## converged
## # weights: 9
## initial value 22647.278644
## final value 20059.089700
## converged
## # weights: 25
## initial value 22712.587104
## final value 20059.089700
## converged
## # weights: 41
## initial value 22060.268371
## final value 20059.089700
## converged
## # weights: 9
## initial value 23563.731172

```

```

## iter 10 value 20065.445499
## final value 20064.600843
## converged
## # weights: 25
## initial value 22427.851362
## iter 10 value 20063.459129
## final value 20063.066198
## converged
## # weights: 41
## initial value 22219.602460
## iter 10 value 20066.921918
## iter 20 value 20062.407356
## final value 20062.406629
## converged
## # weights: 9
## initial value 23394.607119
## iter 10 value 20069.248505
## iter 20 value 20059.206823
## iter 20 value 20059.206776
## final value 20059.206776
## converged
## # weights: 25
## initial value 23266.854984
## iter 10 value 20073.761128
## iter 20 value 20059.258850
## final value 20059.108299
## converged
## # weights: 41
## initial value 22665.050771
## iter 10 value 20079.313971
## iter 20 value 20059.322870
## final value 20059.099786
## converged
## # weights: 9
## initial value 21862.035739
## final value 20051.880500
## converged
## # weights: 25
## initial value 22775.528582
## final value 20051.880500
## converged
## # weights: 41
## initial value 21690.460707
## final value 20051.880500
## converged
## # weights: 9
## initial value 23286.006095
## iter 10 value 20058.616520
## final value 20057.391219
## converged
## # weights: 25
## initial value 21782.387731
## iter 10 value 20056.246890
## final value 20055.856748

```

```

## converged
## # weights: 41
## initial value 23369.794043
## iter 10 value 20056.381450
## final value 20055.197201
## converged
## # weights: 9
## initial value 24061.085219
## iter 10 value 20059.934033
## iter 20 value 20051.973351
## iter 20 value 20051.973314
## final value 20051.973314
## converged
## # weights: 25
## initial value 23689.816205
## iter 10 value 20064.047145
## iter 20 value 20052.020772
## final value 20051.897953
## converged
## # weights: 41
## initial value 22709.321321
## iter 10 value 20071.522106
## iter 20 value 20052.106952
## final value 20051.892844
## converged
## # weights: 9
## initial value 23415.510273
## final value 19992.778000
## converged
## # weights: 25
## initial value 24110.290518
## final value 19992.778000
## converged
## # weights: 41
## initial value 23359.852826
## final value 19992.778000
## converged
## # weights: 9
## initial value 22413.116574
## iter 10 value 19998.362526
## final value 19998.286825
## converged
## # weights: 25
## initial value 23167.936862
## iter 10 value 19998.246598
## final value 19996.753006
## converged
## # weights: 41
## initial value 22839.744848
## iter 10 value 19997.393498
## iter 20 value 19996.093717
## iter 20 value 19996.093651
## iter 20 value 19996.093638
## final value 19996.093638

```

```

## converged
## # weights: 9
## initial value 23190.614823
## iter 10 value 20004.069992
## iter 20 value 19992.908188
## iter 20 value 19992.908136
## final value 19992.908136
## converged
## # weights: 25
## initial value 23469.029110
## iter 10 value 20006.355749
## iter 20 value 19992.934541
## final value 19992.795596
## converged
## # weights: 41
## initial value 22804.071948
## iter 10 value 20010.348033
## iter 20 value 19992.980569
## final value 19992.790636
## converged
## # weights: 9
## initial value 22436.214822
## final value 19941.288500
## converged
## # weights: 25
## initial value 23490.381710
## final value 19941.288500
## converged
## # weights: 41
## initial value 22523.714140
## final value 19941.288500
## converged
## # weights: 9
## initial value 21987.572532
## iter 10 value 19950.109187
## final value 19946.796420
## converged
## # weights: 25
## initial value 22492.291731
## iter 10 value 19951.573581
## iter 20 value 19945.264399
## final value 19945.263039
## converged
## # weights: 41
## initial value 21862.653185
## iter 10 value 19946.268124
## final value 19944.603782
## converged
## # weights: 9
## initial value 22409.078031
## iter 10 value 19953.108434
## iter 20 value 19941.424775
## iter 20 value 19941.424720
## final value 19941.424720

```

```

## converged
## # weights: 25
## initial value 22321.049065
## iter 10 value 19955.581117
## iter 20 value 19941.453283
## final value 19941.302100
## converged
## # weights: 41
## initial value 23196.955753
## iter 10 value 19956.449241
## iter 20 value 19941.463291
## final value 19941.304040
## converged
## # weights: 9
## initial value 23155.394002
## final value 20010.897200
## converged
## # weights: 25
## initial value 22733.044356
## final value 20010.897200
## converged
## # weights: 41
## initial value 21788.862874
## final value 20010.897200
## converged
## # weights: 9
## initial value 22330.278610
## iter 10 value 20016.740366
## final value 20016.406418
## converged
## # weights: 25
## initial value 22258.793256
## iter 10 value 20016.197879
## final value 20014.872454
## converged
## # weights: 41
## initial value 24034.419271
## iter 10 value 20025.034135
## iter 20 value 20014.221268
## final value 20014.213101
## converged
## # weights: 9
## initial value 22289.880871
## iter 10 value 20020.281128
## iter 20 value 20011.005389
## iter 20 value 20011.005346
## final value 20011.005346
## converged
## # weights: 25
## initial value 23349.181379
## iter 10 value 20024.844709
## iter 20 value 20011.058004
## final value 20010.910149
## converged

```



```

## # weights: 41
## initial value 24001.940574
## iter 10 value 20024.124310
## iter 20 value 20011.049698
## final value 20010.909393
## converged
## # weights: 9
## initial value 22701.498459
## final value 20048.501200
## converged
## # weights: 25
## initial value 22295.039699
## final value 20048.501200
## converged
## # weights: 41
## initial value 21414.699212
## final value 20048.501200
## converged
## # weights: 9
## initial value 23620.286516
## iter 10 value 20054.688175
## final value 20054.011722
## converged
## # weights: 25
## initial value 23136.071796
## iter 10 value 20053.468309
## final value 20052.477269
## converged
## # weights: 41
## initial value 23570.223931
## iter 10 value 20057.807631
## iter 20 value 20051.817925
## iter 20 value 20051.817824
## iter 20 value 20051.817781
## final value 20051.817781
## converged
## # weights: 9
## initial value 22339.932661
## iter 10 value 20058.037322
## iter 20 value 20048.611144
## iter 20 value 20048.611100
## final value 20048.611100
## converged
## # weights: 25
## initial value 23044.008446
## iter 10 value 20065.576138
## iter 20 value 20048.698061
## final value 20048.516502
## converged
## # weights: 41
## initial value 21401.443866
## iter 10 value 20057.957974
## iter 20 value 20048.610229
## final value 20048.511023

```

```

## converged
## # weights: 9
## initial value 21898.893036
## final value 20061.374500
## converged
## # weights: 25
## initial value 21984.893499
## final value 20061.374500
## converged
## # weights: 41
## initial value 22643.480072
## final value 20061.374500
## converged
## # weights: 9
## initial value 23907.243484
## iter 10 value 20069.147248
## final value 20066.886009
## converged
## # weights: 25
## initial value 23375.468972
## iter 10 value 20065.941902
## final value 20065.351289
## converged
## # weights: 41
## initial value 23811.393007
## iter 10 value 20066.022222
## iter 20 value 20064.691693
## iter 20 value 20064.691637
## iter 20 value 20064.691633
## final value 20064.691633
## converged
## # weights: 9
## initial value 22894.186635
## iter 10 value 20071.891828
## iter 20 value 20061.495757
## iter 20 value 20061.495708
## final value 20061.495708
## converged
## # weights: 25
## initial value 22533.164107
## iter 10 value 20077.466400
## iter 20 value 20061.560027
## final value 20061.386232
## converged
## # weights: 41
## initial value 22424.586714
## iter 10 value 20080.905846
## iter 20 value 20061.599681
## final value 20061.384679
## converged
## # weights: 9
## initial value 22429.964282
## final value 20040.797200
## converged

```

```

## # weights: 25
## initial value 21693.354804
## final value 20040.797200
## converged
## # weights: 41
## initial value 22955.118788
## final value 20040.797200
## converged
## # weights: 9
## initial value 23568.161139
## iter 10 value 20049.332409
## final value 20046.307389
## converged
## # weights: 25
## initial value 23383.075209
## iter 10 value 20047.659177
## iter 20 value 20044.775766
## final value 20044.773140
## converged
## # weights: 41
## initial value 23478.397746
## iter 10 value 20044.959632
## final value 20044.113573
## converged
## # weights: 9
## initial value 22335.109937
## iter 10 value 20051.691035
## iter 20 value 20040.922797
## iter 20 value 20040.922747
## final value 20040.922747
## converged
## # weights: 25
## initial value 23246.660275
## iter 10 value 20053.209607
## iter 20 value 20040.940305
## final value 20040.812669
## converged
## # weights: 41
## initial value 22642.158076
## iter 10 value 20060.394684
## iter 20 value 20041.023144
## final value 20040.807218
## converged
## # weights: 9
## initial value 22732.761327
## final value 20052.014500
## converged
## # weights: 25
## initial value 21726.576762
## final value 20052.014500
## converged
## # weights: 41
## initial value 21599.924574
## final value 20052.014500

```

```

## converged
## # weights: 9
## initial value 22690.720480
## iter 10 value 20057.652135
## final value 20057.525249
## converged
## # weights: 25
## initial value 23288.986038
## iter 10 value 20057.154054
## final value 20055.990846
## converged
## # weights: 41
## initial value 21507.729489
## iter 10 value 20056.287202
## final value 20055.331314
## converged
## # weights: 9
## initial value 23178.647881
## iter 10 value 20061.355505
## iter 20 value 20052.122194
## iter 20 value 20052.122151
## final value 20052.122151
## converged
## # weights: 25
## initial value 23622.857179
## iter 10 value 20064.649158
## iter 20 value 20052.160168
## final value 20052.028600
## converged
## # weights: 41
## initial value 22267.770508
## iter 10 value 20070.698730
## iter 20 value 20052.229915
## final value 20052.023943
## converged
## # weights: 9
## initial value 23110.867550
## final value 19987.480100
## converged
## # weights: 25
## initial value 21555.064471
## final value 19987.480100
## converged
## # weights: 41
## initial value 22503.943382
## final value 19987.480100
## converged
## # weights: 9
## initial value 23131.140990
## iter 10 value 19993.587538
## final value 19992.988811
## converged
## # weights: 25
## initial value 23869.346298

```

```

## iter 10 value 19996.686681
## iter 20 value 19991.456252
## final value 19991.455057
## converged
## # weights: 41
## initial value 23066.222998
## iter 10 value 19991.481354
## iter 20 value 19990.795773
## iter 20 value 19990.795694
## iter 20 value 19990.795690
## final value 19990.795690
## converged
## # weights: 9
## initial value 22758.936481
## iter 10 value 19997.487683
## iter 20 value 19987.595480
## iter 20 value 19987.595433
## final value 19987.595433
## converged
## # weights: 25
## initial value 22244.777792
## iter 10 value 20002.092042
## iter 20 value 19987.648564
## final value 19987.498073
## converged
## # weights: 41
## initial value 22781.723785
## iter 10 value 20008.615728
## iter 20 value 19987.723777
## final value 19987.491134
## converged
## # weights: 9
## initial value 22622.221906
## final value 19970.625700
## converged
## # weights: 25
## initial value 21394.036408
## final value 19970.625700
## converged
## # weights: 41
## initial value 23086.323696
## final value 19970.625700
## converged
## # weights: 9
## initial value 22698.696317
## iter 10 value 19977.965403
## final value 19976.134074
## converged
## # weights: 25
## initial value 22483.971160
## iter 10 value 19979.565429
## iter 20 value 19974.602856
## final value 19974.600482
## converged

```

```

## # weights: 41
## initial value 23378.188106
## iter 10 value 19986.124051
## iter 20 value 19973.944636
## final value 19973.941153
## converged
## # weights: 9
## initial value 23314.289343
## iter 10 value 19980.453381
## iter 20 value 19970.739005
## iter 20 value 19970.738960
## final value 19970.738960
## converged
## # weights: 25
## initial value 23572.205623
## iter 10 value 19984.374080
## iter 20 value 19970.784208
## final value 19970.639757
## converged
## # weights: 41
## initial value 21927.197610
## iter 10 value 19986.310354
## iter 20 value 19970.806532
## final value 19970.635610
## converged
## # weights: 9
## initial value 22608.816191
## final value 19971.202000
## converged
## # weights: 25
## initial value 23092.433847
## final value 19971.202000
## converged
## # weights: 41
## initial value 23615.375340
## final value 19971.202000
## converged
## # weights: 9
## initial value 23747.766397
## iter 10 value 19978.321269
## final value 19976.710411
## converged
## # weights: 25
## initial value 22592.156597
## iter 10 value 19977.294416
## iter 20 value 19975.181204
## final value 19975.176752
## converged
## # weights: 41
## initial value 22779.822216
## iter 10 value 19975.899266
## iter 20 value 19974.517776
## final value 19974.517453
## converged

```

```

## # weights: 9
## initial value 22939.970291
## iter 10 value 19982.508880
## iter 20 value 19971.332359
## iter 20 value 19971.332307
## final value 19971.332307
## converged
## # weights: 25
## initial value 22264.868819
## iter 10 value 19984.366137
## iter 20 value 19971.353772
## final value 19971.213315
## converged
## # weights: 41
## initial value 22019.671627
## iter 10 value 19987.497525
## iter 20 value 19971.389875
## iter 30 value 19971.211768
## iter 30 value 19971.211766
## iter 30 value 19971.211764
## final value 19971.211764
## converged
## # weights: 9
## initial value 22340.214660
## final value 20033.685200
## converged
## # weights: 25
## initial value 22755.594302
## final value 20033.685200
## converged
## # weights: 41
## initial value 23036.072839
## final value 20033.685200
## converged
## # weights: 9
## initial value 22850.389467
## iter 10 value 20040.994205
## final value 20039.195105
## converged
## # weights: 25
## initial value 22267.045943
## iter 10 value 20040.685475
## iter 20 value 20037.660953
## iter 20 value 20037.660885
## iter 20 value 20037.660883
## final value 20037.660883
## converged
## # weights: 41
## initial value 23066.844150
## iter 10 value 20038.770855
## iter 20 value 20037.001635
## iter 20 value 20037.001470
## iter 20 value 20037.001450
## final value 20037.001450

```

```

## converged
## # weights: 9
## initial value 22415.568727
## iter 10 value 20043.172906
## iter 20 value 20033.794586
## iter 20 value 20033.794542
## final value 20033.794542
## converged
## # weights: 25
## initial value 22575.527384
## iter 10 value 20049.220643
## iter 20 value 20033.864311
## final value 20033.696664
## converged
## # weights: 41
## initial value 22312.162878
## iter 10 value 20050.480060
## iter 20 value 20033.878832
## final value 20033.695715
## converged
## # weights: 9
## initial value 22247.274992
## final value 20021.050000
## converged
## # weights: 25
## initial value 22382.767155
## final value 20021.050000
## converged
## # weights: 41
## initial value 24381.729767
## final value 20021.050000
## converged
## # weights: 9
## initial value 23209.774763
## iter 10 value 20026.781987
## final value 20026.559502
## converged
## # weights: 25
## initial value 21932.590003
## iter 10 value 20034.798434
## iter 20 value 20025.025986
## final value 20025.025411
## converged
## # weights: 41
## initial value 23248.035924
## iter 10 value 20027.019406
## iter 20 value 20024.366089
## iter 20 value 20024.366006
## iter 20 value 20024.366003
## final value 20024.366003
## converged
## # weights: 9
## initial value 23513.827050
## iter 10 value 20031.366626

```



```

## iter 20 value 20021.168943
## iter 20 value 20021.168895
## final value 20021.168895
## converged
## # weights: 25
## initial value 23783.077094
## iter 10 value 20032.861427
## iter 20 value 20021.186176
## final value 20021.065676
## converged
## # weights: 41
## initial value 22756.511955
## iter 10 value 20036.889477
## iter 20 value 20021.232617
## final value 20021.062396
## converged
## # weights: 9
## initial value 23039.510531
## final value 20057.167600
## converged
## # weights: 25
## initial value 22448.290206
## final value 20057.167600
## converged
## # weights: 41
## initial value 22978.347314
## final value 20057.167600
## converged
## # weights: 9
## initial value 21962.224396
## iter 10 value 20064.441522
## final value 20062.678670
## converged
## # weights: 25
## initial value 22748.892699
## iter 10 value 20062.911849
## iter 20 value 20061.144349
## final value 20061.144061
## converged
## # weights: 41
## initial value 22590.076724
## iter 10 value 20060.790300
## final value 20060.484518
## converged
## # weights: 9
## initial value 21977.913204
## iter 10 value 20065.070366
## iter 20 value 20057.258713
## iter 20 value 20057.258676
## final value 20057.258676
## converged
## # weights: 25
## initial value 22185.736746
## iter 10 value 20070.308355

```

```

## iter 20 value 20057.319103
## final value 20057.183030
## converged
## # weights: 41
## initial value 23759.032473
## iter 10 value 20070.915226
## iter 20 value 20057.326099
## final value 20057.180345
## converged
## # weights: 9
## initial value 21979.679738
## final value 20053.560100
## converged
## # weights: 25
## initial value 22681.731240
## final value 20053.560100
## converged
## # weights: 41
## initial value 22041.186400
## final value 20053.560100
## converged
## # weights: 9
## initial value 21864.012729
## iter 10 value 20060.332474
## final value 20059.070948
## converged
## # weights: 25
## initial value 23216.474326
## iter 10 value 20067.172494
## iter 20 value 20057.553441
## final value 20057.536478
## converged
## # weights: 41
## initial value 21203.004748
## iter 10 value 20068.647766
## iter 20 value 20056.877681
## final value 20056.876854
## converged
## # weights: 9
## initial value 21817.610126
## iter 10 value 20062.606086
## iter 20 value 20053.664393
## iter 20 value 20053.664351
## final value 20053.664351
## converged
## # weights: 25
## initial value 21960.553349
## iter 10 value 20064.058271
## iter 20 value 20053.681136
## final value 20053.573992
## converged
## # weights: 41
## initial value 23834.184357
## iter 10 value 20069.359031

```

```

## iter 20 value 20053.742249
## final value 20053.571447
## converged
## # weights: 9
## initial value 22032.689542
## final value 20030.907700
## converged
## # weights: 25
## initial value 23142.934510
## final value 20030.907700
## converged
## # weights: 41
## initial value 23446.131681
## final value 20030.907700
## converged
## # weights: 9
## initial value 22277.759381
## iter 10 value 20037.277863
## final value 20036.417476
## converged
## # weights: 25
## initial value 22263.941706
## iter 10 value 20035.901344
## final value 20034.883367
## converged
## # weights: 41
## initial value 23159.186695
## iter 10 value 20034.853219
## final value 20034.223825
## converged
## # weights: 9
## initial value 21960.854663
## iter 10 value 20040.003183
## iter 20 value 20031.012564
## iter 20 value 20031.012522
## final value 20031.012522
## converged
## # weights: 25
## initial value 22052.963702
## iter 10 value 20045.915042
## iter 20 value 20031.080723
## final value 20030.921873
## converged
## # weights: 41
## initial value 23506.593623
## iter 10 value 20048.742100
## iter 20 value 20031.113317
## final value 20030.922176
## converged
## # weights: 9
## initial value 21949.672960
## final value 20016.930100
## converged
## # weights: 25

```

```

## initial value 23009.894828
## final value 20016.930100
## converged
## # weights: 41
## initial value 23200.076060
## final value 20016.930100
## converged
## # weights: 9
## initial value 22098.467785
## iter 10 value 20022.894807
## final value 20022.439456
## converged
## # weights: 25
## initial value 21894.019200
## iter 10 value 20022.673485
## final value 20020.905406
## converged
## # weights: 41
## initial value 21869.446379
## iter 10 value 20025.166782
## iter 20 value 20020.246271
## final value 20020.246002
## converged
## # weights: 9
## initial value 22860.623859
## iter 10 value 20028.412848
## iter 20 value 20017.062487
## iter 20 value 20017.062434
## final value 20017.062434
## converged
## # weights: 25
## initial value 23082.272441
## iter 10 value 20030.842851
## iter 20 value 20017.090503
## final value 20016.946551
## converged
## # weights: 41
## initial value 22747.011793
## iter 10 value 20037.135014
## iter 20 value 20017.163047
## final value 20016.941055
## converged
## # weights: 9
## initial value 22978.878772
## final value 20004.034000
## converged
## # weights: 25
## initial value 23713.180417
## final value 20004.034000
## converged
## # weights: 41
## initial value 22905.860965
## final value 20004.034000
## converged

```

```

## # weights: 9
## initial value 22188.048944
## iter 10 value 20009.913547
## final value 20009.543068
## converged
## # weights: 25
## initial value 23893.503048
## iter 10 value 20009.223869
## iter 20 value 20008.009184
## iter 20 value 20008.009125
## iter 20 value 20008.009122
## final value 20008.009122
## converged
## # weights: 41
## initial value 22469.811442
## iter 10 value 20008.064142
## final value 20007.349907
## converged
## # weights: 9
## initial value 22166.190639
## iter 10 value 20012.816933
## iter 20 value 20004.135260
## iter 20 value 20004.135220
## final value 20004.135220
## converged
## # weights: 25
## initial value 22050.448217
## iter 10 value 20017.144584
## iter 20 value 20004.185155
## final value 20004.047629
## converged
## # weights: 41
## initial value 24175.947803
## iter 10 value 20013.922658
## iter 20 value 20004.148008
## final value 20004.054987
## converged
## # weights: 9
## initial value 22060.513594
## final value 20043.810100
## converged
## # weights: 25
## initial value 22459.709666
## final value 20043.810100
## converged
## # weights: 41
## initial value 23121.498309
## final value 20043.810100
## converged
## # weights: 9
## initial value 23106.207332
## iter 10 value 20051.005573
## final value 20049.320423
## converged

```

```

## # weights: 25
## initial value 22172.823829
## iter 10 value 20055.478911
## iter 20 value 20047.786584
## final value 20047.786032
## converged
## # weights: 41
## initial value 22340.615539
## iter 10 value 20050.997425
## iter 20 value 20047.127076
## final value 20047.126544
## converged
## # weights: 9
## initial value 23777.193366
## iter 10 value 20051.632738
## iter 20 value 20043.900289
## iter 20 value 20043.900253
## final value 20043.900253
## converged
## # weights: 25
## initial value 21629.301179
## iter 10 value 20054.172820
## iter 20 value 20043.929574
## final value 20043.821800
## converged
## # weights: 41
## initial value 21208.111800
## iter 10 value 20051.890390
## iter 20 value 20043.903259
## final value 20043.819049
## converged
## # weights: 9
## initial value 22485.168114
## final value 19959.334000
## converged
## # weights: 25
## initial value 23877.700643
## final value 19959.334000
## converged
## # weights: 41
## initial value 22899.464897
## final value 19959.334000
## converged
## # weights: 9
## initial value 21580.774251
## iter 10 value 19965.238946
## final value 19964.842206
## converged
## # weights: 25
## initial value 23074.010076
## iter 10 value 19963.805943
## final value 19963.308735
## converged
## # weights: 41

```

```

## initial value 21556.406816
## iter 10 value 19976.203997
## iter 20 value 19962.650159
## final value 19962.649376
## converged
## # weights: 9
## initial value 22891.604626
## iter 10 value 19970.339077
## iter 20 value 19959.460880
## iter 20 value 19959.460829
## final value 19959.460829
## converged
## # weights: 25
## initial value 23327.872842
## iter 10 value 19972.677180
## iter 20 value 19959.487836
## final value 19959.348825
## converged
## # weights: 41
## initial value 22852.815496
## iter 10 value 19980.023586
## iter 20 value 19959.572535
## final value 19959.343721
## converged
## # weights: 9
## initial value 21724.795390
## final value 20045.864500
## converged
## # weights: 25
## initial value 23555.573086
## final value 20045.864500
## converged
## # weights: 41
## initial value 22287.877013
## final value 20045.864500
## converged
## # weights: 9
## initial value 22536.714737
## iter 10 value 20053.093256
## final value 20051.374881
## converged
## # weights: 25
## initial value 21487.848255
## iter 10 value 20051.741191
## iter 20 value 20049.840642
## iter 20 value 20049.840531
## iter 20 value 20049.840498
## final value 20049.840498
## converged
## # weights: 41
## initial value 22250.208024
## iter 10 value 20064.708429
## iter 20 value 20049.187007
## final value 20049.181043

```

```

## converged
## # weights: 9
## initial value 23284.015024
## iter 10 value 20055.312067
## iter 20 value 20045.973423
## iter 20 value 20045.973379
## final value 20045.973379
## converged
## # weights: 25
## initial value 23411.477280
## iter 10 value 20058.401086
## iter 20 value 20046.009037
## final value 20045.878477
## converged
## # weights: 41
## initial value 21891.856178
## iter 10 value 20060.145366
## iter 20 value 20046.029147
## final value 20045.874757
## converged
## # weights: 9
## initial value 22671.791209
## final value 20012.902000
## converged
## # weights: 25
## initial value 23420.245574
## final value 20012.902000
## converged
## # weights: 41
## initial value 23312.657049
## final value 20012.902000
## converged
## # weights: 9
## initial value 22773.886535
## iter 10 value 20021.607738
## final value 20018.411277
## converged
## # weights: 25
## initial value 21897.380710
## iter 10 value 20019.378371
## final value 20016.877306
## converged
## # weights: 41
## initial value 22398.588412
## iter 10 value 20017.938918
## iter 20 value 20016.218156
## final value 20016.217868
## converged
## # weights: 9
## initial value 23763.690948
## iter 10 value 20021.662494
## iter 20 value 20013.003002
## iter 20 value 20013.002961
## final value 20013.002961

```



```

## converged
## # weights: 25
## initial value 22114.276313
## iter 10 value 20026.339841
## iter 20 value 20013.056928
## final value 20012.916139
## converged
## # weights: 41
## initial value 22999.449384
## iter 10 value 20033.527747
## iter 20 value 20013.139799
## final value 20012.912186
## converged
## # weights: 9
## initial value 22526.142836
## final value 19915.790500
## converged
## # weights: 25
## initial value 23870.205165
## final value 19915.790500
## converged
## # weights: 41
## initial value 23854.991614
## final value 19915.790500
## converged
## # weights: 9
## initial value 22851.036446
## iter 10 value 19921.525818
## final value 19921.297945
## converged
## # weights: 25
## initial value 22985.585915
## iter 10 value 19927.447671
## iter 20 value 19919.765601
## final value 19919.764589
## converged
## # weights: 41
## initial value 23428.946008
## iter 10 value 19921.552349
## iter 20 value 19919.107715
## final value 19919.105600
## converged
## # weights: 9
## initial value 21868.668445
## iter 10 value 19925.472832
## iter 20 value 19915.902130
## iter 20 value 19915.902085
## final value 19915.902085
## converged
## # weights: 25
## initial value 22182.837189
## iter 10 value 19929.644172
## iter 20 value 19915.950222
## final value 19915.806166

```

```

## converged
## # weights: 41
## initial value 21012.770021
## iter 10 value 19923.908564
## iter 20 value 19915.884095
## final value 19915.799631
## converged
## # weights: 9
## initial value 23181.227064
## final value 20004.647600
## converged
## # weights: 25
## initial value 23667.113953
## final value 20004.647600
## converged
## # weights: 41
## initial value 23885.142075
## final value 20004.647600
## converged
## # weights: 9
## initial value 22084.447347
## iter 10 value 20010.262385
## final value 20010.156677
## converged
## # weights: 25
## initial value 23158.846352
## iter 10 value 20009.048106
## iter 20 value 20008.622852
## iter 20 value 20008.622784
## iter 20 value 20008.622765
## final value 20008.622765
## converged
## # weights: 41
## initial value 22535.349900
## iter 10 value 20022.156956
## iter 20 value 20007.981254
## final value 20007.963379
## converged
## # weights: 9
## initial value 21881.695624
## iter 10 value 20013.245946
## iter 20 value 20004.746732
## iter 20 value 20004.746693
## final value 20004.746693
## converged
## # weights: 25
## initial value 22065.900406
## iter 10 value 20018.277683
## iter 20 value 20004.804744
## final value 20004.662628
## converged
## # weights: 41
## initial value 22393.145759
## iter 10 value 20021.378626

```

```

## iter 20 value 20004.840496
## final value 20004.657817
## converged
## # weights: 9
## initial value 23585.437520
## final value 19992.105200
## converged
## # weights: 25
## initial value 23420.140696
## final value 19992.105200
## converged
## # weights: 41
## initial value 23181.071848
## final value 19992.105200
## converged
## # weights: 9
## initial value 21847.085260
## iter 10 value 19997.716929
## final value 19997.613956
## converged
## # weights: 25
## initial value 22108.910091
## iter 10 value 20006.475018
## iter 20 value 19996.080193
## iter 20 value 19996.080152
## iter 20 value 19996.080129
## final value 19996.080129
## converged
## # weights: 41
## initial value 22008.259483
## iter 10 value 20008.760790
## iter 20 value 19995.422401
## final value 19995.420803
## converged
## # weights: 9
## initial value 22295.111997
## iter 10 value 20003.054657
## iter 20 value 19992.231439
## iter 20 value 19992.231388
## final value 19992.231388
## converged
## # weights: 25
## initial value 21157.098449
## iter 10 value 19999.661392
## iter 20 value 19992.192317
## final value 19992.116257
## converged
## # weights: 41
## initial value 23267.244864
## iter 10 value 20010.605874
## iter 20 value 19992.318498
## final value 19992.118791
## converged
## # weights: 9

```

```

## initial value 22708.119402
## final value 20042.649200
## converged
## # weights: 25
## initial value 23580.797504
## final value 20042.649200
## converged
## # weights: 41
## initial value 22508.768954
## final value 20042.649200
## converged
## # weights: 9
## initial value 22918.192868
## iter 10 value 20049.782834
## final value 20048.159474
## converged
## # weights: 25
## initial value 21870.431600
## iter 10 value 20048.506169
## final value 20046.625222
## converged
## # weights: 41
## initial value 22460.928657
## iter 10 value 20047.604754
## iter 20 value 20045.965937
## final value 20045.965613
## converged
## # weights: 9
## initial value 21572.628607
## iter 10 value 20049.227350
## iter 20 value 20042.725041
## iter 20 value 20042.725011
## final value 20042.725011
## converged
## # weights: 25
## initial value 22741.467898
## iter 10 value 20057.988912
## iter 20 value 20042.826055
## final value 20042.664408
## converged
## # weights: 41
## initial value 23631.611140
## iter 10 value 20058.899010
## iter 20 value 20042.836548
## final value 20042.663497
## converged
## # weights: 9
## initial value 22539.797319
## final value 19993.947700
## converged
## # weights: 25
## initial value 21885.413788
## final value 19993.947700
## converged

```

```

## # weights: 41
## initial value 22850.585917
## final value 19993.947700
## converged
## # weights: 9
## initial value 21873.774602
## iter 10 value 19999.605275
## final value 19999.456526
## converged
## # weights: 25
## initial value 22343.482372
## iter 10 value 19998.300265
## final value 19997.922672
## converged
## # weights: 41
## initial value 22828.627073
## iter 10 value 20011.669336
## iter 20 value 19997.264213
## final value 19997.263420
## converged
## # weights: 9
## initial value 23840.327435
## iter 10 value 20002.058393
## iter 20 value 19994.041210
## iter 20 value 19994.041173
## final value 19994.041173
## converged
## # weights: 25
## initial value 23597.078746
## iter 10 value 20005.382088
## iter 20 value 19994.079530
## final value 19993.961656
## converged
## # weights: 41
## initial value 21896.428816
## iter 10 value 20007.695499
## iter 20 value 19994.106201
## final value 19993.958156
## converged
## # weights: 9
## initial value 22181.267740
## final value 19988.865700
## converged
## # weights: 25
## initial value 21400.546649
## final value 19988.865700
## converged
## # weights: 41
## initial value 23024.879972
## final value 19988.865700
## converged
## # weights: 9
## initial value 23602.063009
## iter 10 value 19994.708257

```

```

## final value 19994.374355
## converged
## # weights: 25
## initial value 22920.999495
## iter 10 value 19996.409152
## final value 19992.840592
## converged
## # weights: 41
## initial value 22117.867627
## iter 10 value 19993.047044
## final value 19992.181242
## converged
## # weights: 9
## initial value 22224.893964
## iter 10 value 19998.857248
## iter 20 value 19988.980895
## iter 20 value 19988.980849
## final value 19988.980849
## converged
## # weights: 25
## initial value 22764.230088
## iter 10 value 20002.838007
## iter 20 value 19989.026790
## final value 19988.883290
## converged
## # weights: 41
## initial value 23898.297282
## iter 10 value 20003.885995
## iter 20 value 19989.038872
## final value 19988.881122
## converged
## # weights: 9
## initial value 22476.061460
## final value 20022.720500
## converged
## # weights: 25
## initial value 23087.474852
## final value 20022.720500
## converged
## # weights: 41
## initial value 22565.987704
## final value 20022.720500
## converged
## # weights: 9
## initial value 22586.934727
## iter 10 value 20030.553152
## final value 20028.229990
## converged
## # weights: 25
## initial value 21974.242976
## iter 10 value 20027.615042
## final value 20026.695868
## converged
## # weights: 41

```

```

## initial value 23501.440928
## iter 10 value 20039.155989
## iter 20 value 20026.036958
## final value 20026.036495
## converged
## # weights: 9
## initial value 23335.859055
## iter 10 value 20033.255824
## iter 20 value 20022.841964
## iter 20 value 20022.841915
## final value 20022.841915
## converged
## # weights: 25
## initial value 23259.079809
## iter 10 value 20035.597810
## iter 20 value 20022.868965
## final value 20022.733068
## converged
## # weights: 41
## initial value 23957.841819
## iter 10 value 20036.303057
## iter 20 value 20022.877096
## final value 20022.735868
## converged
## # weights: 9
## initial value 23498.057759
## final value 20054.818000
## converged
## # weights: 25
## initial value 23397.501254
## final value 20054.818000
## converged
## # weights: 41
## initial value 22232.953849
## final value 20054.818000
## converged
## # weights: 9
## initial value 23429.219758
## iter 10 value 20061.736299
## final value 20060.328897
## converged
## # weights: 25
## initial value 23226.694458
## iter 10 value 20059.353488
## final value 20058.794400
## converged
## # weights: 41
## initial value 21269.001313
## iter 10 value 20073.636638
## final value 20058.134910
## converged
## # weights: 9
## initial value 22197.791869
## iter 10 value 20065.271227

```

```

## iter 20 value 20054.938518
## iter 20 value 20054.938469
## final value 20054.938469
## converged
## # weights: 25
## initial value 23422.730406
## iter 10 value 20067.459979
## iter 20 value 20054.963752
## final value 20054.830635
## converged
## # weights: 41
## initial value 24477.673285
## iter 10 value 20063.566280
## iter 20 value 20054.918861
## final value 20054.833310
## converged
## # weights: 9
## initial value 21850.151376
## final value 19976.494000
## converged
## # weights: 25
## initial value 23642.484037
## final value 19976.494000
## converged
## # weights: 41
## initial value 23802.875493
## final value 19976.494000
## converged
## # weights: 9
## initial value 22668.535571
## iter 10 value 20006.100931
## iter 20 value 19982.005289
## final value 19982.002487
## converged
## # weights: 25
## initial value 22681.084675
## iter 10 value 19982.514495
## iter 20 value 19980.468885
## iter 20 value 19980.468756
## iter 20 value 19980.468755
## final value 19980.468755
## converged
## # weights: 41
## initial value 22939.490485
## iter 10 value 19980.676939
## final value 19979.809422
## converged
## # weights: 9
## initial value 23625.207617
## iter 10 value 19985.142246
## iter 20 value 19976.593707
## iter 20 value 19976.593668
## final value 19976.593668
## converged

```



```

## # weights: 25
## initial value 22918.750582
## iter 10 value 19992.193594
## iter 20 value 19976.675004
## final value 19976.507167
## converged
## # weights: 41
## initial value 22596.780725
## iter 10 value 19995.713443
## iter 20 value 19976.715585
## final value 19976.504754
## converged
## # weights: 9
## initial value 21957.143957
## final value 19941.950000
## converged
## # weights: 25
## initial value 22633.182680
## final value 19941.950000
## converged
## # weights: 41
## initial value 22821.819350
## final value 19941.950000
## converged
## # weights: 9
## initial value 22857.302224
## iter 10 value 19949.645131
## final value 19947.457871
## converged
## # weights: 25
## initial value 22439.753342
## iter 10 value 19947.812488
## iter 20 value 19945.924444
## iter 20 value 19945.924373
## iter 20 value 19945.924367
## final value 19945.924367
## converged
## # weights: 41
## initial value 23150.173542
## iter 10 value 19946.639020
## final value 19945.265219
## converged
## # weights: 9
## initial value 21970.059734
## iter 10 value 19951.692344
## iter 20 value 19942.062322
## iter 20 value 19942.062277
## final value 19942.062277
## converged
## # weights: 25
## initial value 22917.382124
## iter 10 value 19957.003795
## iter 20 value 19942.123558
## final value 19941.965744

```

```

## converged
## # weights: 41
## initial value 23765.577128
## iter 10 value 19955.731584
## iter 20 value 19942.108891
## final value 19941.964205
## converged
## # weights: 9
## initial value 22273.970210
## final value 20049.627700
## converged
## # weights: 25
## initial value 23557.939890
## final value 20049.627700
## converged
## # weights: 41
## initial value 21823.683958
## final value 20049.627700
## converged
## # weights: 9
## initial value 23183.528587
## iter 10 value 20076.933214
## iter 20 value 20055.161214
## final value 20055.138324
## converged
## # weights: 25
## initial value 22826.135702
## iter 10 value 20055.229214
## final value 20053.603939
## converged
## # weights: 41
## initial value 22450.975646
## iter 10 value 20058.437350
## iter 20 value 20052.944714
## final value 20052.944360
## converged
## # weights: 9
## initial value 22152.167550
## iter 10 value 20060.342384
## iter 20 value 20049.751232
## iter 20 value 20049.751182
## final value 20049.751182
## converged
## # weights: 25
## initial value 22970.576949
## iter 10 value 20065.551142
## iter 20 value 20049.811285
## final value 20049.643695
## converged
## # weights: 41
## initial value 24196.415447
## iter 10 value 20060.458639
## iter 20 value 20049.752572
## final value 20049.640130

```

```

## converged
## # weights: 9
## initial value 23161.286420
## final value 20016.657700
## converged
## # weights: 25
## initial value 22523.228208
## final value 20016.657700
## converged
## # weights: 41
## initial value 22192.983339
## final value 20016.657700
## converged
## # weights: 9
## initial value 22438.238874
## iter 10 value 20025.090141
## final value 20022.167089
## converged
## # weights: 25
## initial value 21189.833645
## iter 10 value 20022.021796
## final value 20020.633078
## converged
## # weights: 41
## initial value 23256.660833
## iter 10 value 20024.185219
## iter 20 value 20019.974799
## final value 20019.973734
## converged
## # weights: 9
## initial value 22595.213607
## iter 10 value 20028.189346
## iter 20 value 20016.790651
## iter 20 value 20016.790598
## final value 20016.790598
## converged
## # weights: 25
## initial value 23703.098099
## iter 10 value 20028.884980
## iter 20 value 20016.798671
## final value 20016.672518
## converged
## # weights: 41
## initial value 23101.925057
## iter 10 value 20034.777430
## iter 20 value 20016.866606
## final value 20016.668626
## converged
## # weights: 9
## initial value 22847.729959
## final value 20002.641700
## converged
## # weights: 25
## initial value 23026.274241

```

```

## final value 20002.641700
## converged
## # weights: 41
## initial value 21927.487633
## final value 20002.641700
## converged
## # weights: 9
## initial value 21779.553041
## iter 10 value 20008.904111
## final value 20008.150779
## converged
## # weights: 25
## initial value 23022.556370
## iter 10 value 20007.921529
## iter 20 value 20006.616988
## iter 20 value 20006.616809
## iter 20 value 20006.616800
## final value 20006.616800
## converged
## # weights: 41
## initial value 23351.132695
## iter 10 value 20006.744548
## final value 20005.957433
## converged
## # weights: 9
## initial value 21942.725082
## iter 10 value 20011.190078
## iter 20 value 20002.740256
## iter 20 value 20002.740217
## final value 20002.740217
## converged
## # weights: 25
## initial value 21885.053792
## iter 10 value 20013.237153
## iter 20 value 20002.763857
## final value 20002.654061
## converged
## # weights: 41
## initial value 23055.471201
## iter 10 value 20022.284846
## iter 20 value 20002.868170
## final value 20002.652027
## converged
## # weights: 9
## initial value 22163.789697
## final value 19982.170100
## converged
## # weights: 25
## initial value 22231.046024
## final value 19982.170100
## converged
## # weights: 41
## initial value 21506.870060
## final value 19982.170100

```

```

## converged
## # weights: 9
## initial value 23264.620594
## iter 10 value 19988.632602
## final value 19987.678682
## converged
## # weights: 25
## initial value 22510.755159
## iter 10 value 19987.386736
## final value 19986.144914
## converged
## # weights: 41
## initial value 22259.948295
## iter 10 value 19989.103126
## iter 20 value 19985.486482
## final value 19985.485622
## converged
## # weights: 9
## initial value 22645.878468
## iter 10 value 19993.211068
## iter 20 value 19982.297394
## iter 20 value 19982.297343
## final value 19982.297343
## converged
## # weights: 25
## initial value 21415.289486
## iter 10 value 19990.406726
## iter 20 value 19982.265062
## final value 19982.181859
## converged
## # weights: 41
## initial value 23100.776805
## iter 10 value 19998.946726
## iter 20 value 19982.363521
## final value 19982.182174
## converged
## # weights: 9
## initial value 22166.417552
## final value 20028.360100
## converged
## # weights: 25
## initial value 23651.816143
## final value 20028.360100
## converged
## # weights: 41
## initial value 22400.477421
## final value 20028.360100
## converged
## # weights: 9
## initial value 21788.924201
## iter 10 value 20034.264222
## final value 20033.869793
## converged
## # weights: 25

```

```

## initial value 22104.908476
## iter 10 value 20033.284018
## final value 20032.335663
## converged
## # weights: 41
## initial value 22743.844920
## iter 10 value 20044.489811
## iter 20 value 20031.676328
## iter 20 value 20031.676211
## iter 20 value 20031.676193
## final value 20031.676193
## converged
## # weights: 9
## initial value 21573.473868
## iter 10 value 20035.138676
## iter 20 value 20028.438252
## iter 20 value 20028.438220
## final value 20028.438220
## converged
## # weights: 25
## initial value 22195.659874
## iter 10 value 20041.636465
## iter 20 value 20028.513166
## final value 20028.372442
## converged
## # weights: 41
## initial value 22354.865896
## iter 10 value 20045.539393
## iter 20 value 20028.558164
## final value 20028.370197
## converged
## # weights: 9
## initial value 23596.905809
## final value 20046.848500
## converged
## # weights: 25
## initial value 22302.151503
## final value 20046.848500
## converged
## # weights: 41
## initial value 22410.938619
## final value 20046.848500
## converged
## # weights: 9
## initial value 23419.665456
## iter 10 value 20052.409020
## final value 20052.358952
## converged
## # weights: 25
## initial value 23448.162361
## iter 10 value 20052.076638
## final value 20050.824561
## converged
## # weights: 41

```

```

## initial value 24439.108452
## iter 10 value 20055.583962
## iter 20 value 20050.165154
## iter 20 value 20050.165049
## iter 20 value 20050.165045
## final value 20050.165045
## converged
## # weights: 9
## initial value 24076.496323
## iter 10 value 20054.246245
## iter 20 value 20046.933790
## iter 20 value 20046.933756
## final value 20046.933756
## converged
## # weights: 25
## initial value 23706.082734
## iter 10 value 20058.708775
## iter 20 value 20046.985240
## final value 20046.863406
## converged
## # weights: 41
## initial value 22943.406947
## iter 10 value 20069.000801
## iter 20 value 20047.103899
## final value 20046.861155
## converged
## # weights: 9
## initial value 22748.660771
## final value 20044.160500
## converged
## # weights: 25
## initial value 22728.355756
## final value 20044.160500
## converged
## # weights: 41
## initial value 22752.282414
## final value 20044.160500
## converged
## # weights: 9
## initial value 23501.971483
## iter 10 value 20050.064397
## final value 20049.670809
## converged
## # weights: 25
## initial value 22983.766984
## iter 10 value 20048.310244
## final value 20048.136531
## converged
## # weights: 41
## initial value 23241.993401
## iter 10 value 20051.592261
## iter 20 value 20047.484233
## final value 20047.476996
## converged

```

```

## # weights: 9
## initial value 22220.360652
## iter 10 value 20054.875425
## iter 20 value 20044.284035
## iter 20 value 20044.283985
## final value 20044.283985
## converged
## # weights: 25
## initial value 21359.291109
## iter 10 value 20052.260013
## iter 20 value 20044.253881
## final value 20044.172158
## converged
## # weights: 41
## initial value 22795.242166
## iter 10 value 20063.987199
## iter 20 value 20044.389086
## final value 20044.170522
## converged
## # weights: 9
## initial value 22429.115520
## final value 20046.767600
## converged
## # weights: 25
## initial value 23151.101276
## final value 20046.767600
## converged
## # weights: 41
## initial value 22666.455215
## final value 20046.767600
## converged
## # weights: 9
## initial value 22497.289792
## iter 10 value 20055.280983
## final value 20052.278054
## converged
## # weights: 25
## initial value 21884.750896
## iter 10 value 20051.700892
## iter 20 value 20050.743775
## iter 20 value 20050.743698
## iter 20 value 20050.743670
## final value 20050.743670
## converged
## # weights: 41
## initial value 22277.971799
## iter 10 value 20064.178203
## iter 20 value 20050.084372
## iter 20 value 20050.084256
## iter 20 value 20050.084243
## final value 20050.084243
## converged
## # weights: 9
## initial value 22467.773423

```



```

## iter 10 value 20058.166103
## iter 20 value 20046.899016
## iter 20 value 20046.898963
## final value 20046.898963
## converged
## # weights: 25
## initial value 23798.636334
## iter 10 value 20057.198976
## iter 20 value 20046.887866
## final value 20046.785298
## converged
## # weights: 41
## initial value 23141.424808
## iter 10 value 20068.094188
## iter 20 value 20047.013479
## final value 20046.777600
## converged
## # weights: 9
## initial value 22453.285658
## final value 19996.584500
## converged
## # weights: 25
## initial value 23953.521491
## final value 19996.584500
## converged
## # weights: 41
## initial value 21542.174885
## final value 19996.584500
## converged
## # weights: 9
## initial value 22357.902098
## iter 10 value 20002.746170
## final value 20002.093254
## converged
## # weights: 25
## initial value 22055.212194
## iter 10 value 20001.377257
## final value 20000.559464
## converged
## # weights: 41
## initial value 23292.571174
## iter 10 value 20011.026693
## iter 20 value 19999.900843
## final value 19999.900089
## converged
## # weights: 9
## initial value 23043.362363
## iter 10 value 20006.914499
## iter 20 value 19996.703597
## iter 20 value 19996.703549
## final value 19996.703549
## converged
## # weights: 25
## initial value 22352.537981

```

```

## iter 10 value 20010.892637
## iter 20 value 19996.749462
## final value 19996.596543
## converged
## # weights: 41
## initial value 22504.875081
## iter 10 value 20014.072487
## iter 20 value 19996.786123
## final value 19996.596174
## converged
## # weights: 9
## initial value 22447.883543
## final value 20055.771700
## converged
## # weights: 25
## initial value 22568.294737
## final value 20055.771700
## converged
## # weights: 41
## initial value 23927.593897
## final value 20055.771700
## converged
## # weights: 9
## initial value 22124.065980
## iter 10 value 20062.484266
## final value 20061.282666
## converged
## # weights: 25
## initial value 21514.526073
## iter 10 value 20067.267518
## iter 20 value 20059.762539
## final value 20059.748134
## converged
## # weights: 41
## initial value 23239.516574
## iter 10 value 20070.755203
## iter 20 value 20059.089957
## final value 20059.088503
## converged
## # weights: 9
## initial value 23372.124181
## iter 10 value 20064.859721
## iter 20 value 20055.876478
## iter 20 value 20055.876436
## final value 20055.876436
## converged
## # weights: 25
## initial value 22141.388110
## iter 10 value 20067.332180
## iter 20 value 20055.904983
## final value 20055.783916
## converged
## # weights: 41
## initial value 22206.911521

```

```

## iter 10 value 20072.612015
## iter 20 value 20055.965856
## final value 20055.782024
## converged
## # weights: 9
## initial value 23333.744830
## final value 20009.734000
## converged
## # weights: 25
## initial value 21735.473028
## final value 20009.734000
## converged
## # weights: 41
## initial value 21257.269688
## final value 20009.734000
## converged
## # weights: 9
## initial value 21502.251660
## iter 10 value 20018.116719
## iter 20 value 20015.252281
## final value 20015.243200
## converged
## # weights: 25
## initial value 21708.839585
## iter 10 value 20014.993186
## iter 20 value 20013.710146
## final value 20013.709364
## converged
## # weights: 41
## initial value 22876.178492
## iter 10 value 20013.847004
## final value 20013.049867
## converged
## # weights: 9
## initial value 22452.053794
## iter 10 value 20020.929923
## iter 20 value 20009.863080
## iter 20 value 20009.863029
## final value 20009.863029
## converged
## # weights: 25
## initial value 23586.030007
## iter 10 value 20021.308476
## iter 20 value 20009.867445
## final value 20009.757738
## converged
## # weights: 41
## initial value 23862.853757
## iter 10 value 20026.287919
## iter 20 value 20009.924854
## final value 20009.747239
## converged
## # weights: 9
## initial value 22114.382048

```

```

## final value 20041.640500
## converged
## # weights: 25
## initial value 21674.277101
## final value 20041.640500
## converged
## # weights: 41
## initial value 22799.268058
## final value 20041.640500
## converged
## # weights: 9
## initial value 23657.577315
## iter 10 value 20047.566997
## final value 20047.150724
## converged
## # weights: 25
## initial value 22629.444881
## iter 10 value 20046.678958
## final value 20045.616391
## converged
## # weights: 41
## initial value 23748.097506
## iter 10 value 20049.054665
## iter 20 value 20044.958865
## final value 20044.956948
## converged
## # weights: 9
## initial value 22860.230568
## iter 10 value 20052.752925
## iter 20 value 20041.768618
## iter 20 value 20041.768566
## final value 20041.768566
## converged
## # weights: 25
## initial value 23460.758523
## iter 10 value 20055.099163
## iter 20 value 20041.795668
## final value 20041.655637
## converged
## # weights: 41
## initial value 22651.014854
## iter 10 value 20060.148136
## iter 20 value 20041.853879
## final value 20041.649953
## converged
## # weights: 9
## initial value 22535.897789
## final value 19989.553700
## converged
## # weights: 25
## initial value 22369.435455
## final value 19989.553700
## converged
## # weights: 41

```

```

## initial value 23623.144480
## final value 19989.553700
## converged
## # weights: 9
## initial value 23193.015494
## iter 10 value 19995.238184
## final value 19995.062453
## converged
## # weights: 25
## initial value 22658.195601
## iter 10 value 19994.267012
## final value 19993.528653
## converged
## # weights: 41
## initial value 21531.669426
## iter 10 value 19995.202252
## final value 19992.869410
## converged
## # weights: 9
## initial value 23265.457066
## iter 10 value 20000.580264
## iter 20 value 19989.680828
## iter 20 value 19989.680777
## final value 19989.680777
## converged
## # weights: 25
## initial value 22911.980299
## iter 10 value 20005.973140
## iter 20 value 19989.743003
## final value 19989.565626
## converged
## # weights: 41
## initial value 22532.683505
## iter 10 value 20008.727179
## iter 20 value 19989.774755
## final value 19989.566078
## converged
## # weights: 9
## initial value 22924.841378
## final value 20018.146000
## converged
## # weights: 25
## initial value 23574.997711
## final value 20018.146000
## converged
## # weights: 41
## initial value 22515.101520
## final value 20018.146000
## converged
## # weights: 9
## initial value 22205.272077
## iter 10 value 20024.199061
## final value 20023.655413
## converged

```

```

## # weights: 25
## initial value 22033.575832
## iter 10 value 20023.000762
## final value 20022.121407
## converged
## # weights: 41
## initial value 22441.204168
## iter 10 value 20025.822867
## iter 20 value 20021.462605
## final value 20021.461940
## converged
## # weights: 9
## initial value 22848.748440
## iter 10 value 20028.846656
## iter 20 value 20018.269370
## iter 20 value 20018.269321
## final value 20018.269321
## converged
## # weights: 25
## initial value 23347.288941
## iter 10 value 20031.232699
## iter 20 value 20018.296879
## final value 20018.159879
## converged
## # weights: 41
## initial value 23159.621362
## iter 10 value 20037.462794
## iter 20 value 20018.368707
## final value 20018.157049
## converged
## # weights: 9
## initial value 21882.770266
## final value 20052.930100
## converged
## # weights: 25
## initial value 23893.902721
## final value 20052.930100
## converged
## # weights: 41
## initial value 21960.733366
## final value 20052.930100
## converged
## # weights: 9
## initial value 22899.213732
## iter 10 value 20059.084990
## final value 20058.440955
## converged
## # weights: 25
## initial value 22310.317769
## iter 10 value 20057.547589
## final value 20056.906471
## converged
## # weights: 41
## initial value 22007.090793

```

```

## iter 10 value 20057.860746
## iter 20 value 20056.246963
## iter 20 value 20056.246911
## iter 20 value 20056.246908
## final value 20056.246908
## converged
## # weights: 9
## initial value 22899.652779
## iter 10 value 20064.077807
## iter 20 value 20053.058624
## iter 20 value 20053.058573
## final value 20053.058573
## converged
## # weights: 25
## initial value 24043.969750
## iter 10 value 20064.174477
## iter 20 value 20053.059739
## final value 20052.947840
## converged
## # weights: 41
## initial value 22636.978121
## iter 10 value 20071.857301
## iter 20 value 20053.148316
## final value 20052.941425
## converged
## # weights: 9
## initial value 21951.129034
## final value 20004.341200
## converged
## # weights: 25
## initial value 23237.501010
## final value 20004.341200
## converged
## # weights: 41
## initial value 22124.072890
## final value 20004.341200
## converged
## # weights: 9
## initial value 21721.902834
## iter 10 value 20010.126982
## final value 20009.850251
## converged
## # weights: 25
## initial value 22947.053585
## iter 10 value 20008.400294
## final value 20008.316413
## converged
## # weights: 41
## initial value 22905.105352
## iter 10 value 20008.061687
## final value 20007.656940
## converged
## # weights: 9
## initial value 21731.969541

```

```

## iter 10 value 20012.102782
## iter 20 value 20004.430685
## iter 20 value 20004.430649
## final value 20004.430649
## converged
## # weights: 25
## initial value 22306.916223
## iter 10 value 20019.760495
## iter 20 value 20004.518972
## iter 30 value 20004.355029
## iter 30 value 20004.354921
## iter 30 value 20004.354916
## final value 20004.354916
## converged
## # weights: 41
## initial value 23808.355069
## iter 10 value 20021.090919
## iter 20 value 20004.534311
## final value 20004.353400
## converged
## # weights: 9
## initial value 23591.293609
## final value 20057.069200
## converged
## # weights: 25
## initial value 21905.243488
## final value 20057.069200
## converged
## # weights: 41
## initial value 23277.482925
## final value 20057.069200
## converged
## # weights: 9
## initial value 23354.225754
## iter 10 value 20062.889961
## final value 20062.580206
## converged
## # weights: 25
## initial value 22432.470076
## iter 10 value 20061.890197
## final value 20061.045680
## converged
## # weights: 41
## initial value 24276.273969
## iter 10 value 20063.821513
## iter 20 value 20060.388798
## final value 20060.386155
## converged
## # weights: 9
## initial value 22779.500154
## iter 10 value 20068.637626
## iter 20 value 20057.202575
## iter 20 value 20057.202522
## final value 20057.202522

```



```

## converged
## # weights: 25
## initial value 23539.741324
## iter 10 value 20070.390106
## iter 20 value 20057.222780
## final value 20057.089141
## converged
## # weights: 41
## initial value 22466.584619
## iter 10 value 20075.564065
## iter 20 value 20057.282431
## final value 20057.079337
## converged
## # weights: 9
## initial value 22946.040180
## final value 20046.195700
## converged
## # weights: 25
## initial value 22009.855739
## final value 20046.195700
## converged
## # weights: 41
## initial value 24275.492044
## final value 20046.195700
## converged
## # weights: 9
## initial value 22164.291426
## iter 10 value 20053.235105
## final value 20051.706090
## converged
## # weights: 25
## initial value 23101.935959
## iter 10 value 20050.659595
## iter 20 value 20050.172112
## iter 20 value 20050.171920
## iter 20 value 20050.171917
## final value 20050.171917
## converged
## # weights: 41
## initial value 23004.534523
## iter 10 value 20061.838486
## final value 20049.512305
## converged
## # weights: 9
## initial value 23406.817461
## iter 10 value 20056.830849
## iter 20 value 20046.318315
## iter 20 value 20046.318266
## final value 20046.318266
## converged
## # weights: 25
## initial value 22041.119102
## iter 10 value 20058.704700
## iter 20 value 20046.339919

```

```

## final value 20046.206737
## converged
## # weights: 41
## initial value 21818.303051
## iter 10 value 20063.003526
## iter 20 value 20046.389481
## final value 20046.205121
## converged
## # weights: 9
## initial value 23228.028468
## final value 20018.681200
## converged
## # weights: 25
## initial value 21994.897472
## final value 20018.681200
## converged
## # weights: 41
## initial value 22681.517403
## final value 20018.681200
## converged
## # weights: 9
## initial value 22831.849531
## iter 10 value 20025.416448
## final value 20024.190615
## converged
## # weights: 25
## initial value 23137.239815
## iter 10 value 20023.964477
## final value 20022.656541
## converged
## # weights: 41
## initial value 23658.562848
## iter 10 value 20027.137636
## iter 20 value 20021.997693
## final value 20021.997162
## converged
## # weights: 9
## initial value 23585.140354
## iter 10 value 20028.188977
## iter 20 value 20018.790817
## iter 20 value 20018.790773
## final value 20018.790773
## converged
## # weights: 25
## initial value 22021.712927
## iter 10 value 20031.477064
## iter 20 value 20018.828726
## final value 20018.696632
## converged
## # weights: 41
## initial value 22253.094892
## iter 10 value 20036.359341
## iter 20 value 20018.885015
## final value 20018.695055

```

```

## converged
## # weights: 9
## initial value 23724.829019
## final value 20040.986000
## converged
## # weights: 25
## initial value 22252.165742
## final value 20040.986000
## converged
## # weights: 41
## initial value 21907.847484
## final value 20040.986000
## converged
## # weights: 9
## initial value 23326.094626
## iter 10 value 20047.142445
## final value 20046.496189
## converged
## # weights: 25
## initial value 22526.402246
## iter 10 value 20046.109871
## iter 20 value 20044.962037
## iter 20 value 20044.961875
## iter 20 value 20044.961869
## final value 20044.961869
## converged
## # weights: 41
## initial value 23164.693805
## iter 10 value 20055.708392
## iter 20 value 20044.307402
## final value 20044.302384
## converged
## # weights: 9
## initial value 23281.078663
## iter 10 value 20050.504637
## iter 20 value 20041.095742
## iter 20 value 20041.095699
## final value 20041.095699
## converged
## # weights: 25
## initial value 23263.513051
## iter 10 value 20055.118360
## iter 20 value 20041.148935
## final value 20040.998493
## converged
## # weights: 41
## initial value 22320.219287
## iter 10 value 20059.606378
## iter 20 value 20041.200678
## final value 20040.996442
## converged
## # weights: 9
## initial value 22844.568089
## final value 20034.333200

```

```

## converged
## # weights: 25
## initial value 22686.178383
## final value 20034.333200
## converged
## # weights: 41
## initial value 22382.612809
## final value 20034.333200
## converged
## # weights: 9
## initial value 22104.358204
## iter 10 value 20041.046541
## final value 20039.843130
## converged
## # weights: 25
## initial value 21856.776241
## iter 10 value 20039.909605
## iter 20 value 20038.308971
## iter 20 value 20038.308884
## iter 20 value 20038.308875
## final value 20038.308875
## converged
## # weights: 41
## initial value 23088.733309
## iter 10 value 20042.123316
## final value 20037.649445
## converged
## # weights: 9
## initial value 23497.364620
## iter 10 value 20044.504307
## iter 20 value 20034.450465
## iter 20 value 20034.450418
## final value 20034.450418
## converged
## # weights: 25
## initial value 22069.327520
## iter 10 value 20047.449508
## iter 20 value 20034.484421
## final value 20034.348112
## converged
## # weights: 41
## initial value 23152.002752
## iter 10 value 20053.791662
## iter 20 value 20034.557541
## final value 20034.343672
## converged
## # weights: 9
## initial value 22849.475360
## final value 20017.337200
## converged
## # weights: 25
## initial value 22790.300352
## final value 20017.337200
## converged

```

```

## # weights: 41
## initial value 21940.715701
## final value 20017.337200
## converged
## # weights: 9
## initial value 23758.992696
## iter 10 value 20023.252646
## final value 20022.846598
## converged
## # weights: 25
## initial value 23384.592643
## iter 10 value 20022.128975
## final value 20021.312554
## converged
## # weights: 41
## initial value 23646.792786
## iter 10 value 20032.726699
## iter 20 value 20020.655618
## final value 20020.653175
## converged
## # weights: 9
## initial value 22218.771245
## iter 10 value 20027.424343
## iter 20 value 20017.453497
## iter 20 value 20017.453450
## final value 20017.453450
## converged
## # weights: 25
## initial value 23148.220594
## iter 10 value 20031.151977
## iter 20 value 20017.496474
## final value 20017.356030
## converged
## # weights: 41
## initial value 21885.570530
## iter 10 value 20033.426518
## iter 20 value 20017.522697
## final value 20017.346133
## converged
## # weights: 9
## initial value 22229.288737
## final value 20027.767600
## converged
## # weights: 25
## initial value 22252.949275
## final value 20027.767600
## converged
## # weights: 41
## initial value 22882.175770
## final value 20027.767600
## converged
## # weights: 9
## initial value 23336.157996
## iter 10 value 20111.746894

```

```

## iter 20 value 20033.300706
## final value 20033.277303
## converged
## # weights: 25
## initial value 22821.758677
## iter 10 value 20033.217555
## final value 20031.743173
## converged
## # weights: 41
## initial value 22177.278898
## iter 10 value 20047.497302
## iter 20 value 20031.084045
## iter 20 value 20031.083880
## iter 20 value 20031.083793
## final value 20031.083793
## converged
## # weights: 9
## initial value 21946.100459
## iter 10 value 20037.766989
## iter 20 value 20027.882885
## iter 20 value 20027.882839
## final value 20027.882839
## converged
## # weights: 25
## initial value 22369.656195
## iter 10 value 20045.158437
## iter 20 value 20027.968103
## final value 20027.780660
## converged
## # weights: 41
## initial value 23712.353289
## iter 10 value 20042.981830
## iter 20 value 20027.943008
## final value 20027.780244
## converged
## # weights: 9
## initial value 22119.242326
## final value 20044.594000
## converged
## # weights: 25
## initial value 22562.555842
## final value 20044.594000
## converged
## # weights: 41
## initial value 21736.619021
## final value 20044.594000
## converged
## # weights: 9
## initial value 21745.909506
## iter 10 value 20050.423126
## final value 20050.104327
## converged
## # weights: 25
## initial value 22250.247863

```

```

## iter 10 value 20049.229459
## final value 20048.569985
## converged
## # weights: 41
## initial value 23488.928891
## iter 10 value 20052.491861
## iter 20 value 20047.911035
## final value 20047.910510
## converged
## # weights: 9
## initial value 23036.591555
## iter 10 value 20054.408541
## iter 20 value 20044.707154
## iter 20 value 20044.707109
## final value 20044.707109
## converged
## # weights: 25
## initial value 23852.758173
## iter 10 value 20056.745026
## iter 20 value 20044.734092
## final value 20044.609739
## converged
## # weights: 41
## initial value 22765.913179
## iter 10 value 20065.567868
## iter 20 value 20044.835812
## final value 20044.605680
## converged
## # weights: 9
## initial value 22622.498695
## final value 19997.560100
## converged
## # weights: 25
## initial value 21943.077655
## final value 19997.560100
## converged
## # weights: 41
## initial value 22778.586799
## final value 19997.560100
## converged
## # weights: 9
## initial value 23348.570927
## iter 10 value 20003.164638
## final value 20003.069003
## converged
## # weights: 25
## initial value 22518.571364
## iter 10 value 20003.831087
## iter 20 value 20001.535227
## iter 20 value 20001.535123
## iter 20 value 20001.535102
## final value 20001.535102
## converged
## # weights: 41

```

```

## initial value 23064.353030
## iter 10 value 20010.556089
## iter 20 value 20000.876300
## final value 20000.875836
## converged
## # weights: 9
## initial value 23653.558579
## iter 10 value 20007.027784
## iter 20 value 19997.669255
## iter 20 value 19997.669211
## final value 19997.669211
## converged
## # weights: 25
## initial value 21609.840727
## iter 10 value 20008.674777
## iter 20 value 19997.688243
## final value 19997.572783
## converged
## # weights: 41
## initial value 22170.820197
## iter 10 value 20015.084556
## iter 20 value 19997.762143
## final value 19997.571312
## converged
## # weights: 9
## initial value 21710.238854
## final value 20039.841200
## converged
## # weights: 25
## initial value 22423.431400
## final value 20039.841200
## converged
## # weights: 41
## initial value 22046.479202
## final value 20039.841200
## converged
## # weights: 9
## initial value 23365.070512
## iter 10 value 20047.309036
## final value 20045.351317
## converged
## # weights: 25
## initial value 22006.434774
## iter 10 value 20050.686734
## iter 20 value 20043.831615
## final value 20043.817035
## converged
## # weights: 41
## initial value 22225.346587
## iter 10 value 20056.750682
## iter 20 value 20043.160272
## final value 20043.157574
## converged
## # weights: 9

```



```

## initial value 23311.278265
## iter 10 value 20049.919849
## iter 20 value 20039.957399
## iter 20 value 20039.957352
## final value 20039.957352
## converged
## # weights: 25
## initial value 21487.242032
## iter 10 value 20048.996806
## iter 20 value 20039.946757
## final value 20039.851979
## converged
## # weights: 41
## initial value 22022.944242
## iter 10 value 20058.029634
## iter 20 value 20040.050898
## final value 20039.851556
## converged
## # weights: 9
## initial value 23959.847567
## final value 20032.589200
## converged
## # weights: 25
## initial value 23159.248146
## final value 20032.589200
## converged
## # weights: 41
## initial value 22641.282060
## final value 20032.589200
## converged
## # weights: 9
## initial value 22451.528811
## iter 10 value 20039.489681
## final value 20038.099054
## converged
## # weights: 25
## initial value 22418.070339
## iter 10 value 20038.486105
## iter 20 value 20036.565234
## final value 20036.564833
## converged
## # weights: 41
## initial value 22568.807960
## iter 10 value 20036.885898
## final value 20035.905404
## converged
## # weights: 9
## initial value 23534.964329
## iter 10 value 20043.159861
## iter 20 value 20032.711071
## iter 20 value 20032.711023
## final value 20032.711023
## converged
## # weights: 25

```

```

## initial value 21520.327924
## iter 10 value 20041.677937
## iter 20 value 20032.693986
## final value 20032.600923
## converged
## # weights: 41
## initial value 22447.540404
## iter 10 value 20052.531183
## iter 20 value 20032.819115
## final value 20032.598479
## converged
## # weights: 9
## initial value 22303.385720
## final value 20047.090000
## converged
## # weights: 25
## initial value 22448.850214
## final value 20047.090000
## converged
## # weights: 41
## initial value 22511.983694
## final value 20047.090000
## converged
## # weights: 9
## initial value 23235.251690
## iter 10 value 20052.678388
## iter 20 value 20052.600512
## iter 20 value 20052.600492
## final value 20052.600492
## converged
## # weights: 25
## initial value 23025.808234
## iter 10 value 20055.133854
## iter 20 value 20051.066633
## final value 20051.066090
## converged
## # weights: 41
## initial value 23863.449331
## iter 10 value 20064.402238
## iter 20 value 20050.410919
## final value 20050.406590
## converged
## # weights: 9
## initial value 22393.506688
## iter 10 value 20057.693601
## iter 20 value 20047.212251
## iter 20 value 20047.212202
## final value 20047.212202
## converged
## # weights: 25
## initial value 22754.806515
## iter 10 value 20063.607168
## iter 20 value 20047.280430
## final value 20047.102744

```

```

## converged
## # weights: 41
## initial value 22289.390602
## iter 10 value 20063.641479
## iter 20 value 20047.280826
## final value 20047.098755
## converged
## # weights: 9
## initial value 22874.658165
## final value 19942.390000
## converged
## # weights: 25
## initial value 21872.034158
## final value 19942.390000
## converged
## # weights: 41
## initial value 23391.130305
## final value 19942.390000
## converged
## # weights: 9
## initial value 23029.976713
## iter 10 value 19948.711250
## final value 19947.897898
## converged
## # weights: 25
## initial value 22675.686606
## iter 10 value 19947.232707
## final value 19946.364428
## converged
## # weights: 41
## initial value 22346.030756
## iter 10 value 19959.323414
## iter 20 value 19945.705361
## iter 20 value 19945.705271
## iter 20 value 19945.705242
## final value 19945.705242
## converged
## # weights: 9
## initial value 22619.776039
## iter 10 value 19953.101142
## iter 20 value 19942.513491
## iter 20 value 19942.513442
## final value 19942.513442
## converged
## # weights: 25
## initial value 22483.573899
## iter 10 value 19956.477394
## iter 20 value 19942.552417
## final value 19942.406720
## converged
## # weights: 41
## initial value 21792.378029
## iter 10 value 19956.195093
## iter 20 value 19942.549162

```

```

## final value 19942.400109
## converged
## # weights: 9
## initial value 21939.418451
## final value 20050.567600
## converged
## # weights: 25
## initial value 22220.937975
## final value 20050.567600
## converged
## # weights: 41
## initial value 21941.314192
## final value 20050.567600
## converged
## # weights: 9
## initial value 22045.865285
## iter 10 value 20056.264407
## final value 20056.078249
## converged
## # weights: 25
## initial value 23239.876981
## iter 10 value 20056.341855
## iter 20 value 20054.544373
## final value 20054.543807
## converged
## # weights: 41
## initial value 22940.214833
## iter 10 value 20067.334770
## iter 20 value 20053.885726
## final value 20053.884317
## converged
## # weights: 9
## initial value 21504.387857
## iter 10 value 20057.720838
## iter 20 value 20050.650071
## iter 20 value 20050.650038
## final value 20050.650038
## converged
## # weights: 25
## initial value 22568.643486
## iter 10 value 20065.172231
## iter 20 value 20050.735980
## final value 20050.581413
## converged
## # weights: 41
## initial value 21729.836581
## iter 10 value 20062.474601
## iter 20 value 20050.704878
## final value 20050.578207
## converged
## # weights: 9
## initial value 23393.341670
## final value 19919.649700
## converged

```

```

## # weights: 25
## initial value 23313.387963
## final value 19919.649700
## converged
## # weights: 41
## initial value 23118.722443
## final value 19919.649700
## converged
## # weights: 9
## initial value 22898.938142
## iter 10 value 19926.401348
## final value 19925.157281
## converged
## # weights: 25
## initial value 22129.018335
## iter 10 value 19925.035238
## final value 19923.623910
## converged
## # weights: 41
## initial value 23042.673801
## iter 10 value 19926.128921
## iter 20 value 19922.965025
## final value 19922.964749
## converged
## # weights: 9
## initial value 23278.023593
## iter 10 value 19930.684972
## iter 20 value 19919.776928
## iter 20 value 19919.776877
## final value 19919.776877
## converged
## # weights: 25
## initial value 22953.447133
## iter 10 value 19933.411732
## iter 20 value 19919.808365
## final value 19919.664007
## converged
## # weights: 41
## initial value 21933.469882
## iter 10 value 19935.465545
## iter 20 value 19919.832044
## final value 19919.659472
## converged
## # weights: 9
## initial value 22250.645205
## final value 19981.448500
## converged
## # weights: 25
## initial value 23146.621804
## final value 19981.448500
## converged
## # weights: 41
## initial value 22845.353697
## final value 19981.448500

```

```

## converged
## # weights: 9
## initial value 23339.827674
## iter 10 value 19987.282850
## final value 19986.957100
## converged
## # weights: 25
## initial value 23185.430300
## iter 10 value 19987.826667
## final value 19985.423356
## converged
## # weights: 41
## initial value 24053.782479
## iter 10 value 19985.422743
## final value 19984.764062
## converged
## # weights: 9
## initial value 23177.544092
## iter 10 value 19990.981014
## iter 20 value 19981.558402
## iter 20 value 19981.558358
## final value 19981.558358
## converged
## # weights: 25
## initial value 21600.653509
## iter 10 value 19992.089862
## iter 20 value 19981.571187
## final value 19981.460548
## converged
## # weights: 41
## initial value 22066.583297
## iter 10 value 19997.337774
## iter 20 value 19981.631691
## final value 19981.457242
## converged
## # weights: 9
## initial value 23205.672514
## final value 20024.481700
## converged
## # weights: 25
## initial value 22945.410069
## final value 20024.481700
## converged
## # weights: 41
## initial value 23072.039750
## final value 20024.481700
## converged
## # weights: 9
## initial value 22608.184616
## iter 10 value 20030.304867
## final value 20029.991302
## converged
## # weights: 25
## initial value 22839.958240

```

```

## iter 10 value 20030.646751
## iter 20 value 20028.457536
## final value 20028.457184
## converged
## # weights: 41
## initial value 21975.885033
## iter 10 value 20040.532286
## iter 20 value 20027.802082
## final value 20027.797750
## converged
## # weights: 9
## initial value 21978.747440
## iter 10 value 20033.415363
## iter 20 value 20024.584698
## iter 20 value 20024.584657
## final value 20024.584657
## converged
## # weights: 25
## initial value 23086.919567
## iter 10 value 20040.103493
## iter 20 value 20024.661807
## final value 20024.493629
## converged
## # weights: 41
## initial value 22878.677068
## iter 10 value 20043.170436
## iter 20 value 20024.697166
## final value 20024.493210
## converged
## # weights: 9
## initial value 23301.495639
## final value 20031.021200
## converged
## # weights: 25
## initial value 22304.497655
## final value 20031.021200
## converged
## # weights: 41
## initial value 24054.193708
## final value 20031.021200
## converged
## # weights: 9
## initial value 22300.977807
## iter 10 value 20038.131321
## final value 20036.531005
## converged
## # weights: 25
## initial value 22931.223809
## iter 10 value 20036.094063
## iter 20 value 20034.996897
## iter 20 value 20034.996815
## iter 20 value 20034.996808
## final value 20034.996808
## converged

```

```

## # weights: 41
## initial value 22308.160363
## iter 10 value 20035.728765
## iter 20 value 20034.337671
## iter 20 value 20034.337498
## iter 20 value 20034.337483
## final value 20034.337483
## converged
## # weights: 9
## initial value 22549.027267
## iter 10 value 20041.686011
## iter 20 value 20031.144157
## iter 20 value 20031.144108
## final value 20031.144108
## converged
## # weights: 25
## initial value 22779.723148
## iter 10 value 20044.295482
## iter 20 value 20031.174242
## final value 20031.036780
## converged
## # weights: 41
## initial value 21126.659497
## iter 10 value 20039.015514
## iter 20 value 20031.113368
## final value 20031.029892
## converged
## # weights: 9
## initial value 22441.666470
## final value 20028.005200
## converged
## # weights: 25
## initial value 23023.202346
## final value 20028.005200
## converged
## # weights: 41
## initial value 22139.392450
## final value 20028.005200
## converged
## # weights: 9
## initial value 23435.860930
## iter 10 value 20033.764856
## final value 20033.514910
## converged
## # weights: 25
## initial value 22173.649818
## iter 10 value 20033.178799
## final value 20031.980736
## converged
## # weights: 41
## initial value 21639.995283
## iter 10 value 20037.353976
## iter 20 value 20031.321507
## iter 20 value 20031.321347

```



```

## iter 20 value 20031.321341
## final value 20031.321341
## converged
## # weights: 9
## initial value 23301.798314
## iter 10 value 20037.783508
## iter 20 value 20028.117936
## iter 20 value 20028.117891
## final value 20028.117891
## converged
## # weights: 25
## initial value 22234.904858
## iter 10 value 20042.291491
## iter 20 value 20028.169910
## final value 20028.018105
## converged
## # weights: 41
## initial value 22203.875183
## iter 10 value 20042.813456
## iter 20 value 20028.175928
## final value 20028.015025
## converged
## # weights: 9
## initial value 21620.094058
## final value 20016.930100
## converged
## # weights: 25
## initial value 21806.255507
## final value 20016.930100
## converged
## # weights: 41
## initial value 22085.742847
## final value 20016.930100
## converged
## # weights: 9
## initial value 21764.431750
## iter 10 value 20022.708207
## final value 20022.439492
## converged
## # weights: 25
## initial value 23535.560108
## iter 10 value 20023.747687
## iter 20 value 20020.905540
## iter 20 value 20020.905482
## iter 20 value 20020.905459
## final value 20020.905459
## converged
## # weights: 41
## initial value 21788.912152
## iter 10 value 20028.829350
## iter 20 value 20020.249292
## final value 20020.246092
## converged
## # weights: 9

```

```

## initial value 22625.524188
## iter 10 value 20026.394121
## iter 20 value 20017.039213
## iter 20 value 20017.039169
## final value 20017.039169
## converged
## # weights: 25
## initial value 22210.197697
## iter 10 value 20030.121189
## iter 20 value 20017.082183
## final value 20016.942694
## converged
## # weights: 41
## initial value 22497.106995
## iter 10 value 20036.311900
## iter 20 value 20017.153557
## final value 20016.940323
## converged
## # weights: 9
## initial value 22726.570067
## final value 20024.481700
## converged
## # weights: 25
## initial value 21372.913860
## final value 20024.481700
## converged
## # weights: 41
## initial value 22591.554957
## final value 20024.481700
## converged
## # weights: 9
## initial value 22594.090402
## iter 10 value 20030.619308
## final value 20029.991286
## converged
## # weights: 25
## initial value 22703.254266
## iter 10 value 20044.929391
## iter 20 value 20028.474805
## final value 20028.457258
## converged
## # weights: 41
## initial value 21660.903940
## iter 10 value 20040.152164
## iter 20 value 20027.799175
## final value 20027.797742
## converged
## # weights: 9
## initial value 22079.834631
## iter 10 value 20033.767011
## iter 20 value 20024.588752
## iter 20 value 20024.588710
## final value 20024.588710
## converged

```

```

## # weights: 25
## initial value 22730.206177
## iter 10 value 20039.100200
## iter 20 value 20024.650240
## final value 20024.494977
## converged
## # weights: 41
## initial value 22847.516148
## iter 10 value 20042.421152
## iter 20 value 20024.688528
## final value 20024.492382
## converged
## # weights: 9
## initial value 22996.119711
## final value 20057.313700
## converged
## # weights: 25
## initial value 23380.565938
## final value 20057.313700
## converged
## # weights: 41
## initial value 23103.980193
## final value 20057.313700
## converged
## # weights: 9
## initial value 22465.080574
## iter 10 value 20064.312687
## final value 20062.824844
## converged
## # weights: 25
## initial value 23571.230140
## iter 10 value 20062.738117
## iter 20 value 20061.290331
## iter 20 value 20061.290279
## iter 20 value 20061.290268
## final value 20061.290268
## converged
## # weights: 41
## initial value 23352.654438
## iter 10 value 20065.511714
## iter 20 value 20060.631747
## final value 20060.630721
## converged
## # weights: 9
## initial value 23100.144230
## iter 10 value 20067.377852
## iter 20 value 20057.429732
## iter 20 value 20057.429685
## final value 20057.429685
## converged
## # weights: 25
## initial value 21566.362188
## iter 10 value 20066.965981
## iter 20 value 20057.424983

```

```

## final value 20057.325594
## converged
## # weights: 41
## initial value 22763.200626
## iter 10 value 20075.699421
## iter 20 value 20057.525673
## final value 20057.324058
## converged
## # weights: 9
## initial value 23111.808974
## final value 20059.710500
## converged
## # weights: 25
## initial value 21622.319058
## final value 20059.710500
## converged
## # weights: 41
## initial value 21888.566501
## final value 20059.710500
## converged
## # weights: 9
## initial value 22738.184434
## iter 10 value 20065.850103
## final value 20065.221787
## converged
## # weights: 25
## initial value 22769.156876
## iter 10 value 20066.061034
## final value 20063.687206
## converged
## # weights: 41
## initial value 23527.255836
## iter 10 value 20064.024020
## final value 20063.027672
## converged
## # weights: 9
## initial value 23301.116481
## iter 10 value 20068.976148
## iter 20 value 20059.817326
## iter 20 value 20059.817283
## final value 20059.817283
## converged
## # weights: 25
## initial value 22897.557702
## iter 10 value 20074.677070
## iter 20 value 20059.883053
## final value 20059.727237
## converged
## # weights: 41
## initial value 22045.258270
## iter 10 value 20074.516717
## iter 20 value 20059.881204
## final value 20059.721717
## converged

```

```

## # weights: 9
## initial value 22144.622066
## final value 19959.334000
## converged
## # weights: 25
## initial value 22256.080442
## final value 19959.334000
## converged
## # weights: 41
## initial value 22486.169636
## final value 19959.334000
## converged
## # weights: 9
## initial value 22656.998550
## iter 10 value 19966.023161
## final value 19964.842173
## converged
## # weights: 25
## initial value 22914.756618
## iter 10 value 19973.178612
## iter 20 value 19963.356413
## final value 19963.308539
## converged
## # weights: 41
## initial value 22372.088864
## iter 10 value 19975.383632
## iter 20 value 19962.652652
## final value 19962.649377
## converged
## # weights: 9
## initial value 23265.293971
## iter 10 value 19969.941594
## iter 20 value 19959.456297
## iter 20 value 19959.456248
## final value 19959.456248
## converged
## # weights: 25
## initial value 23220.121266
## iter 10 value 19973.459434
## iter 20 value 19959.496855
## final value 19959.349973
## converged
## # weights: 41
## initial value 21440.147802
## iter 10 value 19971.071127
## iter 20 value 19959.469320
## final value 19959.343064
## converged
## # weights: 9
## initial value 21766.463326
## final value 20017.742500
## converged
## # weights: 25
## initial value 23584.124705

```

```

## final value 20017.742500
## converged
## # weights: 41
## initial value 22477.183973
## final value 20017.742500
## converged
## # weights: 9
## initial value 22287.531521
## iter 10 value 20023.491306
## final value 20023.251829
## converged
## # weights: 25
## initial value 22720.315088
## iter 10 value 20022.397674
## final value 20021.717798
## converged
## # weights: 41
## initial value 21958.922227
## iter 10 value 20022.068202
## final value 20021.058413
## converged
## # weights: 9
## initial value 23777.602489
## iter 10 value 20026.493445
## iter 20 value 20017.843392
## iter 20 value 20017.843351
## final value 20017.843351
## converged
## # weights: 25
## initial value 23188.924892
## iter 10 value 20032.882107
## iter 20 value 20017.917048
## final value 20017.756714
## converged
## # weights: 41
## initial value 22454.006004
## iter 10 value 20035.095656
## iter 20 value 20017.942568
## final value 20017.751632
## converged
## # weights: 9
## initial value 22755.544197
## final value 20044.160500
## converged
## # weights: 25
## initial value 21390.868252
## final value 20044.160500
## converged
## # weights: 41
## initial value 22547.055280
## final value 20044.160500
## converged
## # weights: 9
## initial value 21529.265477

```

```

## iter 10 value 20049.910078
## final value 20049.670843
## converged
## # weights: 25
## initial value 22008.168871
## iter 10 value 20048.686593
## final value 20048.136480
## converged
## # weights: 41
## initial value 22580.976873
## iter 10 value 20048.197099
## final value 20047.476992
## converged
## # weights: 9
## initial value 22372.789734
## iter 10 value 20054.057172
## iter 20 value 20044.274601
## iter 20 value 20044.274555
## final value 20044.274555
## converged
## # weights: 25
## initial value 22426.504664
## iter 10 value 20059.187828
## iter 20 value 20044.333753
## final value 20044.174976
## converged
## # weights: 41
## initial value 23802.937784
## iter 10 value 20059.007976
## iter 20 value 20044.331680
## final value 20044.172080
## converged
## # weights: 9
## initial value 22795.003732
## final value 20027.529200
## converged
## # weights: 25
## initial value 23220.650082
## final value 20027.529200
## converged
## # weights: 41
## initial value 21977.961509
## final value 20027.529200
## converged
## # weights: 9
## initial value 23324.704423
## iter 10 value 20034.604904
## final value 20033.038894
## converged
## # weights: 25
## initial value 22397.841196
## iter 10 value 20032.400387
## final value 20031.504749
## converged

```

```

## # weights: 41
## initial value 22824.177454
## iter 10 value 20031.624011
## final value 20030.845279
## converged
## # weights: 9
## initial value 21976.149389
## iter 10 value 20037.236822
## iter 20 value 20027.641121
## iter 20 value 20027.641077
## final value 20027.641077
## converged
## # weights: 25
## initial value 22817.683333
## iter 10 value 20044.143942
## iter 20 value 20027.720755
## final value 20027.544237
## converged
## # weights: 41
## initial value 21199.371565
## iter 10 value 20035.762185
## iter 20 value 20027.624120
## final value 20027.538492
## converged
## # weights: 9
## initial value 22887.646717
## final value 20019.610100
## converged
## # weights: 25
## initial value 23388.697785
## final value 20019.610100
## converged
## # weights: 41
## initial value 23902.350180
## final value 20019.610100
## converged
## # weights: 9
## initial value 22148.170035
## iter 10 value 20026.679584
## final value 20025.119558
## converged
## # weights: 25
## initial value 22712.449039
## iter 10 value 20024.923126
## final value 20023.585497
## converged
## # weights: 41
## initial value 22374.930902
## iter 10 value 20039.980004
## iter 20 value 20022.927248
## final value 20022.926072
## converged
## # weights: 9
## initial value 23818.647122

```



```

## iter 10 value 20028.476314
## iter 20 value 20019.712320
## iter 20 value 20019.712280
## final value 20019.712280
## converged
## # weights: 25
## initial value 21833.674313
## iter 10 value 20031.257013
## iter 20 value 20019.744380
## final value 20019.624421
## converged
## # weights: 41
## initial value 22431.219634
## iter 10 value 20037.015577
## iter 20 value 20019.810771
## final value 20019.619961
## converged
## # weights: 9
## initial value 21976.700861
## final value 20020.529200
## converged
## # weights: 25
## initial value 22691.055392
## final value 20020.529200
## converged
## # weights: 41
## initial value 22651.559347
## final value 20020.529200
## converged
## # weights: 9
## initial value 22762.820370
## iter 10 value 20027.839044
## final value 20026.038688
## converged
## # weights: 25
## initial value 23342.146313
## iter 10 value 20025.378945
## final value 20024.504614
## converged
## # weights: 41
## initial value 23995.024138
## iter 10 value 20030.375138
## iter 20 value 20023.847336
## final value 20023.845264
## converged
## # weights: 9
## initial value 22130.482261
## iter 10 value 20029.898501
## iter 20 value 20020.637221
## iter 20 value 20020.637177
## final value 20020.637177
## converged
## # weights: 25
## initial value 23889.060383

```

```

## iter 10 value 20031.276464
## iter 20 value 20020.653108
## final value 20020.547379
## converged
## # weights: 41
## initial value 21896.138268
## iter 10 value 20036.795334
## iter 20 value 20020.716736
## final value 20020.539324
## converged
## # weights: 9
## initial value 21715.750506
## final value 20028.595700
## converged
## # weights: 25
## initial value 23285.171529
## final value 20028.595700
## converged
## # weights: 41
## initial value 22697.185468
## final value 20028.595700
## converged
## # weights: 9
## initial value 23506.270745
## iter 10 value 20034.519474
## final value 20034.105385
## converged
## # weights: 25
## initial value 21307.997869
## iter 10 value 20033.498993
## final value 20032.571339
## converged
## # weights: 41
## initial value 22822.296364
## iter 10 value 20047.138710
## iter 20 value 20031.912464
## final value 20031.911838
## converged
## # weights: 9
## initial value 22116.740462
## iter 10 value 20037.737834
## iter 20 value 20028.701102
## iter 20 value 20028.701059
## final value 20028.701059
## converged
## # weights: 25
## initial value 23740.279679
## iter 10 value 20039.057735
## iter 20 value 20028.716319
## final value 20028.609890
## converged
## # weights: 41
## initial value 24009.926406
## iter 10 value 20043.725133

```

```

## iter 20 value 20028.770130
## final value 20028.608531
## converged
## # weights: 9
## initial value 23415.640829
## final value 20027.409700
## converged
## # weights: 25
## initial value 22430.715073
## final value 20027.409700
## converged
## # weights: 41
## initial value 22967.669177
## final value 20027.409700
## converged
## # weights: 9
## initial value 22130.592667
## iter 10 value 20035.022208
## final value 20032.919387
## converged
## # weights: 25
## initial value 22606.087212
## iter 10 value 20031.619518
## final value 20031.385215
## converged
## # weights: 41
## initial value 22690.645828
## iter 10 value 20032.191092
## final value 20030.725889
## converged
## # weights: 9
## initial value 23425.720639
## iter 10 value 20036.819750
## iter 20 value 20027.518190
## iter 20 value 20027.518147
## final value 20027.518147
## converged
## # weights: 25
## initial value 22730.489799
## iter 10 value 20043.783126
## iter 20 value 20027.598473
## final value 20027.422192
## converged
## # weights: 41
## initial value 23017.642090
## iter 10 value 20048.433292
## iter 20 value 20027.652086
## final value 20027.422084
## converged
## # weights: 9
## initial value 21547.092278
## final value 20003.107600
## converged
## # weights: 25

```

```

## initial value 22983.266755
## final value 20003.107600
## converged
## # weights: 41
## initial value 23326.964992
## final value 20003.107600
## converged
## # weights: 9
## initial value 22902.741368
## iter 10 value 20011.653659
## iter 20 value 20008.616649
## iter 20 value 20008.616627
## final value 20008.616627
## converged
## # weights: 25
## initial value 21482.579633
## iter 10 value 20007.874707
## final value 20007.082709
## converged
## # weights: 41
## initial value 22282.169887
## iter 10 value 20020.484989
## final value 20006.423432
## converged
## # weights: 9
## initial value 22477.891351
## iter 10 value 20013.855756
## iter 20 value 20003.231518
## iter 20 value 20003.231468
## final value 20003.231468
## converged
## # weights: 25
## initial value 22224.838442
## iter 10 value 20016.499798
## iter 20 value 20003.262002
## final value 20003.120435
## converged
## # weights: 41
## initial value 22854.302465
## iter 10 value 20022.640519
## iter 20 value 20003.332799
## final value 20003.120843
## converged
## # weights: 9
## initial value 21504.829028
## final value 19991.090000
## converged
## # weights: 25
## initial value 22086.003328
## final value 19991.090000
## converged
## # weights: 41
## initial value 22233.886492
## final value 19991.090000

```

```

## converged
## # weights: 9
## initial value 21966.302047
## iter 10 value 19996.802616
## final value 19996.598792
## converged
## # weights: 25
## initial value 22582.153121
## iter 10 value 19995.773780
## final value 19995.065008
## converged
## # weights: 41
## initial value 23589.294977
## iter 10 value 19995.208875
## final value 19994.405712
## converged
## # weights: 9
## initial value 22087.526627
## iter 10 value 19999.914179
## iter 20 value 19991.191736
## iter 20 value 19991.191695
## final value 19991.191695
## converged
## # weights: 25
## initial value 21573.457266
## iter 10 value 20000.918934
## iter 20 value 19991.203320
## final value 19991.101774
## converged
## # weights: 41
## initial value 23551.288034
## iter 10 value 20006.415864
## iter 20 value 19991.266695
## final value 19991.101016
## converged
## # weights: 9
## initial value 21922.563616
## final value 20031.360500
## converged
## # weights: 25
## initial value 23526.050517
## final value 20031.360500
## converged
## # weights: 41
## initial value 22938.091089
## final value 20031.360500
## converged
## # weights: 9
## initial value 23782.128137
## iter 10 value 20037.446874
## final value 20036.870297
## converged
## # weights: 25
## initial value 23176.947719

```

```

## iter 10 value 20036.734935
## final value 20035.336094
## converged
## # weights: 41
## initial value 21292.117167
## iter 10 value 20041.580314
## final value 20034.676665
## converged
## # weights: 9
## initial value 22399.474862
## iter 10 value 20041.983555
## iter 20 value 20031.482975
## iter 20 value 20031.482927
## final value 20031.482927
## converged
## # weights: 25
## initial value 22503.254802
## iter 10 value 20047.070045
## iter 20 value 20031.541619
## final value 20031.372774
## converged
## # weights: 41
## initial value 21998.109660
## iter 10 value 20050.476409
## iter 20 value 20031.580891
## final value 20031.369595
## converged
## # weights: 9
## initial value 22149.363171
## final value 19946.097700
## converged
## # weights: 25
## initial value 21854.051479
## final value 19946.097700
## converged
## # weights: 41
## initial value 22260.236218
## final value 19946.097700
## converged
## # weights: 9
## initial value 22155.426439
## iter 10 value 19953.136435
## final value 19951.605690
## converged
## # weights: 25
## initial value 23969.843030
## iter 10 value 19952.384958
## iter 20 value 19950.072581
## final value 19950.072145
## converged
## # weights: 41
## initial value 21470.279802
## iter 10 value 19960.613893
## iter 20 value 19949.413204

```

```

## iter 20 value 19949.413036
## iter 20 value 19949.413026
## final value 19949.413026
## converged
## # weights: 9
## initial value 22280.876554
## iter 10 value 19957.646946
## iter 20 value 19946.230854
## iter 20 value 19946.230800
## final value 19946.230800
## converged
## # weights: 25
## initial value 24136.312021
## iter 10 value 19955.390995
## iter 20 value 19946.204844
## final value 19946.116919
## converged
## # weights: 41
## initial value 22952.906882
## iter 10 value 19962.447547
## iter 20 value 19946.286201
## final value 19946.108561
## converged
## # weights: 9
## initial value 22519.161463
## final value 19957.491700
## converged
## # weights: 25
## initial value 22502.709782
## final value 19957.491700
## converged
## # weights: 41
## initial value 24121.931279
## final value 19957.491700
## converged
## # weights: 9
## initial value 21840.933996
## iter 10 value 19963.432757
## final value 19962.999818
## converged
## # weights: 25
## initial value 21442.182090
## iter 10 value 19962.782733
## final value 19961.466230
## converged
## # weights: 41
## initial value 22567.425871
## iter 10 value 19961.740730
## final value 19960.807042
## converged
## # weights: 9
## initial value 23174.280563
## iter 10 value 19967.355155
## iter 20 value 19957.605418

```

```

## iter 20 value 19957.605372
## final value 19957.605372
## converged
## # weights: 25
## initial value 23699.372721
## iter 10 value 19971.642470
## iter 20 value 19957.654847
## final value 19957.507147
## converged
## # weights: 41
## initial value 22217.365484
## iter 10 value 19977.555838
## iter 20 value 19957.723024
## final value 19957.500866
## converged
## # weights: 9
## initial value 22389.105772
## final value 19927.214500
## converged
## # weights: 25
## initial value 22022.431177
## final value 19927.214500
## converged
## # weights: 41
## initial value 23327.640019
## final value 19927.214500
## converged
## # weights: 9
## initial value 22567.803653
## iter 10 value 19934.289077
## final value 19932.722092
## converged
## # weights: 25
## initial value 24042.736830
## iter 10 value 19931.978201
## final value 19931.188672
## converged
## # weights: 41
## initial value 21580.857188
## iter 10 value 19944.811040
## iter 20 value 19930.533247
## final value 19930.529511
## converged
## # weights: 9
## initial value 23183.586492
## iter 10 value 19938.167993
## iter 20 value 19927.340785
## iter 20 value 19927.340735
## final value 19927.340735
## converged
## # weights: 25
## initial value 22758.784527
## iter 10 value 19942.678538
## iter 20 value 19927.392788

```



```

## final value 19927.232703
## converged
## # weights: 41
## initial value 22948.320611
## iter 10 value 19949.448447
## iter 20 value 19927.470840
## final value 19927.228561
## converged
## # weights: 9
## initial value 23203.861852
## final value 20052.866000
## converged
## # weights: 25
## initial value 23044.467592
## final value 20052.866000
## converged
## # weights: 41
## initial value 23198.245252
## final value 20052.866000
## converged
## # weights: 9
## initial value 23156.780934
## iter 10 value 20059.601094
## final value 20058.376859
## converged
## # weights: 25
## initial value 23717.071173
## iter 10 value 20058.059329
## final value 20056.842308
## converged
## # weights: 41
## initial value 23182.978919
## iter 10 value 20064.834457
## iter 20 value 20056.183955
## final value 20056.182752
## converged
## # weights: 9
## initial value 22807.736811
## iter 10 value 20064.900241
## iter 20 value 20053.004745
## iter 20 value 20053.004690
## final value 20053.004690
## converged
## # weights: 25
## initial value 23719.286583
## iter 10 value 20064.959821
## iter 20 value 20053.005432
## final value 20052.880170
## converged
## # weights: 41
## initial value 22499.742968
## iter 10 value 20075.447719
## iter 20 value 20053.126349
## final value 20052.877310

```

```

## converged
## # weights: 9
## initial value 22745.141913
## final value 20011.186000
## converged
## # weights: 25
## initial value 21809.067050
## final value 20011.186000
## converged
## # weights: 41
## initial value 22915.136969
## final value 20011.186000
## converged
## # weights: 9
## initial value 22520.266967
## iter 10 value 20016.944067
## final value 20016.695227
## converged
## # weights: 25
## initial value 21428.155193
## iter 10 value 20017.181947
## final value 20015.161325
## converged
## # weights: 41
## initial value 23691.136128
## iter 10 value 20019.295891
## iter 20 value 20014.502369
## final value 20014.501855
## converged
## # weights: 9
## initial value 22498.901369
## iter 10 value 20020.936906
## iter 20 value 20011.298420
## iter 20 value 20011.298375
## final value 20011.298375
## converged
## # weights: 25
## initial value 22532.375954
## iter 10 value 20027.653377
## iter 20 value 20011.375856
## final value 20011.206294
## converged
## # weights: 41
## initial value 22257.701893
## iter 10 value 20030.773784
## iter 20 value 20011.411832
## final value 20011.197600
## converged
## # weights: 9
## initial value 22881.416248
## final value 20058.885200
## converged
## # weights: 25
## initial value 22738.006599

```

```

## final value 20058.885200
## converged
## # weights: 41
## initial value 23173.058777
## final value 20058.885200
## converged
## # weights: 9
## initial value 22156.654622
## iter 10 value 20065.360745
## final value 20064.396307
## converged
## # weights: 25
## initial value 22259.531720
## iter 10 value 20069.363274
## iter 20 value 20062.861801
## iter 20 value 20062.861698
## iter 20 value 20062.861685
## final value 20062.861685
## converged
## # weights: 41
## initial value 22075.534960
## iter 10 value 20063.160860
## final value 20062.202033
## converged
## # weights: 9
## initial value 22983.102780
## iter 10 value 20069.135534
## iter 20 value 20059.003378
## iter 20 value 20059.003331
## final value 20059.003331
## converged
## # weights: 25
## initial value 23315.998732
## iter 10 value 20073.931226
## iter 20 value 20059.058669
## final value 20058.900495
## converged
## # weights: 41
## initial value 23489.953586
## iter 10 value 20076.267457
## iter 20 value 20059.085604
## final value 20058.895987
## converged
## # weights: 9
## initial value 22022.578764
## final value 19963.569700
## converged
## # weights: 25
## initial value 22718.759584
## final value 19963.569700
## converged
## # weights: 41
## initial value 22361.077117
## final value 19963.569700

```

```

## converged
## # weights: 9
## initial value 22925.198450
## iter 10 value 19971.244644
## final value 19969.077726
## converged
## # weights: 25
## initial value 22405.974260
## iter 10 value 19970.357087
## iter 20 value 19967.544707
## final value 19967.544086
## converged
## # weights: 41
## initial value 23751.934713
## iter 10 value 19968.946140
## final value 19966.884861
## converged
## # weights: 9
## initial value 22293.742935
## iter 10 value 19973.154881
## iter 20 value 19963.680210
## iter 20 value 19963.680165
## final value 19963.680165
## converged
## # weights: 25
## initial value 22301.318370
## iter 10 value 19979.293824
## iter 20 value 19963.750987
## final value 19963.584928
## converged
## # weights: 41
## initial value 23758.155404
## iter 10 value 19977.241405
## iter 20 value 19963.727324
## final value 19963.583275
## converged
## # weights: 9
## initial value 22845.266085
## final value 19992.610100
## converged
## # weights: 25
## initial value 22246.412375
## final value 19992.610100
## converged
## # weights: 41
## initial value 22857.415347
## final value 19992.610100
## converged
## # weights: 9
## initial value 22789.159942
## iter 10 value 19999.833886
## final value 19998.118917
## converged
## # weights: 25

```

```

## initial value 22639.733786
## iter 10 value 19997.390014
## final value 19996.585164
## converged
## # weights: 41
## initial value 22430.223172
## iter 10 value 19996.909935
## final value 19995.925799
## converged
## # weights: 9
## initial value 22195.681303
## iter 10 value 20003.395151
## iter 20 value 19992.734443
## iter 20 value 19992.734393
## final value 19992.734393
## converged
## # weights: 25
## initial value 21307.859294
## iter 10 value 20001.095930
## iter 20 value 19992.707935
## final value 19992.621123
## converged
## # weights: 41
## initial value 22788.362257
## iter 10 value 20014.019204
## iter 20 value 19992.856930
## final value 19992.622784
## converged
## # weights: 9
## initial value 21717.511759
## final value 20005.865200
## converged
## # weights: 25
## initial value 22974.710390
## final value 20005.865200
## converged
## # weights: 41
## initial value 23381.290677
## final value 20005.865200
## converged
## # weights: 9
## initial value 23122.883308
## iter 10 value 20012.792792
## final value 20011.374318
## converged
## # weights: 25
## initial value 22460.540540
## iter 10 value 20010.390198
## final value 20009.840405
## converged
## # weights: 41
## initial value 23522.221679
## iter 10 value 20010.294800
## iter 20 value 20009.181102

```

```

## iter 20 value 20009.180998
## iter 20 value 20009.180991
## final value 20009.180991
## converged
## # weights: 9
## initial value 22738.127255
## iter 10 value 20015.596898
## iter 20 value 20005.977399
## iter 20 value 20005.977354
## final value 20005.977354
## converged
## # weights: 25
## initial value 23076.200825
## iter 10 value 20021.355726
## iter 20 value 20006.043794
## final value 20005.881897
## converged
## # weights: 41
## initial value 22240.309299
## iter 10 value 20023.056504
## iter 20 value 20006.063402
## final value 20005.874697
## converged
## # weights: 9
## initial value 23696.878949
## final value 20022.082000
## converged
## # weights: 25
## initial value 21556.545820
## final value 20022.082000
## converged
## # weights: 41
## initial value 21909.643948
## final value 20022.082000
## converged
## # weights: 9
## initial value 22465.110608
## iter 10 value 20027.987809
## final value 20027.591529
## converged
## # weights: 25
## initial value 22820.353644
## iter 10 value 20027.028247
## final value 20026.057416
## converged
## # weights: 41
## initial value 21898.528827
## iter 10 value 20026.140197
## final value 20025.398090
## converged
## # weights: 9
## initial value 23732.772011
## iter 10 value 20030.833721
## iter 20 value 20022.182900

```

```

## iter 20 value 20022.182860
## final value 20022.182860
## converged
## # weights: 25
## initial value 23822.927635
## iter 10 value 20033.670352
## iter 20 value 20022.215605
## final value 20022.098299
## converged
## # weights: 41
## initial value 22794.557422
## iter 10 value 20042.679487
## iter 20 value 20022.319473
## final value 20022.091580
## converged
## # weights: 9
## initial value 23394.101835
## final value 20044.851700
## converged
## # weights: 25
## initial value 24086.087692
## final value 20044.851700
## converged
## # weights: 41
## initial value 22113.696308
## final value 20044.851700
## converged
## # weights: 9
## initial value 23150.003967
## iter 10 value 20053.137971
## final value 20050.362025
## converged
## # weights: 25
## initial value 22572.077990
## iter 10 value 20051.490209
## iter 20 value 20048.827750
## iter 20 value 20048.827646
## iter 20 value 20048.827639
## final value 20048.827639
## converged
## # weights: 41
## initial value 24024.334156
## iter 10 value 20060.287779
## iter 20 value 20048.168822
## final value 20048.168183
## converged
## # weights: 9
## initial value 22030.832243
## iter 10 value 20054.239878
## iter 20 value 20044.959938
## iter 20 value 20044.959895
## final value 20044.959895
## converged
## # weights: 25

```

```

## initial value 22927.681218
## iter 10 value 20059.567588
## iter 20 value 20045.021363
## final value 20044.863436
## converged
## # weights: 41
## initial value 23119.154956
## iter 10 value 20063.896271
## iter 20 value 20045.071269
## final value 20044.863709
## converged
## # weights: 9
## initial value 23093.997039
## final value 19981.990000
## converged
## # weights: 25
## initial value 22242.110377
## final value 19981.990000
## converged
## # weights: 41
## initial value 22899.207662
## final value 19981.990000
## converged
## # weights: 9
## initial value 21739.005967
## iter 10 value 19988.026847
## final value 19987.498614
## converged
## # weights: 25
## initial value 23615.051025
## iter 10 value 19986.871432
## final value 19985.964872
## converged
## # weights: 41
## initial value 23971.887971
## iter 10 value 19986.015419
## iter 20 value 19985.305641
## iter 20 value 19985.305561
## iter 20 value 19985.305544
## final value 19985.305544
## converged
## # weights: 9
## initial value 23624.012393
## iter 10 value 19991.745741
## iter 20 value 19982.102476
## iter 20 value 19982.102431
## final value 19982.102431
## converged
## # weights: 25
## initial value 23363.748588
## iter 10 value 19995.429211
## iter 20 value 19982.144944
## final value 19982.003287
## converged

```



```

## # weights: 41
## initial value 24190.744213
## iter 10 value 19992.768377
## iter 20 value 19982.114266
## final value 19982.003785
## converged
## # weights: 9
## initial value 23989.654109
## final value 19943.705200
## converged
## # weights: 25
## initial value 21946.085563
## final value 19943.705200
## converged
## # weights: 41
## initial value 22984.734258
## final value 19943.705200
## converged
## # weights: 9
## initial value 22654.184151
## iter 10 value 19971.994078
## iter 20 value 19949.284699
## final value 19949.213101
## converged
## # weights: 25
## initial value 22010.369693
## iter 10 value 19948.842301
## final value 19947.679579
## converged
## # weights: 41
## initial value 23062.719693
## iter 10 value 19954.787131
## iter 20 value 19947.021340
## final value 19947.020421
## converged
## # weights: 9
## initial value 22781.074367
## iter 10 value 19955.453576
## iter 20 value 19943.840650
## iter 20 value 19943.840595
## final value 19943.840595
## converged
## # weights: 25
## initial value 24328.194451
## iter 10 value 19950.776618
## iter 20 value 19943.786728
## final value 19943.729263
## converged
## # weights: 41
## initial value 22083.306084
## iter 10 value 19960.195809
## iter 20 value 19943.895324
## final value 19943.716147
## converged

```

```

## # weights: 9
## initial value 22273.684754
## final value 20013.749200
## converged
## # weights: 25
## initial value 22666.694586
## final value 20013.749200
## converged
## # weights: 41
## initial value 22389.428231
## final value 20013.749200
## converged
## # weights: 9
## initial value 21638.848563
## iter 10 value 20020.280078
## final value 20019.258487
## converged
## # weights: 25
## initial value 22085.564259
## iter 10 value 20023.604522
## iter 20 value 20017.724757
## iter 20 value 20017.724584
## iter 20 value 20017.724530
## final value 20017.724530
## converged
## # weights: 41
## initial value 23380.979180
## iter 10 value 20018.599438
## iter 20 value 20017.065262
## iter 20 value 20017.065104
## iter 20 value 20017.065101
## final value 20017.065101
## converged
## # weights: 9
## initial value 21771.707215
## iter 10 value 20021.657025
## iter 20 value 20013.840371
## iter 20 value 20013.840335
## final value 20013.840335
## converged
## # weights: 25
## initial value 23672.557894
## iter 10 value 20026.259328
## iter 20 value 20013.893432
## final value 20013.765066
## converged
## # weights: 41
## initial value 23932.018955
## iter 10 value 20028.703408
## iter 20 value 20013.921610
## final value 20013.763658
## converged
## # weights: 9
## initial value 22573.855080

```

```

## final value 20048.881700
## converged
## # weights: 25
## initial value 22988.436637
## final value 20048.881700
## converged
## # weights: 41
## initial value 21803.347584
## final value 20048.881700
## converged
## # weights: 9
## initial value 23849.705172
## iter 10 value 20055.248081
## final value 20054.392275
## converged
## # weights: 25
## initial value 23242.710145
## iter 10 value 20053.311924
## iter 20 value 20052.859553
## final value 20052.857852
## converged
## # weights: 41
## initial value 22224.312376
## iter 10 value 20054.064294
## iter 20 value 20052.198478
## iter 20 value 20052.198345
## iter 20 value 20052.198332
## final value 20052.198332
## converged
## # weights: 9
## initial value 21862.834698
## iter 10 value 20057.200519
## iter 20 value 20048.977609
## iter 20 value 20048.977571
## final value 20048.977571
## converged
## # weights: 25
## initial value 22389.946397
## iter 10 value 20063.487799
## iter 20 value 20049.050097
## final value 20048.898340
## converged
## # weights: 41
## initial value 21216.492312
## iter 10 value 20057.883211
## iter 20 value 20048.985480
## final value 20048.891063
## converged
## # weights: 9
## initial value 22354.682986
## final value 20039.160100
## converged
## # weights: 25
## initial value 23647.598347

```

```

## final value 20039.160100
## converged
## # weights: 41
## initial value 23845.454027
## final value 20039.160100
## converged
## # weights: 9
## initial value 22037.586741
## iter 10 value 20045.506981
## final value 20044.670215
## converged
## # weights: 25
## initial value 22530.327422
## iter 10 value 20044.071118
## final value 20043.135958
## converged
## # weights: 41
## initial value 23661.484358
## iter 10 value 20054.784337
## iter 20 value 20042.479306
## final value 20042.476636
## converged
## # weights: 9
## initial value 23102.075626
## iter 10 value 20048.978611
## iter 20 value 20039.273300
## iter 20 value 20039.273254
## final value 20039.273254
## converged
## # weights: 25
## initial value 22433.584675
## iter 10 value 20055.306437
## iter 20 value 20039.346255
## final value 20039.173395
## converged
## # weights: 41
## initial value 22868.394373
## iter 10 value 20061.468726
## iter 20 value 20039.417301
## final value 20039.170381
## converged
## # weights: 9
## initial value 22175.051998
## final value 19995.272500
## converged
## # weights: 25
## initial value 22002.599986
## final value 19995.272500
## converged
## # weights: 41
## initial value 23880.147075
## final value 19995.272500
## converged
## # weights: 9

```

```

## initial value 22016.943146
## iter 10 value 20001.319192
## final value 20000.781389
## converged
## # weights: 25
## initial value 22018.851920
## iter 10 value 20000.157649
## final value 19999.247502
## converged
## # weights: 41
## initial value 23285.911623
## iter 10 value 20013.956509
## iter 20 value 19998.588750
## final value 19998.588265
## converged
## # weights: 9
## initial value 22145.869500
## iter 10 value 20005.047368
## iter 20 value 19995.385197
## iter 20 value 19995.385151
## final value 19995.385151
## converged
## # weights: 25
## initial value 22546.876921
## iter 10 value 20009.744796
## iter 20 value 19995.439354
## final value 19995.290837
## converged
## # weights: 41
## initial value 21817.859253
## iter 10 value 20010.699082
## iter 20 value 19995.450356
## final value 19995.282711
## converged
## # weights: 9
## initial value 23504.560201
## final value 19959.537700
## converged
## # weights: 25
## initial value 22494.091032
## final value 19959.537700
## converged
## # weights: 41
## initial value 22435.553560
## final value 19959.537700
## converged
## # weights: 9
## initial value 22286.559601
## iter 10 value 19965.165499
## final value 19965.045907
## converged
## # weights: 25
## initial value 22089.924322
## iter 10 value 19967.147108

```

```

## iter 20 value 19963.512996
## final value 19963.512302
## converged
## # weights: 41
## initial value 24049.189470
## iter 10 value 19976.090977
## iter 20 value 19962.853257
## iter 20 value 19962.853126
## iter 20 value 19962.853115
## final value 19962.853115
## converged
## # weights: 9
## initial value 21825.172404
## iter 10 value 19969.035193
## iter 20 value 19959.647199
## iter 20 value 19959.647155
## final value 19959.647155
## converged
## # weights: 25
## initial value 23055.429815
## iter 10 value 19973.481863
## iter 20 value 19959.698465
## final value 19959.550199
## converged
## # weights: 41
## initial value 22122.783372
## iter 10 value 19976.604630
## iter 20 value 19959.734468
## final value 19959.547892
## converged
## # weights: 9
## initial value 23179.186822
## final value 19990.409200
## converged
## # weights: 25
## initial value 22957.648306
## final value 19990.409200
## converged
## # weights: 41
## initial value 22794.248023
## final value 19990.409200
## converged
## # weights: 9
## initial value 23417.337077
## iter 10 value 19999.642211
## iter 20 value 19995.917916
## iter 20 value 19995.917907
## final value 19995.917907
## converged
## # weights: 25
## initial value 22078.148743
## iter 10 value 19995.238833
## final value 19994.384234
## converged

```

```

## # weights: 41
## initial value 21607.915376
## iter 10 value 20008.460427
## iter 20 value 19993.728590
## final value 19993.724810
## converged
## # weights: 9
## initial value 22448.833393
## iter 10 value 20001.744837
## iter 20 value 19990.539891
## iter 20 value 19990.539839
## final value 19990.539839
## converged
## # weights: 25
## initial value 22002.449402
## iter 10 value 20000.667736
## iter 20 value 19990.527473
## final value 19990.423103
## converged
## # weights: 41
## initial value 22012.534245
## iter 10 value 20008.671239
## iter 20 value 19990.619747
## final value 19990.419426
## converged
## # weights: 9
## initial value 22342.244378
## final value 20036.647600
## converged
## # weights: 25
## initial value 21860.369554
## final value 20036.647600
## converged
## # weights: 41
## initial value 22253.471473
## final value 20036.647600
## converged
## # weights: 9
## initial value 23039.888688
## iter 10 value 20044.038748
## final value 20042.157609
## converged
## # weights: 25
## initial value 21933.751424
## iter 10 value 20042.066702
## final value 20040.623529
## converged
## # weights: 41
## initial value 23916.901943
## iter 10 value 20053.526005
## iter 20 value 20039.970128
## final value 20039.963911
## converged
## # weights: 9

```

```

## initial value 23037.607580
## iter 10 value 20047.432852
## iter 20 value 20036.771945
## iter 20 value 20036.771896
## final value 20036.771896
## converged
## # weights: 25
## initial value 22816.872520
## iter 10 value 20049.997839
## iter 20 value 20036.801518
## final value 20036.662555
## converged
## # weights: 41
## initial value 23280.256940
## iter 10 value 20053.415497
## iter 20 value 20036.840921
## final value 20036.660695
## converged
## # weights: 9
## initial value 22000.248272
## final value 20029.530100
## converged
## # weights: 25
## initial value 22456.788377
## final value 20029.530100
## converged
## # weights: 41
## initial value 22346.666104
## final value 20029.530100
## converged
## # weights: 9
## initial value 23393.580926
## iter 10 value 20035.508924
## final value 20035.039884
## converged
## # weights: 25
## initial value 21253.423494
## iter 10 value 20041.216123
## iter 20 value 20033.511915
## final value 20033.505715
## converged
## # weights: 41
## initial value 23236.150752
## iter 10 value 20044.083165
## iter 20 value 20032.846905
## final value 20032.846310
## converged
## # weights: 9
## initial value 23813.642658
## iter 10 value 20037.010876
## iter 20 value 20029.616347
## iter 20 value 20029.616313
## final value 20029.616313
## converged

```



```

## # weights: 25
## initial value 22142.038164
## iter 10 value 20042.251964
## iter 20 value 20029.676773
## final value 20029.541699
## converged
## # weights: 41
## initial value 21395.976030
## iter 10 value 20039.862436
## iter 20 value 20029.649224
## final value 20029.539256
## converged
## # weights: 9
## initial value 23915.810066
## final value 19993.781200
## converged
## # weights: 25
## initial value 22106.555642
## final value 19993.781200
## converged
## # weights: 41
## initial value 21763.493315
## final value 19993.781200
## converged
## # weights: 9
## initial value 22138.969849
## iter 10 value 20016.601095
## iter 20 value 19999.293583
## iter 20 value 19999.293560
## final value 19999.293560
## converged
## # weights: 25
## initial value 22207.199267
## iter 10 value 19999.014222
## final value 19997.756169
## converged
## # weights: 41
## initial value 22994.593177
## iter 10 value 19997.780851
## final value 19997.096891
## converged
## # weights: 9
## initial value 23493.045235
## iter 10 value 20002.298020
## iter 20 value 19993.879392
## iter 20 value 19993.879353
## final value 19993.879353
## converged
## # weights: 25
## initial value 22390.367939
## iter 10 value 20007.455094
## iter 20 value 19993.938849
## final value 19993.794777
## converged

```

```

## # weights: 41
## initial value 22658.668646
## iter 10 value 20014.345502
## iter 20 value 19994.018290
## final value 19993.791457
## converged
## # weights: 9
## initial value 21931.148494
## final value 20018.011700
## converged
## # weights: 25
## initial value 22241.258890
## final value 20018.011700
## converged
## # weights: 41
## initial value 23412.254387
## final value 20018.011700
## converged
## # weights: 9
## initial value 23851.760266
## iter 10 value 20025.950983
## final value 20023.521091
## converged
## # weights: 25
## initial value 23423.052479
## iter 10 value 20031.258557
## iter 20 value 20021.987056
## iter 20 value 20021.987009
## iter 20 value 20021.987007
## final value 20021.987007
## converged
## # weights: 41
## initial value 22589.383187
## iter 10 value 20035.531107
## iter 20 value 20021.328238
## final value 20021.327722
## converged
## # weights: 9
## initial value 21855.345113
## iter 10 value 20026.759015
## iter 20 value 20018.112550
## iter 20 value 20018.112509
## final value 20018.112509
## converged
## # weights: 25
## initial value 23546.030793
## iter 10 value 20032.950943
## iter 20 value 20018.183938
## final value 20018.025803
## converged
## # weights: 41
## initial value 21877.969414
## iter 10 value 20034.073930
## iter 20 value 20018.196885

```

```

## final value 20018.022332
## converged
## # weights: 9
## initial value 23337.555142
## final value 20034.118000
## converged
## # weights: 25
## initial value 21583.249129
## final value 20034.118000
## converged
## # weights: 41
## initial value 22246.800152
## final value 20034.118000
## converged
## # weights: 9
## initial value 21851.110701
## iter 10 value 20041.630235
## final value 20039.627898
## converged
## # weights: 25
## initial value 24088.235393
## iter 10 value 20038.811561
## final value 20038.093682
## converged
## # weights: 41
## initial value 23647.402587
## iter 10 value 20045.699785
## iter 20 value 20037.436911
## final value 20037.434216
## converged
## # weights: 9
## initial value 23771.117000
## iter 10 value 20042.776205
## iter 20 value 20034.217822
## iter 20 value 20034.217782
## final value 20034.217782
## converged
## # weights: 25
## initial value 22978.373825
## iter 10 value 20049.160581
## iter 20 value 20034.291429
## final value 20034.129406
## converged
## # weights: 41
## initial value 22776.555621
## iter 10 value 20057.175581
## iter 20 value 20034.383836
## final value 20034.129815
## converged
## # weights: 9
## initial value 23129.442309
## final value 19849.133200
## converged
## # weights: 25

```

```

## initial value 23622.042995
## final value 19849.133200
## converged
## # weights: 41
## initial value 22862.917672
## final value 19849.133200
## converged
## # weights: 9
## initial value 23414.219113
## iter 10 value 19855.022567
## final value 19854.639896
## converged
## # weights: 25
## initial value 24138.101224
## iter 10 value 19855.457444
## iter 20 value 19853.107575
## final value 19853.106979
## converged
## # weights: 41
## initial value 22991.996161
## iter 10 value 19864.285004
## iter 20 value 19852.448536
## final value 19852.447835
## converged
## # weights: 9
## initial value 22047.769293
## iter 10 value 19859.739902
## iter 20 value 19849.255487
## iter 20 value 19849.255438
## final value 19849.255438
## converged
## # weights: 25
## initial value 22282.787530
## iter 10 value 19863.521598
## iter 20 value 19849.299087
## final value 19849.146027
## converged
## # weights: 41
## initial value 22568.465712
## iter 10 value 19868.601463
## iter 20 value 19849.357654
## final value 19849.143054
## converged
## # weights: 9
## initial value 21847.362464
## final value 20033.902000
## converged
## # weights: 25
## initial value 21206.017013
## final value 20033.902000
## converged
## # weights: 41
## initial value 23342.083963
## final value 20033.902000

```

```

## converged
## # weights: 9
## initial value 22621.259856
## iter 10 value 20039.661406
## final value 20039.411877
## converged
## # weights: 25
## initial value 23513.224101
## iter 10 value 20039.345363
## iter 20 value 20037.877679
## iter 20 value 20037.877653
## iter 20 value 20037.877643
## final value 20037.877643
## converged
## # weights: 41
## initial value 23348.168104
## iter 10 value 20050.218439
## iter 20 value 20037.218866
## final value 20037.218247
## converged
## # weights: 9
## initial value 23120.684601
## iter 10 value 20044.778307
## iter 20 value 20034.027395
## iter 20 value 20034.027345
## final value 20034.027345
## converged
## # weights: 25
## initial value 22087.271101
## iter 10 value 20049.147753
## iter 20 value 20034.077772
## final value 20033.917191
## converged
## # weights: 41
## initial value 23353.771312
## iter 10 value 20055.660786
## iter 20 value 20034.152862
## final value 20033.915148
## converged
## # weights: 9
## initial value 23305.721302
## final value 19980.723700
## converged
## # weights: 25
## initial value 23722.843649
## final value 19980.723700
## converged
## # weights: 41
## initial value 22371.805022
## final value 19980.723700
## converged
## # weights: 9
## initial value 23457.480981
## iter 10 value 19986.469142

```

```

## final value 19986.232244
## converged
## # weights: 25
## initial value 22026.425643
## iter 10 value 19986.346277
## final value 19984.698497
## converged
## # weights: 41
## initial value 23416.704384
## iter 10 value 19996.679863
## iter 20 value 19984.040044
## final value 19984.039178
## converged
## # weights: 9
## initial value 22656.343210
## iter 10 value 19991.381794
## iter 20 value 19980.846579
## iter 20 value 19980.846530
## final value 19980.846530
## converged
## # weights: 25
## initial value 22111.806175
## iter 10 value 19994.636339
## iter 20 value 19980.884102
## final value 19980.738447
## converged
## # weights: 41
## initial value 22701.484295
## iter 10 value 20003.974939
## iter 20 value 19980.991769
## final value 19980.734391
## converged
## # weights: 9
## initial value 23696.419556
## final value 20027.529200
## converged
## # weights: 25
## initial value 22207.317545
## final value 20027.529200
## converged
## # weights: 41
## initial value 21631.596869
## final value 20027.529200
## converged
## # weights: 9
## initial value 22776.770695
## iter 10 value 20036.763593
## final value 20033.038890
## converged
## # weights: 25
## initial value 21728.051192
## iter 10 value 20032.095990
## final value 20031.504754
## converged

```

```

## # weights: 41
## initial value 22356.209842
## iter 10 value 20046.485812
## iter 20 value 20030.845528
## iter 20 value 20030.845366
## iter 20 value 20030.845352
## final value 20030.845352
## converged
## # weights: 9
## initial value 23999.744519
## iter 10 value 20035.665627
## iter 20 value 20027.623007
## iter 20 value 20027.622969
## final value 20027.622969
## converged
## # weights: 25
## initial value 22083.117479
## iter 10 value 20039.902844
## iter 20 value 20027.671858
## final value 20027.540822
## converged
## # weights: 41
## initial value 21925.567969
## iter 10 value 20044.855284
## iter 20 value 20027.728956
## final value 20027.539930
## converged
## # weights: 9
## initial value 22756.070803
## final value 20039.550500
## converged
## # weights: 25
## initial value 21355.283112
## final value 20039.550500
## converged
## # weights: 41
## initial value 21698.707549
## final value 20039.550500
## converged
## # weights: 9
## initial value 22426.997324
## iter 10 value 20045.458499
## final value 20045.060623
## converged
## # weights: 25
## initial value 23977.470113
## iter 10 value 20044.027305
## final value 20043.526340
## converged
## # weights: 41
## initial value 23102.727135
## iter 10 value 20058.799175
## iter 20 value 20042.868434
## final value 20042.866928

```

```

## converged
## # weights: 9
## initial value 22279.672017
## iter 10 value 20050.269771
## iter 20 value 20039.674085
## iter 20 value 20039.674035
## final value 20039.674035
## converged
## # weights: 25
## initial value 23521.361441
## iter 10 value 20053.903528
## iter 20 value 20039.715979
## final value 20039.577291
## converged
## # weights: 41
## initial value 21967.407696
## iter 10 value 20056.546815
## iter 20 value 20039.746454
## final value 20039.561750
## converged
## # weights: 9
## initial value 22641.514683
## final value 20020.659700
## converged
## # weights: 25
## initial value 23411.872273
## final value 20020.659700
## converged
## # weights: 41
## initial value 21973.144943
## final value 20020.659700
## converged
## # weights: 9
## initial value 22820.095928
## iter 10 value 20043.661019
## iter 20 value 20026.174168
## final value 20026.169245
## converged
## # weights: 25
## initial value 22612.316805
## iter 10 value 20025.591232
## final value 20024.635088
## converged
## # weights: 41
## initial value 21250.252107
## iter 10 value 20033.927573
## iter 20 value 20023.977880
## final value 20023.975727
## converged
## # weights: 9
## initial value 23637.879234
## iter 10 value 20029.969431
## iter 20 value 20020.767034
## iter 20 value 20020.766991

```



```

## final value 20020.766991
## converged
## # weights: 25
## initial value 23394.306138
## iter 10 value 20035.789193
## iter 20 value 20020.834131
## final value 20020.674657
## converged
## # weights: 41
## initial value 21657.558469
## iter 10 value 20034.097202
## iter 20 value 20020.814624
## final value 20020.669134
## converged
## # weights: 9
## initial value 22320.699457
## final value 19996.584500
## converged
## # weights: 25
## initial value 23260.164033
## final value 19996.584500
## converged
## # weights: 41
## initial value 21731.854917
## final value 19996.584500
## converged
## # weights: 9
## initial value 23326.899080
## iter 10 value 20003.497193
## final value 20002.093317
## converged
## # weights: 25
## initial value 22182.432084
## iter 10 value 20000.964184
## final value 20000.559538
## converged
## # weights: 41
## initial value 23031.087867
## iter 10 value 20009.426075
## iter 20 value 19999.900433
## iter 20 value 19999.900236
## iter 20 value 19999.900173
## final value 19999.900173
## converged
## # weights: 9
## initial value 22492.355945
## iter 10 value 20006.911343
## iter 20 value 19996.703560
## iter 20 value 19996.703513
## final value 19996.703513
## converged
## # weights: 25
## initial value 21779.384363
## iter 10 value 20009.568306

```

```

## iter 20 value 19996.734193
## final value 19996.597869
## converged
## # weights: 41
## initial value 23249.825985
## iter 10 value 20014.676619
## iter 20 value 19996.793088
## final value 19996.595267
## converged
## # weights: 9
## initial value 21860.899863
## final value 19975.560500
## converged
## # weights: 25
## initial value 21963.133942
## final value 19975.560500
## converged
## # weights: 41
## initial value 22720.879661
## final value 19975.560500
## converged
## # weights: 9
## initial value 21717.433116
## iter 10 value 19981.811637
## final value 19981.069007
## converged
## # weights: 25
## initial value 21682.213605
## iter 10 value 19980.450377
## final value 19979.535359
## converged
## # weights: 41
## initial value 22352.572092
## iter 10 value 19983.737548
## iter 20 value 19978.876381
## final value 19978.876040
## converged
## # weights: 9
## initial value 23102.167366
## iter 10 value 19985.396643
## iter 20 value 19975.673903
## iter 20 value 19975.673858
## final value 19975.673858
## converged
## # weights: 25
## initial value 22033.855795
## iter 10 value 19991.567865
## iter 20 value 19975.745052
## final value 19975.573072
## converged
## # weights: 41
## initial value 22527.804314
## iter 10 value 19995.723259
## iter 20 value 19975.792961

```

```

## final value 19975.570654
## converged
## # weights: 9
## initial value 23756.545723
## final value 20060.414500
## converged
## # weights: 25
## initial value 23440.786208
## final value 20060.414500
## converged
## # weights: 41
## initial value 21493.625993
## final value 20060.414500
## converged
## # weights: 9
## initial value 22066.036001
## iter 10 value 20066.494885
## final value 20065.925954
## converged
## # weights: 25
## initial value 22513.968401
## iter 10 value 20065.136846
## final value 20064.391277
## converged
## # weights: 41
## initial value 23145.879997
## iter 10 value 20076.535607
## iter 20 value 20063.736627
## final value 20063.731779
## converged
## # weights: 9
## initial value 23188.157065
## iter 10 value 20071.064719
## iter 20 value 20060.537289
## iter 20 value 20060.537240
## final value 20060.537240
## converged
## # weights: 25
## initial value 21637.510540
## iter 10 value 20070.213217
## iter 20 value 20060.527472
## final value 20060.426072
## converged
## # weights: 41
## initial value 21610.148185
## iter 10 value 20072.615739
## iter 20 value 20060.555171
## final value 20060.423694
## converged
## # weights: 9
## initial value 21551.887723
## final value 19948.680100
## converged
## # weights: 25

```

```

## initial value 21914.139656
## final value 19948.680100
## converged
## # weights: 41
## initial value 23785.600124
## final value 19948.680100
## converged
## # weights: 9
## initial value 21690.608283
## iter 10 value 19955.589273
## final value 19954.188107
## converged
## # weights: 25
## initial value 23570.401043
## iter 10 value 19957.156069
## iter 20 value 19952.654810
## iter 20 value 19952.654693
## iter 20 value 19952.654652
## final value 19952.654652
## converged
## # weights: 41
## initial value 23612.563206
## iter 10 value 19964.227807
## iter 20 value 19951.996763
## final value 19951.995347
## converged
## # weights: 9
## initial value 22784.156317
## iter 10 value 19959.940121
## iter 20 value 19948.809919
## iter 20 value 19948.809867
## final value 19948.809867
## converged
## # weights: 25
## initial value 23060.053719
## iter 10 value 19965.316434
## iter 20 value 19948.871904
## final value 19948.696759
## converged
## # weights: 41
## initial value 22577.766959
## iter 10 value 19968.441544
## iter 20 value 19948.907934
## final value 19948.689664
## converged
## # weights: 9
## initial value 23814.898188
## final value 20049.554000
## converged
## # weights: 25
## initial value 22838.083500
## final value 20049.554000
## converged
## # weights: 41

```

```

## initial value 23344.285771
## final value 20049.554000
## converged
## # weights: 9
## initial value 23097.575516
## iter 10 value 20056.576439
## final value 20055.064613
## converged
## # weights: 25
## initial value 22501.561746
## iter 10 value 20056.445363
## iter 20 value 20053.530455
## iter 20 value 20053.530318
## iter 20 value 20053.530314
## final value 20053.530314
## converged
## # weights: 41
## initial value 22176.035452
## iter 10 value 20054.166982
## iter 20 value 20052.870740
## iter 20 value 20052.870645
## iter 20 value 20052.870628
## final value 20052.870628
## converged
## # weights: 9
## initial value 22162.966823
## iter 10 value 20059.521387
## iter 20 value 20049.668916
## iter 20 value 20049.668870
## final value 20049.668870
## converged
## # weights: 25
## initial value 21801.581270
## iter 10 value 20061.157303
## iter 20 value 20049.687777
## final value 20049.566308
## converged
## # weights: 41
## initial value 23851.945321
## iter 10 value 20067.613241
## iter 20 value 20049.762209
## final value 20049.566188
## converged
## # weights: 9
## initial value 22243.361105
## final value 20035.817200
## converged
## # weights: 25
## initial value 22048.543609
## final value 20035.817200
## converged
## # weights: 41
## initial value 23343.808044
## final value 20035.817200

```

```

## converged
## # weights: 9
## initial value 22792.971213
## iter 10 value 20046.883421
## iter 20 value 20041.327170
## iter 20 value 20041.327167
## final value 20041.327167
## converged
## # weights: 25
## initial value 22939.144132
## iter 10 value 20040.240410
## final value 20039.793068
## converged
## # weights: 41
## initial value 24104.724493
## iter 10 value 20049.520132
## iter 20 value 20039.133865
## final value 20039.133468
## converged
## # weights: 9
## initial value 21933.359689
## iter 10 value 20045.131011
## iter 20 value 20035.924581
## iter 20 value 20035.924538
## final value 20035.924538
## converged
## # weights: 25
## initial value 24482.241475
## iter 10 value 20041.540858
## iter 20 value 20035.883189
## final value 20035.842261
## converged
## # weights: 41
## initial value 22495.823586
## iter 10 value 20052.066504
## iter 20 value 20036.004542
## final value 20035.829310
## converged
## # weights: 9
## initial value 22040.144611
## final value 20058.547600
## converged
## # weights: 25
## initial value 22918.958683
## final value 20058.547600
## converged
## # weights: 41
## initial value 23520.958209
## final value 20058.547600
## converged
## # weights: 9
## initial value 22312.993771
## iter 10 value 20064.224927
## final value 20064.058752

```

```

## converged
## # weights: 25
## initial value 23081.244126
## iter 10 value 20063.216112
## iter 20 value 20062.525727
## final value 20062.524124
## converged
## # weights: 41
## initial value 23986.044880
## iter 10 value 20073.058120
## iter 20 value 20061.866890
## final value 20061.864523
## converged
## # weights: 9
## initial value 22299.761663
## iter 10 value 20069.451648
## iter 20 value 20058.673315
## iter 20 value 20058.673265
## final value 20058.673265
## converged
## # weights: 25
## initial value 21475.685598
## iter 10 value 20065.843922
## iter 20 value 20058.631721
## final value 20058.559466
## converged
## # weights: 41
## initial value 22785.891577
## iter 10 value 20078.274364
## iter 20 value 20058.775034
## final value 20058.557495
## converged
## # weights: 9
## initial value 22773.229472
## final value 19957.697200
## converged
## # weights: 25
## initial value 23117.882508
## final value 19957.697200
## converged
## # weights: 41
## initial value 23426.882203
## final value 19957.697200
## converged
## # weights: 9
## initial value 22226.281394
## iter 10 value 19963.574936
## final value 19963.205375
## converged
## # weights: 25
## initial value 22382.403182
## iter 10 value 19962.275003
## final value 19961.671773
## converged

```

```

## # weights: 41
## initial value 22147.452939
## iter 10 value 19962.062188
## final value 19961.012530
## converged
## # weights: 9
## initial value 22847.450902
## iter 10 value 19967.824845
## iter 20 value 19957.813964
## iter 20 value 19957.813917
## final value 19957.813917
## converged
## # weights: 25
## initial value 21666.862852
## iter 10 value 19968.330500
## iter 20 value 19957.819794
## final value 19957.710015
## converged
## # weights: 41
## initial value 21496.863597
## iter 10 value 19971.699232
## iter 20 value 19957.858632
## final value 19957.707264
## converged
## # weights: 9
## initial value 22105.418917
## final value 20047.250000
## converged
## # weights: 25
## initial value 23278.965272
## final value 20047.250000
## converged
## # weights: 41
## initial value 22858.529287
## final value 20047.250000
## converged
## # weights: 9
## initial value 23303.938454
## iter 10 value 20053.947330
## final value 20052.760452
## converged
## # weights: 25
## initial value 22843.920668
## iter 10 value 20051.661620
## final value 20051.226031
## converged
## # weights: 41
## initial value 22507.103266
## iter 10 value 20052.268414
## iter 20 value 20050.566781
## iter 20 value 20050.566634
## iter 20 value 20050.566561
## final value 20050.566561
## converged

```



```

## # weights: 9
## initial value 23507.367992
## iter 10 value 20056.761520
## iter 20 value 20047.359660
## iter 20 value 20047.359616
## final value 20047.359616
## converged
## # weights: 25
## initial value 23696.961579
## iter 10 value 20061.312279
## iter 20 value 20047.412127
## final value 20047.265409
## converged
## # weights: 41
## initial value 22041.012455
## iter 10 value 20062.254124
## iter 20 value 20047.422986
## final value 20047.259301
## converged
## # weights: 9
## initial value 23190.093610
## final value 19980.360100
## converged
## # weights: 25
## initial value 23105.531632
## final value 19980.360100
## converged
## # weights: 41
## initial value 21691.035601
## final value 19980.360100
## converged
## # weights: 9
## initial value 23558.962420
## iter 10 value 19986.445334
## final value 19985.868655
## converged
## # weights: 25
## initial value 22097.298859
## iter 10 value 19984.650933
## final value 19984.335012
## converged
## # weights: 41
## initial value 22607.826676
## iter 10 value 19984.685136
## iter 20 value 19983.678398
## final value 19983.675622
## converged
## # weights: 9
## initial value 22565.393049
## iter 10 value 19991.712633
## iter 20 value 19980.490986
## iter 20 value 19980.490933
## final value 19980.490933
## converged

```

```

## # weights: 25
## initial value 21799.515807
## iter 10 value 19992.257730
## iter 20 value 19980.497270
## final value 19980.371439
## converged
## # weights: 41
## initial value 22681.371209
## iter 10 value 19997.458416
## iter 20 value 19980.557230
## final value 19980.369730
## converged
## # weights: 9
## initial value 23421.366874
## final value 20040.702500
## converged
## # weights: 25
## initial value 23040.666675
## final value 20040.702500
## converged
## # weights: 41
## initial value 21290.362303
## final value 20040.702500
## converged
## # weights: 9
## initial value 22965.038129
## iter 10 value 20048.246364
## final value 20046.212610
## converged
## # weights: 25
## initial value 23882.446012
## iter 10 value 20046.272140
## final value 20044.678355
## converged
## # weights: 41
## initial value 22277.246444
## iter 10 value 20045.256553
## iter 20 value 20044.019192
## iter 20 value 20044.019002
## iter 20 value 20044.018913
## final value 20044.018913
## converged
## # weights: 9
## initial value 23287.109251
## iter 10 value 20050.364213
## iter 20 value 20040.813892
## iter 20 value 20040.813847
## final value 20040.813847
## converged
## # weights: 25
## initial value 21122.654095
## iter 10 value 20046.739399
## iter 20 value 20040.772101
## final value 20040.713329

```

```

## converged
## # weights: 41
## initial value 23044.203708
## iter 10 value 20060.141909
## iter 20 value 20040.926621
## final value 20040.712461
## converged
## # weights: 9
## initial value 21986.731925
## final value 20039.453200
## converged
## # weights: 25
## initial value 23815.592793
## final value 20039.453200
## converged
## # weights: 41
## initial value 23899.997600
## final value 20039.453200
## converged
## # weights: 9
## initial value 21809.472235
## iter 10 value 20046.004113
## final value 20044.963326
## converged
## # weights: 25
## initial value 21650.616122
## iter 10 value 20043.891030
## final value 20043.429022
## converged
## # weights: 41
## initial value 22337.819817
## iter 10 value 20047.718834
## iter 20 value 20042.769767
## iter 20 value 20042.769593
## iter 20 value 20042.769589
## final value 20042.769589
## converged
## # weights: 9
## initial value 22412.531204
## iter 10 value 20050.368026
## iter 20 value 20039.579039
## iter 20 value 20039.578989
## final value 20039.578989
## converged
## # weights: 25
## initial value 22551.589903
## iter 10 value 20055.640122
## iter 20 value 20039.639823
## final value 20039.466043
## converged
## # weights: 41
## initial value 22664.492991
## iter 10 value 20059.214032
## iter 20 value 20039.681027

```

```

## final value 20039.463094
## converged
## # weights: 9
## initial value 21898.346120
## final value 20019.213200
## converged
## # weights: 25
## initial value 21699.889734
## final value 20019.213200
## converged
## # weights: 41
## initial value 21703.307125
## final value 20019.213200
## converged
## # weights: 9
## initial value 23386.706686
## iter 10 value 20085.102294
## iter 20 value 20024.856375
## final value 20024.722609
## converged
## # weights: 25
## initial value 22937.864226
## iter 10 value 20024.175016
## final value 20023.188516
## converged
## # weights: 41
## initial value 24124.643814
## iter 10 value 20031.831541
## iter 20 value 20022.533756
## final value 20022.529236
## converged
## # weights: 9
## initial value 22837.304016
## iter 10 value 20030.961688
## iter 20 value 20019.348651
## iter 20 value 20019.348597
## final value 20019.348597
## converged
## # weights: 25
## initial value 22217.760790
## iter 10 value 20032.468926
## iter 20 value 20019.366028
## final value 20019.224570
## converged
## # weights: 41
## initial value 22045.848196
## iter 10 value 20035.021594
## iter 20 value 20019.395458
## final value 20019.223058
## converged
## # weights: 9
## initial value 23234.110505
## final value 20036.337700
## converged

```

```

## # weights: 25
## initial value 22193.042751
## final value 20036.337700
## converged
## # weights: 41
## initial value 22925.022224
## final value 20036.337700
## converged
## # weights: 9
## initial value 23104.200139
## iter 10 value 20042.959940
## final value 20041.847685
## converged
## # weights: 25
## initial value 22814.003065
## iter 10 value 20041.521446
## final value 20040.313441
## converged
## # weights: 41
## initial value 23463.568554
## iter 10 value 20040.431480
## final value 20039.654085
## converged
## # weights: 9
## initial value 22273.142842
## iter 10 value 20047.247293
## iter 20 value 20036.463479
## iter 20 value 20036.463429
## final value 20036.463429
## converged
## # weights: 25
## initial value 22962.743899
## iter 10 value 20052.256637
## iter 20 value 20036.521233
## final value 20036.357766
## converged
## # weights: 41
## initial value 23355.158044
## iter 10 value 20055.005979
## iter 20 value 20036.552931
## final value 20036.347933
## converged
## # weights: 9
## initial value 22835.516714
## final value 20045.781200
## converged
## # weights: 25
## initial value 21784.038094
## final value 20045.781200
## converged
## # weights: 41
## initial value 21203.410761
## final value 20045.781200
## converged

```

```

## # weights: 9
## initial value 22007.110621
## iter 10 value 20051.484707
## final value 20051.291593
## converged
## # weights: 25
## initial value 23559.674729
## iter 10 value 20051.274704
## final value 20049.757293
## converged
## # weights: 41
## initial value 22839.877845
## iter 10 value 20050.171347
## iter 20 value 20049.097766
## iter 20 value 20049.097680
## iter 20 value 20049.097676
## final value 20049.097676
## converged
## # weights: 9
## initial value 22059.429439
## iter 10 value 20055.971830
## iter 20 value 20045.898690
## iter 20 value 20045.898643
## final value 20045.898643
## converged
## # weights: 25
## initial value 23110.046034
## iter 10 value 20061.378842
## iter 20 value 20045.961029
## final value 20045.797657
## converged
## # weights: 41
## initial value 23187.296255
## iter 10 value 20066.515960
## iter 20 value 20046.020256
## final value 20045.796240
## converged
## # weights: 9
## initial value 22818.080390
## final value 20005.258000
## converged
## # weights: 25
## initial value 23674.793850
## final value 20005.258000
## converged
## # weights: 41
## initial value 22542.646626
## final value 20005.258000
## converged
## # weights: 9
## initial value 22096.006462
## iter 10 value 20012.991991
## final value 20010.767032
## converged

```

```

## # weights: 25
## initial value 23047.386525
## iter 10 value 20010.692259
## iter 20 value 20009.233160
## iter 20 value 20009.233087
## iter 20 value 20009.233067
## final value 20009.233067
## converged
## # weights: 41
## initial value 21472.913969
## iter 10 value 20013.169756
## iter 20 value 20008.574189
## final value 20008.573716
## converged
## # weights: 9
## initial value 22348.960026
## iter 10 value 20014.776700
## iter 20 value 20005.367743
## iter 20 value 20005.367699
## final value 20005.367699
## converged
## # weights: 25
## initial value 22005.963828
## iter 10 value 20017.895984
## iter 20 value 20005.403706
## final value 20005.270686
## converged
## # weights: 41
## initial value 21757.147072
## iter 10 value 20017.899124
## iter 20 value 20005.403742
## final value 20005.267272
## converged
## # weights: 9
## initial value 21998.449059
## final value 20038.469200
## converged
## # weights: 25
## initial value 22053.451128
## final value 20038.469200
## converged
## # weights: 41
## initial value 21857.698280
## final value 20038.469200
## converged
## # weights: 9
## initial value 23345.123430
## iter 10 value 20044.122088
## final value 20043.979290
## converged
## # weights: 25
## initial value 24403.941849
## iter 10 value 20043.805357
## iter 20 value 20042.466224

```

```

## final value 20042.445008
## converged
## # weights: 41
## initial value 22460.255681
## iter 10 value 20046.912701
## iter 20 value 20041.786046
## final value 20041.785497
## converged
## # weights: 9
## initial value 22442.244556
## iter 10 value 20050.070142
## iter 20 value 20038.602950
## iter 20 value 20038.602896
## final value 20038.602896
## converged
## # weights: 25
## initial value 22384.653310
## iter 10 value 20052.591808
## iter 20 value 20038.632023
## final value 20038.483619
## converged
## # weights: 41
## initial value 22349.289384
## iter 10 value 20055.350988
## iter 20 value 20038.663834
## final value 20038.478997
## converged
## # weights: 9
## initial value 21903.832280
## final value 19952.078500
## converged
## # weights: 25
## initial value 21972.042604
## final value 19952.078500
## converged
## # weights: 41
## initial value 22648.182007
## final value 19952.078500
## converged
## # weights: 9
## initial value 22428.933036
## iter 10 value 19961.624605
## final value 19957.586425
## converged
## # weights: 25
## initial value 21216.677015
## iter 10 value 19956.826774
## final value 19956.052954
## converged
## # weights: 41
## initial value 23207.064413
## iter 10 value 19956.049365
## final value 19955.393623
## converged

```



```

## # weights: 9
## initial value 23776.870134
## iter 10 value 19959.472334
## iter 20 value 19952.163745
## iter 20 value 19952.163711
## final value 19952.163711
## converged
## # weights: 25
## initial value 23555.021879
## iter 10 value 19964.946810
## iter 20 value 19952.226862
## final value 19952.097653
## converged
## # weights: 41
## initial value 22610.430900
## iter 10 value 19972.822658
## iter 20 value 19952.317664
## final value 19952.090572
## converged
## # weights: 9
## initial value 21624.460942
## final value 20020.920100
## converged
## # weights: 25
## initial value 23441.994993
## final value 20020.920100
## converged
## # weights: 41
## initial value 22803.655396
## final value 20020.920100
## converged
## # weights: 9
## initial value 22521.850927
## iter 10 value 20027.594811
## final value 20026.429594
## converged
## # weights: 25
## initial value 22871.728245
## iter 10 value 20026.937213
## final value 20024.895549
## converged
## # weights: 41
## initial value 22406.488737
## iter 10 value 20025.910612
## iter 20 value 20024.236457
## final value 20024.236099
## converged
## # weights: 9
## initial value 22159.749047
## iter 10 value 20029.982655
## iter 20 value 20021.024584
## iter 20 value 20021.024542
## final value 20021.024542
## converged

```

```

## # weights: 25
## initial value 23672.993194
## iter 10 value 20033.389924
## iter 20 value 20021.063867
## final value 20020.935292
## converged
## # weights: 41
## initial value 23349.899807
## iter 10 value 20039.101572
## iter 20 value 20021.129718
## final value 20020.932141
## converged
## # weights: 9
## initial value 22309.187114
## final value 20022.465700
## converged
## # weights: 25
## initial value 22950.342852
## final value 20022.465700
## converged
## # weights: 41
## initial value 24092.800240
## final value 20022.465700
## converged
## # weights: 9
## initial value 23657.511237
## iter 10 value 20028.424470
## final value 20027.975238
## converged
## # weights: 25
## initial value 21980.587386
## iter 10 value 20027.192407
## final value 20026.441187
## converged
## # weights: 41
## initial value 23629.455731
## iter 10 value 20036.018289
## iter 20 value 20025.792713
## final value 20025.781780
## converged
## # weights: 9
## initial value 21981.941349
## iter 10 value 20031.550199
## iter 20 value 20022.570437
## iter 20 value 20022.570395
## final value 20022.570395
## converged
## # weights: 25
## initial value 21956.785494
## iter 10 value 20035.039092
## iter 20 value 20022.610661
## final value 20022.478129
## converged
## # weights: 41

```

```

## initial value 21965.712355
## iter 10 value 20036.681524
## iter 20 value 20022.629597
## final value 20022.475501
## converged
## # weights: 9
## initial value 22820.459427
## final value 20016.794000
## converged
## # weights: 25
## initial value 22913.984244
## final value 20016.794000
## converged
## # weights: 41
## initial value 24160.024040
## final value 20016.794000
## converged
## # weights: 9
## initial value 22233.886948
## iter 10 value 20024.353111
## final value 20022.303384
## converged
## # weights: 25
## initial value 22489.413141
## iter 10 value 20022.532813
## iter 20 value 20020.769512
## iter 20 value 20020.769404
## iter 20 value 20020.769361
## final value 20020.769361
## converged
## # weights: 41
## initial value 23846.948409
## iter 10 value 20020.792970
## final value 20020.109937
## converged
## # weights: 9
## initial value 23137.154395
## iter 10 value 20026.115966
## iter 20 value 20016.901475
## iter 20 value 20016.901432
## final value 20016.901432
## converged
## # weights: 25
## initial value 22707.089428
## iter 10 value 20030.928737
## iter 20 value 20016.956962
## final value 20016.810295
## converged
## # weights: 41
## initial value 22510.036788
## iter 10 value 20034.731329
## iter 20 value 20017.000803
## final value 20016.805220
## converged

```

```

## # weights: 9
## initial value 21813.142864
## final value 20038.270000
## converged
## # weights: 25
## initial value 21131.807688
## final value 20038.270000
## converged
## # weights: 41
## initial value 22537.749198
## final value 20038.270000
## converged
## # weights: 9
## initial value 22619.209403
## iter 10 value 20043.996219
## final value 20043.780039
## converged
## # weights: 25
## initial value 22804.754809
## iter 10 value 20044.059661
## final value 20042.245865
## converged
## # weights: 41
## initial value 23982.462108
## iter 10 value 20046.777190
## iter 20 value 20041.586982
## final value 20041.586312
## converged
## # weights: 9
## initial value 22554.069555
## iter 10 value 20049.619417
## iter 20 value 20038.400850
## iter 20 value 20038.400798
## final value 20038.400798
## converged
## # weights: 25
## initial value 22907.410659
## iter 10 value 20053.583532
## iter 20 value 20038.446553
## final value 20038.283506
## converged
## # weights: 41
## initial value 22716.630457
## iter 10 value 20056.466506
## iter 20 value 20038.479791
## final value 20038.279753
## converged
## # weights: 9
## initial value 22647.452942
## final value 20007.965200
## converged
## # weights: 25
## initial value 23796.709038
## final value 20007.965200

```

```

## converged
## # weights: 41
## initial value 22716.436111
## final value 20007.965200
## converged
## # weights: 9
## initial value 23236.496668
## iter 10 value 20015.207148
## final value 20013.474294
## converged
## # weights: 25
## initial value 23247.062793
## iter 10 value 20013.534847
## final value 20011.940293
## converged
## # weights: 41
## initial value 22287.424133
## iter 10 value 20014.008862
## iter 20 value 20011.281169
## iter 20 value 20011.281004
## iter 20 value 20011.280990
## final value 20011.280990
## converged
## # weights: 9
## initial value 22960.160829
## iter 10 value 20019.477651
## iter 20 value 20008.097930
## iter 20 value 20008.097876
## final value 20008.097876
## converged
## # weights: 25
## initial value 23484.506473
## iter 10 value 20022.101161
## iter 20 value 20008.128177
## final value 20007.978229
## converged
## # weights: 41
## initial value 23579.440695
## iter 10 value 20026.142084
## iter 20 value 20008.174765
## final value 20007.977536
## converged
## # weights: 9
## initial value 23278.760596
## final value 20048.654000
## converged
## # weights: 25
## initial value 22928.676631
## final value 20048.654000
## converged
## # weights: 41
## initial value 21324.635061
## final value 20048.654000
## converged

```

```

## # weights: 9
## initial value 22589.113384
## iter 10 value 20054.748585
## final value 20054.164588
## converged
## # weights: 25
## initial value 23230.911735
## iter 10 value 20053.650940
## final value 20052.630258
## converged
## # weights: 41
## initial value 21723.009636
## iter 10 value 20065.241075
## iter 20 value 20051.970985
## iter 20 value 20051.970785
## iter 20 value 20051.970713
## final value 20051.970713
## converged
## # weights: 9
## initial value 22344.160056
## iter 10 value 20058.288935
## iter 20 value 20048.765083
## iter 20 value 20048.765039
## final value 20048.765039
## converged
## # weights: 25
## initial value 21776.552727
## iter 10 value 20060.593870
## iter 20 value 20048.791657
## final value 20048.666349
## converged
## # weights: 41
## initial value 23660.487984
## iter 10 value 20065.548969
## iter 20 value 20048.848786
## final value 20048.665909
## converged
## # weights: 9
## initial value 22547.389047
## final value 19999.649200
## converged
## # weights: 25
## initial value 21933.696342
## final value 19999.649200
## converged
## # weights: 41
## initial value 24328.556823
## final value 19999.649200
## converged
## # weights: 9
## initial value 23021.670842
## iter 10 value 20005.735339
## final value 20005.158207
## converged

```

```

## # weights: 25
## initial value 23963.177032
## iter 10 value 20006.435952
## iter 20 value 20003.624335
## iter 20 value 20003.624272
## iter 20 value 20003.624260
## final value 20003.624260
## converged
## # weights: 41
## initial value 22830.343744
## iter 10 value 20005.155577
## final value 20002.964933
## converged
## # weights: 9
## initial value 22394.590649
## iter 10 value 20009.795945
## iter 20 value 19999.766184
## iter 20 value 19999.766137
## final value 19999.766137
## converged
## # weights: 25
## initial value 21364.115579
## iter 10 value 20008.291118
## iter 20 value 19999.748835
## final value 19999.661042
## converged
## # weights: 41
## initial value 23982.525407
## iter 10 value 20014.069780
## iter 20 value 19999.815458
## final value 19999.661877
## converged
## # weights: 9
## initial value 22182.360449
## final value 20028.595700
## converged
## # weights: 25
## initial value 23315.399665
## final value 20028.595700
## converged
## # weights: 41
## initial value 22145.114734
## final value 20028.595700
## converged
## # weights: 9
## initial value 23658.401442
## iter 10 value 20034.665788
## final value 20034.105435
## converged
## # weights: 25
## initial value 23170.710869
## iter 10 value 20033.615038
## final value 20032.571278
## converged

```

```

## # weights: 41
## initial value 23808.604403
## iter 10 value 20034.044019
## iter 20 value 20031.912126
## final value 20031.911809
## converged
## # weights: 9
## initial value 22442.053596
## iter 10 value 20038.629621
## iter 20 value 20028.711383
## iter 20 value 20028.711337
## final value 20028.711337
## converged
## # weights: 25
## initial value 22717.723764
## iter 10 value 20043.215147
## iter 20 value 20028.764251
## final value 20028.610298
## converged
## # weights: 41
## initial value 22841.426109
## iter 10 value 20049.280660
## iter 20 value 20028.834181
## final value 20028.610339
## converged
## # weights: 9
## initial value 22116.275397
## final value 19929.305200
## converged
## # weights: 25
## initial value 23214.041401
## final value 19929.305200
## converged
## # weights: 41
## initial value 21915.804579
## final value 19929.305200
## converged
## # weights: 9
## initial value 22866.358481
## iter 10 value 19935.691461
## final value 19934.812943
## converged
## # weights: 25
## initial value 23224.893294
## iter 10 value 19934.894354
## iter 20 value 19933.279627
## iter 20 value 19933.279556
## iter 20 value 19933.279548
## final value 19933.279548
## converged
## # weights: 41
## initial value 22049.091491
## iter 10 value 19933.400948
## final value 19932.620411

```



```

## converged
## # weights: 9
## initial value 22871.673800
## iter 10 value 19939.698411
## iter 20 value 19929.425026
## iter 20 value 19929.424978
## final value 19929.424978
## converged
## # weights: 25
## initial value 22907.523904
## iter 10 value 19945.270994
## iter 20 value 19929.489273
## final value 19929.321327
## converged
## # weights: 41
## initial value 21640.458120
## iter 10 value 19944.416603
## iter 20 value 19929.479423
## final value 19929.315363
## converged
## # weights: 9
## initial value 22474.013916
## final value 19993.947700
## converged
## # weights: 25
## initial value 22933.071991
## final value 19993.947700
## converged
## # weights: 41
## initial value 24122.595217
## final value 19993.947700
## converged
## # weights: 9
## initial value 22860.902925
## iter 10 value 20003.783361
## final value 19999.456547
## converged
## # weights: 25
## initial value 21063.291416
## iter 10 value 19999.272031
## final value 19997.922865
## converged
## # weights: 41
## initial value 22003.443831
## iter 10 value 19998.575995
## final value 19997.263417
## converged
## # weights: 9
## initial value 23265.794850
## iter 10 value 20004.899354
## iter 20 value 19994.073964
## iter 20 value 19994.073913
## final value 19994.073913
## converged

```

```

## # weights: 25
## initial value 21890.002905
## iter 10 value 20005.836185
## iter 20 value 19994.084765
## final value 19993.961720
## converged
## # weights: 41
## initial value 21836.779864
## iter 10 value 20010.057787
## iter 20 value 19994.133437
## final value 19993.957741
## converged
## # weights: 9
## initial value 22561.847766
## final value 20004.800500
## converged
## # weights: 25
## initial value 22669.220170
## final value 20004.800500
## converged
## # weights: 41
## initial value 23601.719738
## final value 20004.800500
## converged
## # weights: 9
## initial value 22988.668184
## iter 10 value 20010.641302
## final value 20010.309581
## converged
## # weights: 25
## initial value 22202.619209
## iter 10 value 20009.838357
## final value 20008.775669
## converged
## # weights: 41
## initial value 21850.157396
## iter 10 value 20014.115881
## final value 20008.116439
## converged
## # weights: 9
## initial value 22008.182990
## iter 10 value 20013.108571
## iter 20 value 20004.896286
## iter 20 value 20004.896247
## final value 20004.896247
## converged
## # weights: 25
## initial value 23070.931948
## iter 10 value 20020.251456
## iter 20 value 20004.978637
## final value 20004.816069
## converged
## # weights: 41
## initial value 24006.908390

```

```

## iter 10 value 20017.336470
## iter 20 value 20004.945030
## final value 20004.812215
## converged
## # weights: 9
## initial value 21873.181814
## final value 19974.056500
## converged
## # weights: 25
## initial value 20889.074631
## final value 19974.056500
## converged
## # weights: 41
## initial value 22167.632110
## final value 19974.056500
## converged
## # weights: 9
## initial value 22129.526028
## iter 10 value 19982.028422
## final value 19979.564952
## converged
## # weights: 25
## initial value 22292.881457
## iter 10 value 19979.109632
## iter 20 value 19978.031432
## iter 20 value 19978.031263
## iter 20 value 19978.031246
## final value 19978.031246
## converged
## # weights: 41
## initial value 23603.488555
## iter 10 value 19982.243413
## iter 20 value 19977.372460
## final value 19977.371985
## converged
## # weights: 9
## initial value 21523.365079
## iter 10 value 19981.145290
## iter 20 value 19974.138228
## iter 20 value 19974.138196
## final value 19974.138196
## converged
## # weights: 25
## initial value 22076.520886
## iter 10 value 19987.665232
## iter 20 value 19974.213398
## final value 19974.072004
## converged
## # weights: 41
## initial value 22279.999229
## iter 10 value 19994.489699
## iter 20 value 19974.292079
## final value 19974.066286
## converged

```

```

## # weights: 9
## initial value 23219.448683
## final value 19908.416500
## converged
## # weights: 25
## initial value 23028.787570
## final value 19908.416500
## converged
## # weights: 41
## initial value 23026.404987
## final value 19908.416500
## converged
## # weights: 9
## initial value 21937.130872
## iter 10 value 19914.713406
## final value 19913.923805
## converged
## # weights: 25
## initial value 23329.102941
## iter 10 value 19913.800934
## final value 19912.390484
## converged
## # weights: 41
## initial value 23981.116161
## iter 10 value 19923.538187
## iter 20 value 19911.735810
## final value 19911.731380
## converged
## # weights: 9
## initial value 23522.851499
## iter 10 value 19917.051825
## iter 20 value 19908.516059
## iter 20 value 19908.516019
## final value 19908.516019
## converged
## # weights: 25
## initial value 21523.051527
## iter 10 value 19919.272147
## iter 20 value 19908.541657
## final value 19908.427844
## converged
## # weights: 41
## initial value 22072.451092
## iter 10 value 19926.070192
## iter 20 value 19908.620033
## final value 19908.426255
## converged
## # weights: 9
## initial value 22020.166320
## final value 19991.767600
## converged
## # weights: 25
## initial value 23555.316113
## final value 19991.767600

```

```

## converged
## # weights: 41
## initial value 22389.076645
## final value 19991.767600
## converged
## # weights: 9
## initial value 22509.714225
## iter 10 value 19998.440818
## final value 19997.276403
## converged
## # weights: 25
## initial value 23401.413085
## iter 10 value 19997.702686
## iter 20 value 19995.742823
## iter 20 value 19995.742664
## iter 20 value 19995.742615
## final value 19995.742615
## converged
## # weights: 41
## initial value 23229.815863
## iter 10 value 19996.505722
## final value 19995.083416
## converged
## # weights: 9
## initial value 22778.678720
## iter 10 value 20002.563789
## iter 20 value 19991.892072
## iter 20 value 19991.892022
## final value 19991.892022
## converged
## # weights: 25
## initial value 22925.484690
## iter 10 value 20007.746898
## iter 20 value 19991.951829
## final value 19991.787026
## converged
## # weights: 41
## initial value 22744.594863
## iter 10 value 20009.023846
## iter 20 value 19991.966551
## final value 19991.777614
## converged
## # weights: 9
## initial value 22761.133951
## final value 20044.680100
## converged
## # weights: 25
## initial value 23262.117893
## final value 20044.680100
## converged
## # weights: 41
## initial value 22621.463466
## final value 20044.680100
## converged

```

```

## # weights: 9
## initial value 22470.566797
## iter 10 value 20117.599776
## iter 20 value 20050.555096
## final value 20050.190466
## converged
## # weights: 25
## initial value 24008.645858
## iter 10 value 20050.138154
## iter 20 value 20048.656157
## iter 20 value 20048.656124
## iter 20 value 20048.656110
## final value 20048.656110
## converged
## # weights: 41
## initial value 22009.528447
## iter 10 value 20053.059884
## iter 20 value 20048.004960
## final value 20047.996652
## converged
## # weights: 9
## initial value 22734.468289
## iter 10 value 20054.823345
## iter 20 value 20044.797044
## iter 20 value 20044.796997
## final value 20044.796997
## converged
## # weights: 25
## initial value 22283.899198
## iter 10 value 20057.879698
## iter 20 value 20044.832281
## final value 20044.691712
## converged
## # weights: 41
## initial value 22907.495525
## iter 10 value 20065.212935
## iter 20 value 20044.916827
## final value 20044.693957
## converged
## # weights: 9
## initial value 22789.129773
## final value 20026.929700
## converged
## # weights: 25
## initial value 23294.933640
## final value 20026.929700
## converged
## # weights: 41
## initial value 23470.503261
## final value 20026.929700
## converged
## # weights: 9
## initial value 23240.273262
## iter 10 value 20036.914872

```

```

## final value 20032.439366
## converged
## # weights: 25
## initial value 21444.994956
## iter 10 value 20032.697894
## final value 20030.905292
## converged
## # weights: 41
## initial value 24407.011956
## iter 10 value 20041.994470
## iter 20 value 20030.246334
## final value 20030.245821
## converged
## # weights: 9
## initial value 21769.840124
## iter 10 value 20034.892275
## iter 20 value 20027.021502
## iter 20 value 20027.021466
## final value 20027.021466
## converged
## # weights: 25
## initial value 22647.807123
## iter 10 value 20043.753035
## iter 20 value 20027.123660
## final value 20026.941162
## converged
## # weights: 41
## initial value 22021.165250
## iter 10 value 20045.034247
## iter 20 value 20027.138431
## final value 20026.939893
## converged
## # weights: 9
## initial value 22639.775549
## final value 20056.513700
## converged
## # weights: 25
## initial value 23550.001520
## final value 20056.513700
## converged
## # weights: 41
## initial value 23539.451328
## final value 20056.513700
## converged
## # weights: 9
## initial value 22264.572579
## iter 10 value 20063.807558
## final value 20062.024825
## converged
## # weights: 25
## initial value 22106.908726
## iter 10 value 20061.683642
## final value 20060.490332
## converged

```

```

## # weights: 41
## initial value 22029.476915
## iter 10 value 20072.304790
## iter 20 value 20059.830968
## iter 20 value 20059.830785
## iter 20 value 20059.830778
## final value 20059.830778
## converged
## # weights: 9
## initial value 21900.413675
## iter 10 value 20064.770227
## iter 20 value 20056.608891
## iter 20 value 20056.608853
## final value 20056.608853
## converged
## # weights: 25
## initial value 21933.592666
## iter 10 value 20069.537503
## iter 20 value 20056.663854
## final value 20056.528341
## converged
## # weights: 41
## initial value 21776.470101
## iter 10 value 20070.886741
## iter 20 value 20056.679410
## final value 20056.523333
## converged
## # weights: 9
## initial value 22525.311763
## final value 19910.400500
## converged
## # weights: 25
## initial value 22984.877186
## final value 19910.400500
## converged
## # weights: 41
## initial value 22549.009063
## final value 19910.400500
## converged
## # weights: 9
## initial value 22475.186548
## iter 10 value 19916.533382
## final value 19915.907973
## converged
## # weights: 25
## initial value 23618.538807
## iter 10 value 19915.191674
## final value 19914.374695
## converged
## # weights: 41
## initial value 20882.221935
## iter 10 value 19916.329238
## iter 20 value 19913.715676
## iter 20 value 19913.715555

```



```

## iter 20 value 19913.715540
## final value 19913.715540
## converged
## # weights: 9
## initial value 21922.623196
## iter 10 value 19920.697605
## iter 20 value 19910.519218
## iter 20 value 19910.519170
## final value 19910.519170
## converged
## # weights: 25
## initial value 23030.048778
## iter 10 value 19924.874089
## iter 20 value 19910.567369
## final value 19910.413515
## converged
## # weights: 41
## initial value 22048.397842
## iter 10 value 19927.781870
## iter 20 value 19910.600894
## final value 19910.410780
## converged
## # weights: 9
## initial value 21742.974062
## final value 20053.121200
## converged
## # weights: 25
## initial value 22941.627341
## final value 20053.121200
## converged
## # weights: 41
## initial value 22546.781240
## final value 20053.121200
## converged
## # weights: 9
## initial value 23816.185717
## iter 10 value 20060.543026
## final value 20058.631944
## converged
## # weights: 25
## initial value 22005.051150
## iter 10 value 20059.287959
## iter 20 value 20057.102822
## final value 20057.097451
## converged
## # weights: 41
## initial value 23895.005450
## iter 10 value 20073.349471
## iter 20 value 20056.438767
## final value 20056.437931
## converged
## # weights: 9
## initial value 22184.743995
## iter 10 value 20062.075876

```

```

## iter 20 value 20053.224440
## iter 20 value 20053.224399
## final value 20053.224399
## converged
## # weights: 25
## initial value 22281.198970
## iter 10 value 20067.925274
## iter 20 value 20053.291879
## final value 20053.132970
## converged
## # weights: 41
## initial value 24541.551186
## iter 10 value 20061.216646
## iter 20 value 20053.214534
## final value 20053.136919
## converged
## # weights: 9
## initial value 22179.246297
## final value 20058.633200
## converged
## # weights: 25
## initial value 23551.498369
## final value 20058.633200
## converged
## # weights: 41
## initial value 23227.407099
## final value 20058.633200
## converged
## # weights: 9
## initial value 22628.329967
## iter 10 value 20065.608378
## final value 20064.144396
## converged
## # weights: 25
## initial value 22127.223894
## iter 10 value 20062.932081
## final value 20062.609802
## converged
## # weights: 41
## initial value 23405.432708
## iter 10 value 20076.536319
## iter 20 value 20061.951928
## final value 20061.950229
## converged
## # weights: 9
## initial value 21708.978875
## iter 10 value 20065.715442
## iter 20 value 20058.714853
## iter 20 value 20058.714820
## final value 20058.714820
## converged
## # weights: 25
## initial value 23125.644673
## iter 10 value 20073.287790

```

```

## iter 20 value 20058.802156
## final value 20058.646941
## converged
## # weights: 41
## initial value 23005.891893
## iter 10 value 20077.893961
## iter 20 value 20058.855261
## final value 20058.645037
## converged
## # weights: 9
## initial value 21907.055421
## final value 20002.797200
## converged
## # weights: 25
## initial value 22182.505204
## final value 20002.797200
## converged
## # weights: 41
## initial value 22293.436120
## final value 20002.797200
## converged
## # weights: 9
## initial value 23245.287647
## iter 10 value 20008.696976
## final value 20008.306232
## converged
## # weights: 25
## initial value 23590.551790
## iter 10 value 20012.089495
## iter 20 value 20006.787678
## final value 20006.772305
## converged
## # weights: 41
## initial value 23536.482886
## iter 10 value 20009.881247
## iter 20 value 20006.113183
## iter 20 value 20006.113038
## iter 20 value 20006.112992
## final value 20006.112992
## converged
## # weights: 9
## initial value 23223.182625
## iter 10 value 20012.791400
## iter 20 value 20002.912425
## iter 20 value 20002.912379
## final value 20002.912379
## converged
## # weights: 25
## initial value 21789.139832
## iter 10 value 20014.513492
## iter 20 value 20002.932280
## final value 20002.809345
## converged
## # weights: 41

```

```

## initial value 21672.906780
## iter 10 value 20014.886505
## iter 20 value 20002.936580
## final value 20002.806819
## converged
## # weights: 9
## initial value 22908.198841
## final value 20004.187700
## converged
## # weights: 25
## initial value 23507.411116
## final value 20004.187700
## converged
## # weights: 41
## initial value 22576.540200
## final value 20004.187700
## converged
## # weights: 9
## initial value 23558.647170
## iter 10 value 20012.892559
## final value 20009.696763
## converged
## # weights: 25
## initial value 24139.551327
## iter 10 value 20009.600845
## final value 20008.162857
## converged
## # weights: 41
## initial value 23532.642358
## iter 10 value 20008.674056
## iter 20 value 20007.503815
## final value 20007.503513
## converged
## # weights: 9
## initial value 21694.146212
## iter 10 value 20011.653843
## iter 20 value 20004.273779
## iter 20 value 20004.273744
## final value 20004.273744
## converged
## # weights: 25
## initial value 23584.557198
## iter 10 value 20015.969205
## iter 20 value 20004.323532
## final value 20004.210387
## converged
## # weights: 41
## initial value 23114.909047
## iter 10 value 20023.424980
## iter 20 value 20004.409491
## final value 20004.201284
## converged
## # weights: 9
## initial value 22577.850004

```

```

## final value 20045.107600
## converged
## # weights: 25
## initial value 22688.658592
## final value 20045.107600
## converged
## # weights: 41
## initial value 23665.188842
## final value 20045.107600
## converged
## # weights: 9
## initial value 21878.881826
## iter 10 value 20050.735304
## final value 20050.617986
## converged
## # weights: 25
## initial value 23183.328295
## iter 10 value 20050.965792
## final value 20049.083705
## converged
## # weights: 41
## initial value 23624.656006
## iter 10 value 20050.571144
## iter 20 value 20048.424536
## final value 20048.424099
## converged
## # weights: 9
## initial value 22438.805320
## iter 10 value 20056.117361
## iter 20 value 20045.234534
## iter 20 value 20045.234483
## final value 20045.234483
## converged
## # weights: 25
## initial value 21670.742232
## iter 10 value 20056.624112
## iter 20 value 20045.240376
## final value 20045.119385
## converged
## # weights: 41
## initial value 23730.517151
## iter 10 value 20060.494793
## iter 20 value 20045.285002
## final value 20045.121488
## converged
## # weights: 9
## initial value 22813.325153
## final value 19977.422500
## converged
## # weights: 25
## initial value 22934.356919
## final value 19977.422500
## converged
## # weights: 41

```

```

## initial value 22454.015191
## final value 19977.422500
## converged
## # weights: 9
## initial value 22181.130510
## iter 10 value 19984.639660
## final value 19982.931005
## converged
## # weights: 25
## initial value 22904.237583
## iter 10 value 19992.048777
## iter 20 value 19981.397555
## final value 19981.397273
## converged
## # weights: 41
## initial value 22375.209034
## iter 10 value 19981.889848
## iter 20 value 19980.738113
## iter 20 value 19980.737991
## iter 20 value 19980.737977
## final value 19980.737977
## converged
## # weights: 9
## initial value 23652.637714
## iter 10 value 19986.246088
## iter 20 value 19977.524229
## iter 20 value 19977.524188
## final value 19977.524188
## converged
## # weights: 25
## initial value 21723.034394
## iter 10 value 19989.505638
## iter 20 value 19977.561809
## final value 19977.435001
## converged
## # weights: 41
## initial value 22131.895508
## iter 10 value 19995.705408
## iter 20 value 19977.633288
## final value 19977.433520
## converged
## # weights: 9
## initial value 22178.844579
## final value 19972.920100
## converged
## # weights: 25
## initial value 23568.515765
## final value 19972.920100
## converged
## # weights: 41
## initial value 23948.022799
## final value 19972.920100
## converged
## # weights: 9

```

```

## initial value 22911.381622
## iter 10 value 19980.571316
## final value 19978.428509
## converged
## # weights: 25
## initial value 23493.259713
## iter 10 value 19979.914986
## iter 20 value 19976.896768
## final value 19976.894780
## converged
## # weights: 41
## initial value 23226.428058
## iter 10 value 19991.402064
## iter 20 value 19976.253554
## final value 19976.235543
## converged
## # weights: 9
## initial value 23694.693553
## iter 10 value 19981.227416
## iter 20 value 19973.015877
## iter 20 value 19973.015839
## final value 19973.015839
## converged
## # weights: 25
## initial value 23104.861464
## iter 10 value 19987.733982
## iter 20 value 19973.090892
## final value 19972.939750
## converged
## # weights: 41
## initial value 22936.532641
## iter 10 value 19992.111454
## iter 20 value 19973.141361
## final value 19972.935258
## converged
## # weights: 9
## initial value 23106.873261
## final value 20032.589200
## converged
## # weights: 25
## initial value 22648.320115
## final value 20032.589200
## converged
## # weights: 41
## initial value 21705.279942
## final value 20032.589200
## converged
## # weights: 9
## initial value 23015.829982
## iter 10 value 20038.281521
## final value 20038.099012
## converged
## # weights: 25
## initial value 23177.803303

```

```

## iter 10 value 20123.474388
## iter 20 value 20036.765406
## iter 30 value 20036.584909
## final value 20036.564795
## converged
## # weights: 41
## initial value 21548.714846
## iter 10 value 20039.703280
## iter 20 value 20035.905859
## final value 20035.905348
## converged
## # weights: 9
## initial value 22287.685963
## iter 10 value 20043.102168
## iter 20 value 20032.710406
## iter 20 value 20032.710358
## final value 20032.710358
## converged
## # weights: 25
## initial value 22179.991470
## iter 10 value 20046.396730
## iter 20 value 20032.748390
## final value 20032.601306
## converged
## # weights: 41
## initial value 22384.759571
## iter 10 value 20053.064673
## iter 20 value 20032.825266
## final value 20032.598902
## converged
## # weights: 9
## initial value 23759.743725
## final value 20038.369700
## converged
## # weights: 25
## initial value 21646.657746
## final value 20038.369700
## converged
## # weights: 41
## initial value 22440.697927
## final value 20038.369700
## converged
## # weights: 9
## initial value 22795.413250
## iter 10 value 20045.256300
## final value 20043.879782
## converged
## # weights: 25
## initial value 21842.560531
## iter 10 value 20043.390397
## final value 20042.345615
## converged
## # weights: 41
## initial value 22650.400758

```



```

## iter 10 value 20052.857035
## iter 20 value 20041.686943
## final value 20041.686098
## converged
## # weights: 9
## initial value 22726.380990
## iter 10 value 20048.939188
## iter 20 value 20038.491558
## iter 20 value 20038.491509
## final value 20038.491509
## converged
## # weights: 25
## initial value 23319.658944
## iter 10 value 20055.171144
## iter 20 value 20038.563407
## final value 20038.382603
## converged
## # weights: 41
## initial value 21637.063956
## iter 10 value 20051.758971
## iter 20 value 20038.524068
## final value 20038.378791
## converged
## # weights: 9
## initial value 21610.631969
## final value 19884.413200
## converged
## # weights: 25
## initial value 21956.468329
## final value 19884.413200
## converged
## # weights: 41
## initial value 22294.855392
## final value 19884.413200
## converged
## # weights: 9
## initial value 22096.306045
## iter 10 value 19893.873698
## final value 19889.920328
## converged
## # weights: 25
## initial value 23856.290440
## iter 10 value 19890.091865
## final value 19888.387196
## converged
## # weights: 41
## initial value 23278.814534
## iter 10 value 19899.858697
## iter 20 value 19887.729833
## final value 19887.728061
## converged
## # weights: 9
## initial value 22832.064559
## iter 10 value 19894.954487

```

```

## iter 20 value 19884.534733
## iter 20 value 19884.534684
## final value 19884.534684
## converged
## # weights: 25
## initial value 22263.958308
## iter 10 value 19900.023188
## iter 20 value 19884.593171
## final value 19884.430752
## converged
## # weights: 41
## initial value 22733.856409
## iter 10 value 19899.803484
## iter 20 value 19884.590638
## final value 19884.423387
## converged
## # weights: 9
## initial value 23078.785962
## final value 19968.886000
## converged
## # weights: 25
## initial value 22597.674719
## final value 19968.886000
## converged
## # weights: 41
## initial value 22318.507326
## final value 19968.886000
## converged
## # weights: 9
## initial value 23050.395158
## iter 10 value 19975.198836
## final value 19974.394323
## converged
## # weights: 25
## initial value 22257.953189
## iter 10 value 19973.336473
## iter 20 value 19972.861206
## final value 19972.860633
## converged
## # weights: 41
## initial value 22997.902628
## iter 10 value 19973.841547
## final value 19972.201427
## converged
## # weights: 9
## initial value 23847.563237
## iter 10 value 19976.605980
## iter 20 value 19968.975005
## iter 20 value 19968.974970
## final value 19968.974970
## converged
## # weights: 25
## initial value 23026.308455
## iter 10 value 19983.222462

```

```

## iter 20 value 19969.051288
## final value 19968.900601
## converged
## # weights: 41
## initial value 22504.998395
## iter 10 value 19989.045394
## iter 20 value 19969.118422
## final value 19968.897225
## converged
## # weights: 9
## initial value 23310.224640
## final value 19977.422500
## converged
## # weights: 25
## initial value 23050.895898
## final value 19977.422500
## converged
## # weights: 41
## initial value 23544.354397
## final value 19977.422500
## converged
## # weights: 9
## initial value 22906.756691
## iter 10 value 19983.345496
## final value 19982.931025
## converged
## # weights: 25
## initial value 21592.397121
## iter 10 value 19983.148080
## final value 19981.397282
## converged
## # weights: 41
## initial value 23463.026312
## iter 10 value 19983.677959
## iter 20 value 19980.738412
## final value 19980.738033
## converged
## # weights: 9
## initial value 23066.868810
## iter 10 value 19988.185379
## iter 20 value 19977.546588
## iter 20 value 19977.546538
## final value 19977.546538
## converged
## # weights: 25
## initial value 22610.140820
## iter 10 value 19993.107796
## iter 20 value 19977.603339
## final value 19977.439511
## converged
## # weights: 41
## initial value 22716.110017
## iter 10 value 19997.035230
## iter 20 value 19977.648619

```

```

## final value 19977.434108
## converged
## # weights: 9
## initial value 22994.758356
## final value 20018.547700
## converged
## # weights: 25
## initial value 23224.108055
## final value 20018.547700
## converged
## # weights: 41
## initial value 22110.338380
## final value 20018.547700
## converged
## # weights: 9
## initial value 21786.460073
## iter 10 value 20031.114483
## iter 20 value 20024.059289
## final value 20024.057179
## converged
## # weights: 25
## initial value 21768.176584
## iter 10 value 20023.494528
## iter 20 value 20022.524565
## final value 20022.523068
## converged
## # weights: 41
## initial value 23667.397975
## iter 10 value 20028.666380
## iter 20 value 20021.865308
## final value 20021.863695
## converged
## # weights: 9
## initial value 23080.367256
## iter 10 value 20028.856184
## iter 20 value 20018.666549
## iter 20 value 20018.666501
## final value 20018.666501
## converged
## # weights: 25
## initial value 24108.582203
## iter 10 value 20028.540857
## iter 20 value 20018.662913
## final value 20018.568554
## converged
## # weights: 41
## initial value 22181.567701
## iter 10 value 20035.435647
## iter 20 value 20018.742405
## final value 20018.558879
## converged
## # weights: 9
## initial value 22796.352528
## final value 19997.883700

```

```

## converged
## # weights: 25
## initial value 23877.035284
## final value 19997.883700
## converged
## # weights: 41
## initial value 22095.252535
## final value 19997.883700
## converged
## # weights: 9
## initial value 22638.075090
## iter 10 value 20005.007969
## final value 20003.392558
## converged
## # weights: 25
## initial value 21794.979461
## iter 10 value 20002.695057
## final value 20001.858656
## converged
## # weights: 41
## initial value 23220.413960
## iter 10 value 20001.842581
## final value 20001.199327
## converged
## # weights: 9
## initial value 21723.060946
## iter 10 value 20005.661140
## iter 20 value 19997.973368
## iter 20 value 19997.973332
## final value 19997.973332
## converged
## # weights: 25
## initial value 22763.227036
## iter 10 value 20013.422565
## iter 20 value 19998.062851
## final value 19997.899061
## converged
## # weights: 41
## initial value 22343.952635
## iter 10 value 20020.765506
## iter 20 value 19998.147509
## final value 19997.894589
## converged
## # weights: 9
## initial value 23525.681939
## final value 20016.930100
## converged
## # weights: 25
## initial value 21788.826412
## final value 20016.930100
## converged
## # weights: 41
## initial value 23284.410285
## final value 20016.930100

```

```

## converged
## # weights: 9
## initial value 22190.588229
## iter 10 value 20024.229123
## final value 20022.439478
## converged
## # weights: 25
## initial value 23192.925641
## iter 10 value 20023.560027
## final value 20020.905476
## converged
## # weights: 41
## initial value 24221.432920
## iter 10 value 20020.636390
## final value 20020.246035
## converged
## # weights: 9
## initial value 22107.719767
## iter 10 value 20025.874249
## iter 20 value 20017.033219
## iter 20 value 20017.033178
## final value 20017.033178
## converged
## # weights: 25
## initial value 23376.446451
## iter 10 value 20030.743682
## iter 20 value 20017.089360
## final value 20016.945731
## converged
## # weights: 41
## initial value 22844.684030
## iter 10 value 20037.755226
## iter 20 value 20017.170197
## final value 20016.939783
## converged
## # weights: 9
## initial value 22635.925568
## final value 20042.193700
## converged
## # weights: 25
## initial value 23409.746836
## final value 20042.193700
## converged
## # weights: 41
## initial value 23606.929939
## final value 20042.193700
## converged
## # weights: 9
## initial value 23081.260618
## iter 10 value 20049.746144
## final value 20047.703964
## converged
## # weights: 25
## initial value 23753.870718

```

```

## iter 10 value 20049.601075
## iter 20 value 20046.175382
## final value 20046.169627
## converged
## # weights: 41
## initial value 23194.042249
## iter 10 value 20061.353570
## iter 20 value 20045.510847
## final value 20045.510115
## converged
## # weights: 9
## initial value 23470.178173
## iter 10 value 20052.792521
## iter 20 value 20042.315896
## iter 20 value 20042.315847
## final value 20042.315847
## converged
## # weights: 25
## initial value 22374.077056
## iter 10 value 20055.701997
## iter 20 value 20042.349440
## final value 20042.205640
## converged
## # weights: 41
## initial value 23228.016555
## iter 10 value 20061.217221
## iter 20 value 20042.413026
## final value 20042.204331
## converged
## # weights: 9
## initial value 21937.103205
## final value 19991.936500
## converged
## # weights: 25
## initial value 22511.783206
## final value 19991.936500
## converged
## # weights: 41
## initial value 21986.041700
## final value 19991.936500
## converged
## # weights: 9
## initial value 22407.002006
## iter 10 value 20001.237432
## final value 19997.445276
## converged
## # weights: 25
## initial value 23544.448657
## iter 10 value 19996.685783
## final value 19995.911511
## converged
## # weights: 41
## initial value 22619.287326
## iter 10 value 20009.433314

```

```

## iter 20 value 19995.252682
## final value 19995.252113
## converged
## # weights: 9
## initial value 23050.114439
## iter 10 value 20002.838185
## iter 20 value 19992.062188
## iter 20 value 19992.062138
## final value 19992.062138
## converged
## # weights: 25
## initial value 22795.768934
## iter 10 value 20007.577451
## iter 20 value 19992.116828
## final value 19991.951932
## converged
## # weights: 41
## initial value 23621.422075
## iter 10 value 20008.132584
## iter 20 value 19992.123228
## final value 19991.950417
## converged
## # weights: 9
## initial value 23469.720625
## final value 20015.560100
## converged
## # weights: 25
## initial value 22036.253737
## final value 20015.560100
## converged
## # weights: 41
## initial value 22362.803243
## final value 20015.560100
## converged
## # weights: 9
## initial value 22805.719196
## iter 10 value 20022.769968
## final value 20021.069410
## converged
## # weights: 25
## initial value 21857.173158
## iter 10 value 20020.383915
## final value 20019.535429
## converged
## # weights: 41
## initial value 22332.104114
## iter 10 value 20023.892627
## iter 20 value 20018.876076
## iter 20 value 20018.876003
## iter 20 value 20018.875992
## final value 20018.875992
## converged
## # weights: 9
## initial value 22591.076251

```



```

## iter 10 value 20025.618004
## iter 20 value 20015.676060
## iter 20 value 20015.676013
## final value 20015.676013
## converged
## # weights: 25
## initial value 22540.272155
## iter 10 value 20031.006522
## iter 20 value 20015.738185
## final value 20015.574968
## converged
## # weights: 41
## initial value 22711.134578
## iter 10 value 20033.181997
## iter 20 value 20015.763267
## final value 20015.569899
## converged
## # weights: 9
## initial value 21616.128971
## final value 19829.997200
## converged
## # weights: 25
## initial value 22895.576934
## final value 19829.997200
## converged
## # weights: 41
## initial value 22295.679706
## final value 19829.997200
## converged
## # weights: 9
## initial value 22051.900549
## iter 10 value 19837.918984
## final value 19835.503716
## converged
## # weights: 25
## initial value 23305.376608
## iter 10 value 19834.517763
## final value 19833.970828
## converged
## # weights: 41
## initial value 22616.227708
## iter 10 value 19834.956165
## iter 20 value 19833.311951
## iter 20 value 19833.311801
## iter 20 value 19833.311792
## final value 19833.311792
## converged
## # weights: 9
## initial value 22458.338173
## iter 10 value 19839.687633
## iter 20 value 19830.108923
## iter 20 value 19830.108878
## final value 19830.108878
## converged

```

```

## # weights: 25
## initial value 22556.861765
## iter 10 value 19845.421090
## iter 20 value 19830.175025
## final value 19830.013396
## converged
## # weights: 41
## initial value 23645.457255
## iter 10 value 19842.511243
## iter 20 value 19830.141477
## final value 19830.008753
## converged
## # weights: 9
## initial value 21955.432690
## final value 20029.414000
## converged
## # weights: 25
## initial value 22451.800059
## final value 20029.414000
## converged
## # weights: 41
## initial value 24115.551250
## final value 20029.414000
## converged
## # weights: 9
## initial value 22026.920468
## iter 10 value 20037.260532
## final value 20034.923760
## converged
## # weights: 25
## initial value 22305.659554
## iter 10 value 20035.013751
## iter 20 value 20033.389598
## iter 20 value 20033.389569
## iter 20 value 20033.389568
## final value 20033.389568
## converged
## # weights: 41
## initial value 23222.238081
## iter 10 value 20042.206328
## iter 20 value 20032.739246
## final value 20032.730198
## converged
## # weights: 9
## initial value 22573.548338
## iter 10 value 20041.399292
## iter 20 value 20029.552181
## iter 20 value 20029.552126
## final value 20029.552126
## converged
## # weights: 25
## initial value 22021.258347
## iter 10 value 20040.912186
## iter 20 value 20029.546565

```

```

## final value 20029.427122
## converged
## # weights: 41
## initial value 22319.637584
## iter 10 value 20049.532467
## iter 20 value 20029.645950
## final value 20029.424044
## converged
## # weights: 9
## initial value 22600.816080
## final value 20037.058000
## converged
## # weights: 25
## initial value 23223.071283
## final value 20037.058000
## converged
## # weights: 41
## initial value 22733.446450
## final value 20037.058000
## converged
## # weights: 9
## initial value 23354.033343
## iter 10 value 20042.950076
## final value 20042.568145
## converged
## # weights: 25
## initial value 23934.297177
## iter 10 value 20042.061663
## final value 20041.033882
## converged
## # weights: 41
## initial value 22842.074948
## iter 10 value 20041.695119
## iter 20 value 20040.374380
## iter 20 value 20040.374298
## iter 20 value 20040.374281
## final value 20040.374281
## converged
## # weights: 9
## initial value 22143.697062
## iter 10 value 20045.953957
## iter 20 value 20037.160563
## iter 20 value 20037.160522
## final value 20037.160522
## converged
## # weights: 25
## initial value 22404.065976
## iter 10 value 20051.978963
## iter 20 value 20037.230027
## final value 20037.074046
## converged
## # weights: 41
## initial value 23212.431545
## iter 10 value 20056.411800

```

```

## iter 20 value 20037.281134
## final value 20037.072735
## converged
## # weights: 9
## initial value 22778.659467
## final value 20040.034000
## converged
## # weights: 25
## initial value 22465.694297
## final value 20040.034000
## converged
## # weights: 41
## initial value 23822.159719
## final value 20040.034000
## converged
## # weights: 9
## initial value 22787.693086
## iter 10 value 20065.828721
## iter 20 value 20045.545029
## final value 20045.544157
## converged
## # weights: 25
## initial value 22716.572026
## iter 10 value 20045.353640
## final value 20044.009875
## converged
## # weights: 41
## initial value 21432.179035
## iter 10 value 20044.264275
## final value 20043.350383
## converged
## # weights: 9
## initial value 22845.948197
## iter 10 value 20050.672123
## iter 20 value 20040.156649
## iter 20 value 20040.156600
## final value 20040.156600
## converged
## # weights: 25
## initial value 22075.896144
## iter 10 value 20051.457809
## iter 20 value 20040.165708
## final value 20040.045954
## converged
## # weights: 41
## initial value 22615.684005
## iter 10 value 20061.005405
## iter 20 value 20040.275784
## final value 20040.043967
## converged
## # weights: 9
## initial value 22377.666623
## final value 19988.520500
## converged

```

```

## # weights: 25
## initial value 23483.238671
## final value 19988.520500
## converged
## # weights: 41
## initial value 22949.629669
## final value 19988.520500
## converged
## # weights: 9
## initial value 23737.751944
## iter 10 value 19996.758693
## final value 19994.029222
## converged
## # weights: 25
## initial value 23486.355350
## iter 10 value 19994.053189
## iter 20 value 19992.495499
## iter 20 value 19992.495416
## iter 20 value 19992.495397
## final value 19992.495397
## converged
## # weights: 41
## initial value 23731.632584
## iter 10 value 19993.000324
## iter 20 value 19991.836229
## iter 20 value 19991.836112
## iter 20 value 19991.836103
## final value 19991.836103
## converged
## # weights: 9
## initial value 23162.511535
## iter 10 value 20000.026890
## iter 20 value 19988.653160
## iter 20 value 19988.653107
## final value 19988.653107
## converged
## # weights: 25
## initial value 23394.347213
## iter 10 value 20002.286032
## iter 20 value 19988.679206
## final value 19988.533588
## converged
## # weights: 41
## initial value 21936.358600
## iter 10 value 20003.353347
## iter 20 value 19988.691511
## final value 19988.532268
## converged
## # weights: 9
## initial value 22897.275521
## final value 20054.760100
## converged
## # weights: 25
## initial value 21846.866398

```

```

## final value 20054.760100
## converged
## # weights: 41
## initial value 24063.520734
## final value 20054.760100
## converged
## # weights: 9
## initial value 23456.148795
## iter 10 value 20061.069537
## final value 20060.271005
## converged
## # weights: 25
## initial value 22648.586176
## iter 10 value 20063.443679
## iter 20 value 20058.736758
## final value 20058.736472
## converged
## # weights: 41
## initial value 23317.661751
## iter 10 value 20061.907637
## iter 20 value 20058.102876
## final value 20058.076889
## converged
## # weights: 9
## initial value 22366.620028
## iter 10 value 20063.947192
## iter 20 value 20054.866020
## iter 20 value 20054.865978
## final value 20054.865978
## converged
## # weights: 25
## initial value 22994.388200
## iter 10 value 20071.505659
## iter 20 value 20054.953163
## final value 20054.775090
## converged
## # weights: 41
## initial value 22593.004671
## iter 10 value 20074.558803
## iter 20 value 20054.988364
## final value 20054.769996
## converged
## # weights: 9
## initial value 23873.529506
## final value 20047.567600
## converged
## # weights: 25
## initial value 23252.139194
## final value 20047.567600
## converged
## # weights: 41
## initial value 23685.661483
## final value 20047.567600
## converged

```

```

## # weights: 9
## initial value 23254.608137
## iter 10 value 20054.770946
## final value 20053.078047
## converged
## # weights: 25
## initial value 21887.735107
## iter 10 value 20052.307968
## final value 20051.543753
## converged
## # weights: 41
## initial value 23315.991521
## iter 10 value 20062.155844
## iter 20 value 20050.884469
## final value 20050.884119
## converged
## # weights: 9
## initial value 22486.391524
## iter 10 value 20058.797872
## iter 20 value 20047.697076
## iter 20 value 20047.697024
## final value 20047.697024
## converged
## # weights: 25
## initial value 22309.985341
## iter 10 value 20061.407366
## iter 20 value 20047.727162
## final value 20047.581996
## converged
## # weights: 41
## initial value 23154.400590
## iter 10 value 20063.778202
## iter 20 value 20047.754496
## final value 20047.579402
## converged
## # weights: 9
## initial value 23065.703968
## final value 19993.447600
## converged
## # weights: 25
## initial value 21743.189868
## final value 19993.447600
## converged
## # weights: 41
## initial value 21212.342264
## final value 19993.447600
## converged
## # weights: 9
## initial value 22840.795244
## iter 10 value 19999.383894
## final value 19998.956429
## converged
## # weights: 25
## initial value 21548.275690

```

```

## iter 10 value 19999.990202
## iter 20 value 19997.422821
## final value 19997.422558
## converged
## # weights: 41
## initial value 24349.727998
## iter 10 value 20009.610130
## iter 20 value 19996.771668
## final value 19996.763264
## converged
## # weights: 9
## initial value 21616.208107
## iter 10 value 20001.052383
## iter 20 value 19993.535277
## iter 20 value 19993.535242
## final value 19993.535242
## converged
## # weights: 25
## initial value 22690.882429
## iter 10 value 20006.211465
## iter 20 value 19993.594757
## final value 19993.460832
## converged
## # weights: 41
## initial value 22983.891227
## iter 10 value 20014.953277
## iter 20 value 19993.695544
## final value 19993.460428
## converged
## # weights: 9
## initial value 22793.436366
## final value 19922.747600
## converged
## # weights: 25
## initial value 22722.884305
## final value 19922.747600
## converged
## # weights: 41
## initial value 23375.367394
## final value 19922.747600
## converged
## # weights: 9
## initial value 23208.133419
## iter 10 value 19928.801504
## final value 19928.255218
## converged
## # weights: 25
## initial value 22253.589904
## iter 10 value 19929.805717
## final value 19926.721861
## converged
## # weights: 41
## initial value 22308.542647
## iter 10 value 19940.788837

```



```

## iter 20 value 19926.062851
## iter 20 value 19926.062736
## iter 20 value 19926.062725
## final value 19926.062725
## converged
## # weights: 9
## initial value 23338.911311
## iter 10 value 19932.476493
## iter 20 value 19922.859767
## iter 20 value 19922.859722
## final value 19922.859722
## converged
## # weights: 25
## initial value 23441.956975
## iter 10 value 19935.931503
## iter 20 value 19922.899600
## final value 19922.764269
## converged
## # weights: 41
## initial value 23207.672850
## iter 10 value 19940.618417
## iter 20 value 19922.953636
## final value 19922.758795
## converged
## # weights: 9
## initial value 23263.513492
## final value 20039.453200
## converged
## # weights: 25
## initial value 22054.372259
## final value 20039.453200
## converged
## # weights: 41
## initial value 23794.181110
## final value 20039.453200
## converged
## # weights: 9
## initial value 22064.841570
## iter 10 value 20046.713673
## final value 20044.963327
## converged
## # weights: 25
## initial value 23314.687762
## iter 10 value 20043.733845
## final value 20043.429094
## converged
## # weights: 41
## initial value 22542.599368
## iter 10 value 20045.819185
## iter 20 value 20042.769813
## iter 20 value 20042.769648
## iter 20 value 20042.769609
## final value 20042.769609
## converged

```

```

## # weights: 9
## initial value 23029.694901
## iter 10 value 20050.208046
## iter 20 value 20039.577195
## iter 20 value 20039.577145
## final value 20039.577145
## converged
## # weights: 25
## initial value 22687.809994
## iter 10 value 20052.125679
## iter 20 value 20039.599304
## final value 20039.466389
## converged
## # weights: 41
## initial value 23213.675551
## iter 10 value 20056.605277
## iter 20 value 20039.650950
## final value 20039.463354
## converged
## # weights: 9
## initial value 22217.025670
## final value 20044.507700
## converged
## # weights: 25
## initial value 23224.502299
## final value 20044.507700
## converged
## # weights: 41
## initial value 22155.776503
## final value 20044.507700
## converged
## # weights: 9
## initial value 22756.792810
## iter 10 value 20051.077887
## final value 20050.018051
## converged
## # weights: 25
## initial value 21383.933606
## iter 10 value 20053.873108
## iter 20 value 20048.483737
## iter 20 value 20048.483674
## iter 20 value 20048.483672
## final value 20048.483672
## converged
## # weights: 41
## initial value 23495.520396
## iter 10 value 20048.977331
## iter 20 value 20047.824244
## iter 20 value 20047.824173
## iter 20 value 20047.824165
## final value 20047.824165
## converged
## # weights: 9
## initial value 22920.933977

```

```

## iter 10 value 20054.227255
## iter 20 value 20044.619759
## iter 20 value 20044.619714
## final value 20044.619714
## converged
## # weights: 25
## initial value 22863.098426
## iter 10 value 20058.630932
## iter 20 value 20044.670530
## final value 20044.520683
## converged
## # weights: 41
## initial value 21602.305122
## iter 10 value 20056.559642
## iter 20 value 20044.646649
## final value 20044.516678
## converged
## # weights: 9
## initial value 22774.259378
## final value 20004.341200
## converged
## # weights: 25
## initial value 23370.213523
## final value 20004.341200
## converged
## # weights: 41
## initial value 22199.909211
## final value 20004.341200
## converged
## # weights: 9
## initial value 22511.522937
## iter 10 value 20010.537008
## final value 20009.850259
## converged
## # weights: 25
## initial value 22392.360670
## iter 10 value 20009.195626
## final value 20008.316341
## converged
## # weights: 41
## initial value 23989.148863
## iter 10 value 20008.632220
## final value 20007.657010
## converged
## # weights: 9
## initial value 23487.949500
## iter 10 value 20013.623193
## iter 20 value 20004.448214
## iter 20 value 20004.448171
## final value 20004.448171
## converged
## # weights: 25
## initial value 23765.904447
## iter 10 value 20016.727898

```

```

## iter 20 value 20004.484009
## final value 20004.361439
## converged
## # weights: 41
## initial value 23085.600551
## iter 10 value 20022.107977
## iter 20 value 20004.546037
## final value 20004.351056
## converged
## # weights: 9
## initial value 21961.070310
## final value 20012.190500
## converged
## # weights: 25
## initial value 22743.777270
## final value 20012.190500
## converged
## # weights: 41
## initial value 22333.984479
## final value 20012.190500
## converged
## # weights: 9
## initial value 22794.543158
## iter 10 value 20018.138012
## final value 20017.699762
## converged
## # weights: 25
## initial value 23341.187544
## iter 10 value 20016.634722
## final value 20016.165739
## converged
## # weights: 41
## initial value 24293.723930
## iter 10 value 20028.371728
## iter 20 value 20015.506928
## final value 20015.506408
## converged
## # weights: 9
## initial value 23298.137739
## iter 10 value 20021.796526
## iter 20 value 20012.301250
## iter 20 value 20012.301206
## final value 20012.301206
## converged
## # weights: 25
## initial value 23125.464081
## iter 10 value 20026.253031
## iter 20 value 20012.352630
## final value 20012.203441
## converged
## # weights: 41
## initial value 21197.223362
## iter 10 value 20019.547238
## iter 20 value 20012.275317

```

```

## final value 20012.199151
## converged
## # weights: 9
## initial value 23346.468848
## final value 20007.816500
## converged
## # weights: 25
## initial value 21827.496705
## final value 20007.816500
## converged
## # weights: 41
## initial value 23675.507375
## final value 20007.816500
## converged
## # weights: 9
## initial value 22530.340644
## iter 10 value 20015.028280
## final value 20013.325657
## converged
## # weights: 25
## initial value 22760.957986
## iter 10 value 20014.823096
## final value 20011.791884
## converged
## # weights: 41
## initial value 22476.635989
## iter 10 value 20012.234888
## final value 20011.132316
## converged
## # weights: 9
## initial value 22208.666014
## iter 10 value 20017.386130
## iter 20 value 20007.926830
## iter 20 value 20007.926786
## final value 20007.926786
## converged
## # weights: 25
## initial value 23521.094748
## iter 10 value 20019.820843
## iter 20 value 20007.954901
## final value 20007.833106
## converged
## # weights: 41
## initial value 21934.514224
## iter 10 value 20023.949460
## iter 20 value 20008.002500
## final value 20007.827729
## converged
## # weights: 9
## initial value 23714.101527
## final value 20043.189200
## converged
## # weights: 25
## initial value 21873.362981

```

```

## final value 20043.189200
## converged
## # weights: 41
## initial value 22671.820614
## final value 20043.189200
## converged
## # weights: 9
## initial value 22505.176708
## iter 10 value 20048.913964
## final value 20048.699460
## converged
## # weights: 25
## initial value 22352.798478
## iter 10 value 20053.331844
## iter 20 value 20047.165768
## final value 20047.165167
## converged
## # weights: 41
## initial value 22195.514475
## iter 10 value 20047.194029
## final value 20046.505601
## converged
## # weights: 9
## initial value 23161.913866
## iter 10 value 20054.653424
## iter 20 value 20043.321374
## iter 20 value 20043.321321
## final value 20043.321321
## converged
## # weights: 25
## initial value 22391.410778
## iter 10 value 20056.117339
## iter 20 value 20043.338251
## final value 20043.207335
## converged
## # weights: 41
## initial value 23473.942639
## iter 10 value 20061.161019
## iter 20 value 20043.396401
## final value 20043.205532
## converged
## # weights: 9
## initial value 23376.167390
## final value 20037.160100
## converged
## # weights: 25
## initial value 22176.516914
## final value 20037.160100
## converged
## # weights: 41
## initial value 22262.169144
## final value 20037.160100
## converged
## # weights: 9

```

```

## initial value 21822.376552
## iter 10 value 20042.742453
## final value 20042.670140
## converged
## # weights: 25
## initial value 22562.103718
## iter 10 value 20041.861369
## iter 20 value 20041.138409
## final value 20041.135868
## converged
## # weights: 41
## initial value 23253.813544
## iter 10 value 20053.207640
## iter 20 value 20040.476759
## iter 20 value 20040.476573
## iter 20 value 20040.476515
## final value 20040.476515
## converged
## # weights: 9
## initial value 22967.026958
## iter 10 value 20049.147187
## iter 20 value 20037.298302
## iter 20 value 20037.298246
## final value 20037.298246
## converged
## # weights: 25
## initial value 23018.362855
## iter 10 value 20053.526276
## iter 20 value 20037.348789
## final value 20037.173910
## converged
## # weights: 41
## initial value 22725.617561
## iter 10 value 20057.672218
## iter 20 value 20037.396589
## final value 20037.173324
## converged
## # weights: 9
## initial value 22915.988804
## final value 20050.709200
## converged
## # weights: 25
## initial value 21996.652537
## final value 20050.709200
## converged
## # weights: 41
## initial value 22451.221672
## final value 20050.709200
## converged
## # weights: 9
## initial value 21874.260312
## iter 10 value 20057.173519
## final value 20056.219788
## converged

```

```

## # weights: 25
## initial value 22211.151899
## iter 10 value 20073.297480
## iter 20 value 20054.850046
## final value 20054.685318
## converged
## # weights: 41
## initial value 23849.299770
## iter 10 value 20063.534976
## iter 20 value 20054.026375
## final value 20054.025752
## converged
## # weights: 9
## initial value 23041.512534
## iter 10 value 20061.912592
## iter 20 value 20050.838366
## iter 20 value 20050.838315
## final value 20050.838315
## converged
## # weights: 25
## initial value 23456.665929
## iter 10 value 20065.662319
## iter 20 value 20050.881598
## final value 20050.722013
## converged
## # weights: 41
## initial value 23055.339477
## iter 10 value 20071.580679
## iter 20 value 20050.949832
## final value 20050.721020
## converged
## # weights: 9
## initial value 22773.544807
## final value 20042.285200
## converged
## # weights: 25
## initial value 22001.862460
## final value 20042.285200
## converged
## # weights: 41
## initial value 23743.123266
## final value 20042.285200
## converged
## # weights: 9
## initial value 22731.791074
## iter 10 value 20049.757588
## final value 20047.795394
## converged
## # weights: 25
## initial value 22052.138921
## iter 10 value 20051.316254
## iter 20 value 20046.261567
## final value 20046.261042
## converged

```



```

## # weights: 41
## initial value 23812.170357
## iter 10 value 20057.920184
## iter 20 value 20045.602760
## final value 20045.601589
## converged
## # weights: 9
## initial value 23177.701354
## iter 10 value 20052.716757
## iter 20 value 20042.405468
## iter 20 value 20042.405420
## final value 20042.405420
## converged
## # weights: 25
## initial value 23345.327365
## iter 10 value 20056.029694
## iter 20 value 20042.443663
## final value 20042.301003
## converged
## # weights: 41
## initial value 22523.751282
## iter 10 value 20065.093789
## iter 20 value 20042.548165
## final value 20042.295786
## converged
## # weights: 9
## initial value 23295.347685
## final value 20044.247600
## converged
## # weights: 25
## initial value 22918.977856
## final value 20044.247600
## converged
## # weights: 41
## initial value 23308.988418
## final value 20044.247600
## converged
## # weights: 9
## initial value 22644.045035
## iter 10 value 20076.146853
## iter 20 value 20050.238873
## final value 20049.757868
## converged
## # weights: 25
## initial value 22157.187283
## iter 10 value 20050.013025
## iter 20 value 20048.223609
## iter 20 value 20048.223514
## iter 20 value 20048.223487
## final value 20048.223487
## converged
## # weights: 41
## initial value 24058.736886
## iter 10 value 20060.869904

```

```

## iter 20 value 20047.585425
## final value 20047.563985
## converged
## # weights: 9
## initial value 23339.854053
## iter 10 value 20054.458061
## iter 20 value 20044.365319
## iter 20 value 20044.365272
## final value 20044.365272
## converged
## # weights: 25
## initial value 22318.780008
## iter 10 value 20059.764692
## iter 20 value 20044.426500
## final value 20044.261185
## converged
## # weights: 41
## initial value 23969.661408
## iter 10 value 20058.306723
## iter 20 value 20044.409691
## final value 20044.261228
## converged
## # weights: 9
## initial value 23452.260917
## final value 19929.305200
## converged
## # weights: 25
## initial value 22314.995767
## final value 19929.305200
## converged
## # weights: 41
## initial value 22024.315374
## final value 19929.305200
## converged
## # weights: 9
## initial value 23083.701748
## iter 10 value 19936.226241
## final value 19934.812920
## converged
## # weights: 25
## initial value 21768.479404
## iter 10 value 19934.155026
## final value 19933.279559
## converged
## # weights: 41
## initial value 22069.479501
## iter 10 value 19936.769290
## final value 19932.620358
## converged
## # weights: 9
## initial value 21596.859268
## iter 10 value 19936.516472
## iter 20 value 19929.388340
## iter 20 value 19929.388307

```

```

## final value 19929.388307
## converged
## # weights: 25
## initial value 22017.703435
## iter 10 value 19942.228984
## iter 20 value 19929.454201
## final value 19929.319817
## converged
## # weights: 41
## initial value 21292.720468
## iter 10 value 19940.392408
## iter 20 value 19929.433027
## final value 19929.314735
## converged
## # weights: 9
## initial value 23500.475430
## final value 20036.750500
## converged
## # weights: 25
## initial value 21674.588822
## final value 20036.750500
## converged
## # weights: 41
## initial value 23297.990032
## final value 20036.750500
## converged
## # weights: 9
## initial value 22620.621803
## iter 10 value 20042.995382
## final value 20042.260531
## converged
## # weights: 25
## initial value 23705.560243
## iter 10 value 20041.834702
## final value 20040.726342
## converged
## # weights: 41
## initial value 22286.826081
## iter 10 value 20040.777241
## final value 20040.066771
## converged
## # weights: 9
## initial value 22802.974362
## iter 10 value 20047.330827
## iter 20 value 20036.872483
## iter 20 value 20036.872434
## final value 20036.872434
## converged
## # weights: 25
## initial value 24005.345238
## iter 10 value 20046.873118
## iter 20 value 20036.867206
## final value 20036.767195
## converged

```

```

## # weights: 41
## initial value 22512.341282
## iter 10 value 20058.263531
## iter 20 value 20036.998528
## final value 20036.760099
## converged
## # weights: 9
## initial value 23252.385382
## final value 20022.082000
## converged
## # weights: 25
## initial value 22085.805167
## final value 20022.082000
## converged
## # weights: 41
## initial value 23809.219806
## final value 20022.082000
## converged
## # weights: 9
## initial value 23889.272069
## iter 10 value 20029.603580
## final value 20027.591494
## converged
## # weights: 25
## initial value 22216.414328
## iter 10 value 20033.716710
## iter 20 value 20026.069535
## final value 20026.057425
## converged
## # weights: 41
## initial value 24080.091925
## iter 10 value 20036.212899
## iter 20 value 20025.404988
## final value 20025.398044
## converged
## # weights: 9
## initial value 22682.607061
## iter 10 value 20033.074445
## iter 20 value 20022.208734
## iter 20 value 20022.208684
## final value 20022.208684
## converged
## # weights: 25
## initial value 22319.678978
## iter 10 value 20035.862776
## iter 20 value 20022.240882
## final value 20022.099321
## converged
## # weights: 41
## initial value 21435.580831
## iter 10 value 20033.542285
## iter 20 value 20022.214128
## final value 20022.091258
## converged

```

```

## # weights: 9
## initial value 23551.652210
## final value 20038.766500
## converged
## # weights: 25
## initial value 23455.312471
## final value 20038.766500
## converged
## # weights: 41
## initial value 22859.988215
## final value 20038.766500
## converged
## # weights: 9
## initial value 23184.174188
## iter 10 value 20047.084577
## final value 20044.276548
## converged
## # weights: 25
## initial value 23680.603078
## iter 10 value 20043.268367
## final value 20042.742249
## converged
## # weights: 41
## initial value 22435.435162
## iter 10 value 20044.191945
## final value 20042.082848
## converged
## # weights: 9
## initial value 23419.890181
## iter 10 value 20047.995509
## iter 20 value 20038.872903
## iter 20 value 20038.872861
## final value 20038.872861
## converged
## # weights: 25
## initial value 22520.858619
## iter 10 value 20053.746490
## iter 20 value 20038.939208
## final value 20038.782078
## converged
## # weights: 41
## initial value 21615.999645
## iter 10 value 20050.150802
## iter 20 value 20038.897752
## final value 20038.776375
## converged
## # weights: 9
## initial value 22123.917824
## final value 19987.306000
## converged
## # weights: 25
## initial value 23145.773778
## final value 19987.306000
## converged

```

```

## # weights: 41
## initial value 22848.411854
## final value 19987.306000
## converged
## # weights: 9
## initial value 22520.377140
## iter 10 value 19994.592698
## final value 19992.814611
## converged
## # weights: 25
## initial value 22521.550137
## iter 10 value 19992.116453
## iter 20 value 19991.280922
## iter 20 value 19991.280799
## iter 20 value 19991.280799
## final value 19991.280799
## converged
## # weights: 41
## initial value 22931.883206
## iter 10 value 19991.704033
## final value 19990.621557
## converged
## # weights: 9
## initial value 23844.796168
## iter 10 value 19994.701779
## iter 20 value 19987.391268
## iter 20 value 19987.391233
## final value 19987.391233
## converged
## # weights: 25
## initial value 22670.247881
## iter 10 value 20003.067578
## iter 20 value 19987.487719
## final value 19987.319894
## converged
## # weights: 41
## initial value 21937.632755
## iter 10 value 20003.294684
## iter 20 value 19987.490337
## final value 19987.316742
## converged
## # weights: 9
## initial value 22074.566776
## iter 10 value 20072.899947
## iter 20 value 20063.282277
## iter 20 value 20063.282233
## final value 20063.282233
## converged

```

```
nnet_Cars
```

```

## Neural Network
##
## 400 samples
## 6 predictor

```

```
##
## Pre-processing: centered (6), scaled (6)
## Resampling: Leave-One-Out Cross-Validation
## Summary of sample sizes: 399, 399, 399, 399, 399, 399, ...
## Resampling results across tuning parameters:
##
##   size  decay  RMSE      Rsquared  MAE
##   1     0e+00  7.082226      NA      6.511475
##   1     1e-04  7.082226      NA      6.511475
##   1     1e-01  7.082396  0.32235623  6.511658
##   3     0e+00  7.082226      NA      6.511475
##   3     1e-04  7.082226  0.01658690  6.511475
##   3     1e-01  7.082338  0.32942001  6.511597
##   5     0e+00  7.082226      NA      6.511475
##   5     1e-04  7.082226  0.01236387  6.511475
##   5     1e-01  7.082317  0.32640106  6.511574
##
## RMSE was used to select the optimal model using the smallest value.
## The final values used for the model were size = 1 and decay = 1e-04.
```

#The model selected size = 1 and decay 1e-04 as the most optimal model using RMSE. The specific Rsquared for this model is “NAN”. The closest Rsquared is **0.01236387** for a model with decay 1e-04 and RMSE of 7.082226.

**\*\*QB4** Consider the following input: • Sales=9 • Price=6.54 • Population=124 • Advertising=0 • Age=76 • Income= 110 • Education=10 What will be the estimated Sales for this record using the above neuralnet model?

```
Sales <- c(9)
Price <- c(6.54)
Population <- c(124)
Advertising <- c(0)
Age <- c(76)
Income <- c(110)
Education <- c(10)
Test <- data.frame(Sales, Price, Population, Advertising, Age, Income, Education)
```

#Now that we have established the test data that is needed, it is time to predict using our network.

```
Pred_sales <- predict(nnet_Cars, Test)
Pred_sales
```

```
## 1
## 1
```

#According to the Neural Net built using the instructions provided, the model predicts that only **1** sale will take place with the given record. This result is troubling as in the previous assignment, the decision tree concluded that 9.5 sales would occur at this record. I believe that using the Keras package and building a model using “keras\_model\_sequential” may create a more adjustable neural network model that would provide a better outcome.