

# Assignment-3\_advanced.data.mining

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## PART-A

**QA1.** What is the difference between SVM with hard margin and soft margin? **ANSWER** SVMs are supervised machine learning algorithms that are used for classification and regression tasks. The main difference between SVM with hard margin and SVM with soft margin is how they handle misclassified data points. SVM with a hard margin assumes that the data is linearly separable, which means that it can be divided into two classes using a straight line (or hyperplane) with no misclassifications. It seeks the hyperplane with the greatest possible margin of separation between the two classes, defined as the distance between the hyperplane and the nearest data points from each class. However, if there are misclassifications or outliers, this approach will fail because perfect separation is required. SVM with soft margin, on the other hand, allows for some misclassifications and outliers by inserting a slack variable that penalizes misclassified data points in the objective function. This method identifies a hyperplane that maximizes the margin while also minimizing the sum of the slack variables. The regularization parameter controls the balance between enhancing the margin and minimizing the slack variable penalty. In summary, SVM with hard margin is stricter and only works with data that is linearly separable, whereas SVM with soft margin is more flexible and can handle certain misclassifications and outliers.

REFERENCE - <https://scikit-learn.org/stable/modules/svm.html>

**QA2.** What is the role of the cost parameter, C, in SVM (with soft margin) classifiers? **ANSWER** In SVM with soft margin, the cost parameter, C, controls the balance between achieving a larger margin and allowing some misclassifications. The C parameter is a regularization parameter that determines the penalty for misclassifying data points. A smaller value of C will allow for more misclassifications, while a larger value of C will penalize misclassifications more heavily, resulting in a smaller margin and potentially overfitting the data. Thus, in SVM with soft margin, selecting the appropriate value of C is critical. A small C number results in a broader margin but may result in some misclassifications, whereas a large C value results in a tight margin but may reduce misclassifications. The best value of C is determined by the problem's complexity and the amount of noise in the data.

REFERENCE- <https://towardsdatascience.com/support-vector-machine-introduction-to-machine-learning-algorithms-934a444fca47>

**QA3.** Will the following perceptron be activated (2.8 is the activation threshold) **ANSWER**  $0.1 \rightarrow 0.8 \rightarrow 2.8 \rightarrow 11.1 \rightarrow -0.2$

This perceptron will not activate as the result is -2.14. This occurs as a result of  $11.1 * 0.2 = -2.22$ , and the result 0.08 from the top is added, which gives us -2.14.

**QA4.** What is the role of alpha, the learning rate in the delta rule? **ANSWER** In the delta rule, which is a learning rule used in artificial neural networks, the learning rate (often denoted by alpha) determines the step size of the weight update during training. The delta rule is used to change the weights of the connections between neurons in a neural network in order to minimize the difference between predicted and actual outputs. The learning rate controls the amount by which the weights are adjusted in response to the error signal. A larger value of alpha will result in larger weight updates and faster convergence but may also cause overshooting and instability. A smaller value of alpha will result in smaller weight updates and

slower convergence but may also help avoid overshooting and converge to a better solution. Thus, selecting an appropriate value of alpha is crucial in the delta rule to achieve efficient and stable learning.

REFERENCE - <http://neuralnetworksanddeeplearning.com/chap2.html>

## PART-B

This part of the assignment involves building SVM and neural network regression models to answer a number of questions. We will use the Carseats dataset that is part of the ISLR package. We may also need the following packages: caret, dplyr, and glmnet

```
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 4.1-7
```

```
library(caret)
```

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

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

```
library(kernlab)
```

```
##
## Attaching package: 'kernlab'

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

For this assignment, we only need the following attributes: “Sales”, “Price”, “Advertising”, “Population”, “Age”, “Income” and “Education”. The goal of the assignment is to build models to predict the sales of the carseats (“Sales” attribute) using the other attributes.

```
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?”

```
train_control <- trainControl(method = "repeatedcv", number = 10, repeats = 3)
set.seed(12)

svm_linear <- train(Sales~., data = Carseats_Filtered, method = "svmLinear",
                    trControl=train_control,
                    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, 361, 360, 360, ...
## Resampling results:
##
## RMSE      Rsquared    MAE
## 2.265167  0.3699916  1.812511
##
## Tuning parameter 'C' was held constant at a value of 1
```

A train control section has been added above which adds cross validation to the model. **The  $R^2$  of the model is 0.3699916**

**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))
train_control_2 <- trainControl(method = "repeatedcv", number = 5, repeats = 2)

svm_linear_grid <- train(Sales~., data = Carseats_Filtered, method = "svmLinear",
                        trControl=train_control_2,
                        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  2.278284  0.3604331  1.822761
##      0.5  2.281319  0.3595523  1.825311
##      1.0  2.281784  0.3592871  1.825438
##     10.0  2.281405  0.3593924  1.824955
##
## RMSE was used to select the optimal model using the smallest value.
## The final value used for the model was C = 0.1.
```

Cross validation has been used above as instructed. It has been observed that as we increase C, the change decreases and **0.5** 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(12)

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 22739.273070
## final value 19990.920100
## converged
## # weights:  25
## initial value 22966.203130
## final value 19990.920100
## converged
## # weights:  41
## initial value 23539.168914
## final value 19990.920100
## converged
## # weights:  9
## initial value 21531.321900
## iter 10 value 19997.946985
## final value 19996.428872
## converged
## # weights:  25
## initial value 23340.698765
## iter 10 value 19996.586970
## final value 19994.895194
## converged
## # weights:  41
## initial value 23193.339557
```

```

## iter 10 value 20000.148712
## iter 20 value 19994.235847
## iter 20 value 19994.235732
## iter 20 value 19994.235728
## final value 19994.235728
## converged
## # weights: 9
## initial value 23057.957760
## iter 10 value 20001.847377
## iter 20 value 19991.046083
## iter 20 value 19991.046033
## final value 19991.046033
## converged
## # weights: 25
## initial value 22284.993787
## iter 10 value 20004.013284
## iter 20 value 19991.071054
## final value 19990.935456
## converged
## # weights: 41
## initial value 22606.974890
## iter 10 value 20011.160546
## iter 20 value 19991.153456
## final value 19990.930063
## converged
## # weights: 9
## initial value 22806.117523
## final value 19958.721700
## converged
## # weights: 25
## initial value 23328.157432
## final value 19958.721700
## converged
## # weights: 41
## initial value 21653.874360
## final value 19958.721700
## converged
## # weights: 9
## initial value 22881.944323
## iter 10 value 19964.967614
## final value 19964.229890
## converged
## # weights: 25
## initial value 21902.578105
## iter 10 value 19965.493432
## iter 20 value 19962.698588
## final value 19962.696300
## converged
## # weights: 41
## initial value 22949.358446
## iter 10 value 19976.758531
## iter 20 value 19962.038883
## final value 19962.037141
## converged

```

```

## # weights: 9
## initial value 23350.854667
## iter 10 value 19969.547749
## iter 20 value 19958.846516
## iter 20 value 19958.846466
## final value 19958.846466
## converged
## # weights: 25
## initial value 22445.941220
## iter 10 value 19974.948029
## iter 20 value 19958.908777
## final value 19958.733514
## converged
## # weights: 41
## initial value 22250.685780
## iter 10 value 19976.815012
## iter 20 value 19958.930302
## final value 19958.731499
## converged
## # weights: 9
## initial value 23602.343451
## final value 19981.086500
## converged
## # weights: 25
## initial value 23239.885877
## final value 19981.086500
## converged
## # weights: 41
## initial value 21481.440899
## final value 19981.086500
## converged
## # weights: 9
## initial value 23502.779665
## iter 10 value 19989.604439
## final value 19986.595086
## converged
## # weights: 25
## initial value 23566.305946
## iter 10 value 19990.171922
## iter 20 value 19985.061918
## iter 20 value 19985.061746
## iter 20 value 19985.061630
## final value 19985.061630
## converged
## # weights: 41
## initial value 22627.795404
## iter 10 value 19985.100946
## final value 19984.402039
## converged
## # weights: 9
## initial value 22920.528123
## iter 10 value 19991.606981
## iter 20 value 19981.207793
## iter 20 value 19981.207744

```

```

## final value 19981.207744
## converged
## # weights: 25
## initial value 23072.557984
## iter 10 value 19994.519536
## iter 20 value 19981.241372
## final value 19981.101359
## converged
## # weights: 41
## initial value 22249.269121
## iter 10 value 19998.113152
## iter 20 value 19981.282804
## final value 19981.096001
## converged
## # weights: 9
## initial value 23539.012667
## final value 20022.210100
## converged
## # weights: 25
## initial value 22566.583472
## final value 20022.210100
## converged
## # weights: 41
## initial value 22871.166527
## final value 20022.210100
## converged
## # weights: 9
## initial value 22122.774506
## iter 10 value 20029.257706
## final value 20027.719631
## converged
## # weights: 25
## initial value 22242.896400
## iter 10 value 20026.960956
## final value 20026.185550
## converged
## # weights: 41
## initial value 24129.686528
## iter 10 value 20028.388545
## iter 20 value 20025.526463
## final value 20025.526111
## converged
## # weights: 9
## initial value 21765.243480
## iter 10 value 20030.619131
## iter 20 value 20022.307050
## iter 20 value 20022.307011
## final value 20022.307011
## converged
## # weights: 25
## initial value 22879.265468
## iter 10 value 20035.116183
## iter 20 value 20022.358897
## final value 20022.226209

```

```

## converged
## # weights: 41
## initial value 24048.567613
## iter 10 value 20034.796238
## iter 20 value 20022.355208
## final value 20022.224870
## converged
## # weights: 9
## initial value 23299.758354
## final value 20053.247600
## converged
## # weights: 25
## initial value 22978.769629
## final value 20053.247600
## converged
## # weights: 41
## initial value 23991.734572
## final value 20053.247600
## converged
## # weights: 9
## initial value 22052.860291
## iter 10 value 20058.946119
## final value 20058.758376
## converged
## # weights: 25
## initial value 22236.955373
## iter 10 value 20064.138900
## iter 20 value 20057.227444
## final value 20057.223859
## converged
## # weights: 41
## initial value 23575.903400
## iter 10 value 20062.241433
## iter 20 value 20056.567489
## final value 20056.564318
## converged
## # weights: 9
## initial value 23705.702145
## iter 10 value 20061.644630
## iter 20 value 20053.344411
## iter 20 value 20053.344372
## final value 20053.344372
## converged
## # weights: 25
## initial value 24143.849341
## iter 10 value 20063.050848
## iter 20 value 20053.360624
## final value 20053.267504
## converged
## # weights: 41
## initial value 22402.960006
## iter 10 value 20072.715169
## iter 20 value 20053.472046
## final value 20053.258250

```



```

## converged
## # weights: 9
## initial value 23286.007158
## final value 19966.934000
## converged
## # weights: 25
## initial value 22633.933126
## final value 19966.934000
## converged
## # weights: 41
## initial value 23056.457206
## final value 19966.934000
## converged
## # weights: 9
## initial value 21838.269097
## iter 10 value 19972.533442
## final value 19972.442325
## converged
## # weights: 25
## initial value 21926.865775
## iter 10 value 19971.751480
## final value 19970.908709
## converged
## # weights: 41
## initial value 23038.697018
## iter 10 value 19972.162077
## iter 20 value 19970.249685
## iter 20 value 19970.249504
## iter 20 value 19970.249451
## final value 19970.249451
## converged
## # weights: 9
## initial value 22116.391751
## iter 10 value 19975.644645
## iter 20 value 19967.034427
## iter 20 value 19967.034387
## final value 19967.034387
## converged
## # weights: 25
## initial value 22346.125090
## iter 10 value 19980.795475
## iter 20 value 19967.093812
## final value 19966.946587
## converged
## # weights: 41
## initial value 22816.871227
## iter 10 value 19985.191230
## iter 20 value 19967.144492
## final value 19966.944679
## converged
## # weights: 9
## initial value 23902.584687
## final value 20031.473200
## converged

```

```

## # weights: 25
## initial value 23605.028382
## final value 20031.473200
## converged
## # weights: 41
## initial value 24475.405842
## final value 20031.473200
## converged
## # weights: 9
## initial value 23851.958843
## iter 10 value 20039.847077
## final value 20036.983036
## converged
## # weights: 25
## initial value 22124.663037
## iter 10 value 20035.940937
## final value 20035.448854
## converged
## # weights: 41
## initial value 22409.912234
## iter 10 value 20049.341460
## final value 20034.789389
## converged
## # weights: 9
## initial value 23823.509332
## iter 10 value 20040.444006
## iter 20 value 20031.576626
## iter 20 value 20031.576585
## final value 20031.576585
## converged
## # weights: 25
## initial value 23239.701759
## iter 10 value 20046.614760
## iter 20 value 20031.647770
## final value 20031.487691
## converged
## # weights: 41
## initial value 23281.675323
## iter 10 value 20050.685868
## iter 20 value 20031.694707
## final value 20031.483955
## converged
## # weights: 9
## initial value 23647.559397
## final value 19945.447600
## converged
## # weights: 25
## initial value 23408.681584
## final value 19945.447600
## converged
## # weights: 41
## initial value 22580.288415
## final value 19945.447600
## converged

```

```

## # weights: 9
## initial value 22999.761728
## iter 10 value 19951.137541
## final value 19950.955520
## converged
## # weights: 25
## initial value 23059.934298
## iter 10 value 19950.400704
## final value 19949.421946
## converged
## # weights: 41
## initial value 22471.161941
## iter 10 value 19949.539900
## final value 19948.762741
## converged
## # weights: 9
## initial value 22725.424275
## iter 10 value 19955.181885
## iter 20 value 19945.559829
## iter 20 value 19945.559784
## final value 19945.559784
## converged
## # weights: 25
## initial value 21983.782159
## iter 10 value 19957.946292
## iter 20 value 19945.591700
## final value 19945.459974
## converged
## # weights: 41
## initial value 23619.695128
## iter 10 value 19960.025995
## iter 20 value 19945.615677
## final value 19945.460674
## converged
## # weights: 9
## initial value 21947.431898
## final value 20032.478500
## converged
## # weights: 25
## initial value 23516.584380
## final value 20032.478500
## converged
## # weights: 41
## initial value 21118.189230
## final value 20032.478500
## converged
## # weights: 9
## initial value 23406.928720
## iter 10 value 20038.605722
## final value 20037.988365
## converged
## # weights: 25
## initial value 22142.881093
## iter 10 value 20038.636054

```

```

## iter 20 value 20036.454239
## iter 20 value 20036.454139
## iter 20 value 20036.454134
## final value 20036.454134
## converged
## # weights: 41
## initial value 22002.477288
## iter 10 value 20048.318906
## iter 20 value 20035.796260
## final value 20035.794737
## converged
## # weights: 9
## initial value 23171.304468
## iter 10 value 20042.072705
## iter 20 value 20032.589114
## iter 20 value 20032.589069
## final value 20032.589069
## converged
## # weights: 25
## initial value 24024.300158
## iter 10 value 20041.716960
## iter 20 value 20032.585012
## final value 20032.496539
## converged
## # weights: 41
## initial value 21205.885530
## iter 10 value 20041.970815
## iter 20 value 20032.587939
## final value 20032.488414
## converged
## # weights: 9
## initial value 22594.006622
## final value 20049.554000
## converged
## # weights: 25
## initial value 22352.718319
## final value 20049.554000
## converged
## # weights: 41
## initial value 22729.730388
## final value 20049.554000
## converged
## # weights: 9
## initial value 23606.564015
## iter 10 value 20058.597378
## final value 20055.064610
## converged
## # weights: 25
## initial value 21859.242467
## iter 10 value 20054.682728
## final value 20053.530202
## converged
## # weights: 41
## initial value 24553.320671

```

```

## iter 10 value 20062.552140
## iter 20 value 20052.878099
## final value 20052.870678
## converged
## # weights: 9
## initial value 22445.258768
## iter 10 value 20060.167894
## iter 20 value 20049.676370
## iter 20 value 20049.676321
## final value 20049.676321
## converged
## # weights: 25
## initial value 23200.803902
## iter 10 value 20065.649937
## iter 20 value 20049.739574
## final value 20049.570672
## converged
## # weights: 41
## initial value 23882.163778
## iter 10 value 20063.921971
## iter 20 value 20049.719651
## final value 20049.566780
## converged
## # weights: 9
## initial value 23471.320756
## final value 19999.010000
## converged
## # weights: 25
## initial value 23958.929371
## final value 19999.010000
## converged
## # weights: 41
## initial value 23986.783373
## final value 19999.010000
## converged
## # weights: 9
## initial value 22651.155188
## iter 10 value 20006.085925
## final value 20004.518954
## converged
## # weights: 25
## initial value 22663.890957
## iter 10 value 20004.585752
## iter 20 value 20002.985108
## iter 20 value 20002.985067
## iter 20 value 20002.985051
## final value 20002.985051
## converged
## # weights: 41
## initial value 21983.947562
## iter 10 value 20015.453976
## iter 20 value 20002.328828
## final value 20002.325762
## converged

```

```

## # weights: 9
## initial value 21837.504223
## iter 10 value 20006.679028
## iter 20 value 19999.098418
## iter 20 value 19999.098383
## final value 19999.098383
## converged
## # weights: 25
## initial value 23064.488946
## iter 10 value 20012.734159
## iter 20 value 19999.168229
## final value 19999.027103
## converged
## # weights: 41
## initial value 22389.968710
## iter 10 value 20017.068406
## iter 20 value 19999.218199
## final value 19999.020339
## converged
## # weights: 9
## initial value 22961.927419
## final value 19943.048500
## converged
## # weights: 25
## initial value 21257.930675
## final value 19943.048500
## converged
## # weights: 41
## initial value 22821.236957
## final value 19943.048500
## converged
## # weights: 9
## initial value 22270.364233
## iter 10 value 19949.432349
## final value 19948.556399
## converged
## # weights: 25
## initial value 22410.305615
## iter 10 value 19948.268884
## final value 19947.022945
## converged
## # weights: 41
## initial value 22137.707978
## iter 10 value 19957.947348
## iter 20 value 19946.390201
## final value 19946.363808
## converged
## # weights: 9
## initial value 22303.817912
## iter 10 value 19952.804398
## iter 20 value 19943.160978
## iter 20 value 19943.160933
## final value 19943.160933
## converged

```

```

## # weights: 25
## initial value 22604.635840
## iter 10 value 19959.233206
## iter 20 value 19943.235097
## final value 19943.065964
## converged
## # weights: 41
## initial value 22847.181974
## iter 10 value 19961.875184
## iter 20 value 19943.265557
## final value 19943.060333
## converged
## # weights: 9
## initial value 23954.955703
## final value 20054.289700
## converged
## # weights: 25
## initial value 22929.203726
## final value 20054.289700
## converged
## # weights: 41
## initial value 23609.181512
## final value 20054.289700
## converged
## # weights: 9
## initial value 23862.179319
## iter 10 value 20060.315914
## final value 20059.800631
## converged
## # weights: 25
## initial value 22961.591096
## iter 10 value 20058.937402
## final value 20058.266273
## converged
## # weights: 41
## initial value 22236.722310
## iter 10 value 20061.135494
## iter 20 value 20057.606906
## final value 20057.606550
## converged
## # weights: 9
## initial value 22231.279835
## iter 10 value 20064.629908
## iter 20 value 20054.408914
## iter 20 value 20054.408867
## final value 20054.408867
## converged
## # weights: 25
## initial value 23078.430286
## iter 10 value 20068.281388
## iter 20 value 20054.451013
## final value 20054.302752
## converged
## # weights: 41

```

```

## initial value 22265.717543
## iter 10 value 20073.652354
## iter 20 value 20054.512936
## final value 20054.300335
## converged
## # weights: 9
## initial value 23518.249272
## final value 19963.968500
## converged
## # weights: 25
## initial value 22920.041670
## final value 19963.968500
## converged
## # weights: 41
## initial value 21508.442905
## final value 19963.968500
## converged
## # weights: 9
## initial value 22607.895598
## iter 10 value 19970.284752
## final value 19969.476763
## converged
## # weights: 25
## initial value 22628.887427
## iter 10 value 19969.381736
## final value 19967.943135
## converged
## # weights: 41
## initial value 21022.126028
## iter 10 value 19978.213714
## iter 20 value 19967.284714
## final value 19967.283889
## converged
## # weights: 9
## initial value 22378.271956
## iter 10 value 19975.867546
## iter 20 value 19964.105687
## iter 20 value 19964.105632
## final value 19964.105632
## converged
## # weights: 25
## initial value 22124.420107
## iter 10 value 19978.896213
## iter 20 value 19964.140605
## final value 19963.984547
## converged
## # weights: 41
## initial value 22992.558481
## iter 10 value 19983.213419
## iter 20 value 19964.190379
## final value 19963.979775
## converged
## # weights: 9
## initial value 22418.331393

```



```

## final value 19959.741200
## converged
## # weights: 25
## initial value 22503.773459
## final value 19959.741200
## converged
## # weights: 41
## initial value 21986.797505
## final value 19959.741200
## converged
## # weights: 9
## initial value 23285.959940
## iter 10 value 19969.061372
## final value 19965.249388
## converged
## # weights: 25
## initial value 21764.820370
## iter 10 value 19964.991429
## final value 19963.715741
## converged
## # weights: 41
## initial value 21616.833087
## iter 10 value 19964.367917
## iter 20 value 19963.056687
## iter 20 value 19963.056547
## iter 20 value 19963.056510
## final value 19963.056510
## converged
## # weights: 9
## initial value 23241.781303
## iter 10 value 19971.005699
## iter 20 value 19959.871071
## iter 20 value 19959.871019
## final value 19959.871019
## converged
## # weights: 25
## initial value 21822.362635
## iter 10 value 19972.066323
## iter 20 value 19959.883299
## final value 19959.753158
## converged
## # weights: 41
## initial value 23869.760086
## iter 10 value 19973.895743
## iter 20 value 19959.904391
## final value 19959.753678
## converged
## # weights: 9
## initial value 22948.053462
## final value 20003.726000
## converged
## # weights: 25
## initial value 21601.798796
## final value 20003.726000

```

```

## converged
## # weights: 41
## initial value 22798.021266
## final value 20003.726000
## converged
## # weights: 9
## initial value 23701.878796
## iter 10 value 20009.902361
## final value 20009.234923
## converged
## # weights: 25
## initial value 23737.593565
## iter 10 value 20008.776769
## final value 20007.700968
## converged
## # weights: 41
## initial value 23897.272177
## iter 10 value 20010.979706
## iter 20 value 20007.041968
## final value 20007.041634
## converged
## # weights: 9
## initial value 22659.684035
## iter 10 value 20014.332162
## iter 20 value 20003.848281
## iter 20 value 20003.848232
## final value 20003.848232
## converged
## # weights: 25
## initial value 23082.294474
## iter 10 value 20020.292638
## iter 20 value 20003.917000
## final value 20003.738765
## converged
## # weights: 41
## initial value 23587.751284
## iter 10 value 20018.362788
## iter 20 value 20003.894751
## final value 20003.737324
## converged
## # weights: 9
## initial value 22981.993605
## final value 20019.873700
## converged
## # weights: 25
## initial value 22980.192872
## final value 20019.873700
## converged
## # weights: 41
## initial value 23013.861701
## final value 20019.873700
## converged
## # weights: 9
## initial value 23112.906856

```

```

## iter 10 value 20026.411972
## final value 20025.383153
## converged
## # weights: 25
## initial value 22583.622439
## iter 10 value 20024.493437
## final value 20023.849085
## converged
## # weights: 41
## initial value 22383.546760
## iter 10 value 20036.848669
## iter 20 value 20023.192659
## final value 20023.189669
## converged
## # weights: 9
## initial value 23266.776800
## iter 10 value 20030.064703
## iter 20 value 20019.991194
## iter 20 value 20019.991147
## final value 20019.991147
## converged
## # weights: 25
## initial value 22593.969885
## iter 10 value 20035.430530
## iter 20 value 20020.053058
## final value 20019.890796
## converged
## # weights: 41
## initial value 21872.722306
## iter 10 value 20035.935298
## iter 20 value 20020.058878
## iter 30 value 20019.883274
## iter 30 value 20019.883274
## iter 30 value 20019.883271
## final value 20019.883271
## converged
## # weights: 9
## initial value 22061.518868
## final value 19935.706000
## converged
## # weights: 25
## initial value 22349.577842
## final value 19935.706000
## converged
## # weights: 41
## initial value 23280.614157
## final value 19935.706000
## converged
## # weights: 9
## initial value 22072.573395
## iter 10 value 19941.668669
## final value 19941.213711
## converged
## # weights: 25

```

```

## initial value 21799.031314
## iter 10 value 19943.296636
## iter 20 value 19939.684985
## final value 19939.680258
## converged
## # weights: 41
## initial value 23117.016529
## iter 10 value 19951.869313
## iter 20 value 19939.024897
## final value 19939.021029
## converged
## # weights: 9
## initial value 22763.434502
## iter 10 value 19947.114861
## iter 20 value 19935.837535
## iter 20 value 19935.837483
## final value 19935.837483
## converged
## # weights: 25
## initial value 23578.164209
## iter 10 value 19947.456255
## iter 20 value 19935.841471
## final value 19935.721359
## converged
## # weights: 41
## initial value 23790.638428
## iter 10 value 19947.681512
## iter 20 value 19935.844068
## final value 19935.717579
## converged
## # weights: 9
## initial value 21976.920583
## final value 19896.502000
## converged
## # weights: 25
## initial value 22280.071128
## final value 19896.502000
## converged
## # weights: 41
## initial value 22371.323202
## final value 19896.502000
## converged
## # weights: 9
## initial value 22361.698082
## iter 10 value 19903.988793
## final value 19902.009268
## converged
## # weights: 25
## initial value 23161.690365
## iter 10 value 19900.693999
## final value 19900.476080
## converged
## # weights: 41
## initial value 23081.960463

```

```

## iter 10 value 19908.584840
## iter 20 value 19899.880655
## iter 30 value 19899.817589
## final value 19899.816991
## converged
## # weights: 9
## initial value 22393.374671
## iter 10 value 19906.753868
## iter 20 value 19896.620196
## iter 20 value 19896.620149
## final value 19896.620149
## converged
## # weights: 25
## initial value 23217.203950
## iter 10 value 19911.236777
## iter 20 value 19896.671880
## final value 19896.519231
## converged
## # weights: 41
## initial value 22739.993046
## iter 10 value 19915.189551
## iter 20 value 19896.717453
## final value 19896.512129
## converged
## # weights: 9
## initial value 21852.903658
## final value 20003.417200
## converged
## # weights: 25
## initial value 22290.458025
## final value 20003.417200
## converged
## # weights: 41
## initial value 21679.421810
## final value 20003.417200
## converged
## # weights: 9
## initial value 22156.863290
## iter 10 value 20010.629632
## final value 20008.926246
## converged
## # weights: 25
## initial value 22593.957705
## iter 10 value 20012.144011
## iter 20 value 20007.393622
## final value 20007.392363
## converged
## # weights: 41
## initial value 22478.339924
## iter 10 value 20011.192285
## iter 20 value 20006.735203
## final value 20006.732981
## converged
## # weights: 9

```

```

## initial value 23091.760060
## iter 10 value 20014.733280
## iter 20 value 20003.547666
## iter 20 value 20003.547613
## final value 20003.547613
## converged
## # weights: 25
## initial value 21675.107985
## iter 10 value 20015.046703
## iter 20 value 20003.551279
## final value 20003.429423
## converged
## # weights: 41
## initial value 23720.692631
## iter 10 value 20018.829388
## iter 20 value 20003.594890
## final value 20003.428359
## converged
## # weights: 9
## initial value 23333.850202
## final value 20033.902000
## converged
## # weights: 25
## initial value 23416.801577
## final value 20033.902000
## converged
## # weights: 41
## initial value 23629.854949
## final value 20033.902000
## converged
## # weights: 9
## initial value 23132.182465
## iter 10 value 20042.328909
## final value 20039.411917
## converged
## # weights: 25
## initial value 22237.337168
## iter 10 value 20039.198131
## final value 20037.877736
## converged
## # weights: 41
## initial value 22656.470184
## iter 10 value 20050.596808
## iter 20 value 20037.218527
## iter 20 value 20037.218366
## iter 20 value 20037.218319
## final value 20037.218319
## converged
## # weights: 9
## initial value 21923.803247
## iter 10 value 20042.205597
## iter 20 value 20033.997734
## iter 20 value 20033.997696
## final value 20033.997696

```

```

## converged
## # weights: 25
## initial value 21670.269659
## iter 10 value 20043.636752
## iter 20 value 20034.014234
## final value 20033.914945
## converged
## # weights: 41
## initial value 22456.356580
## iter 10 value 20051.256192
## iter 20 value 20034.102080
## final value 20033.911602
## converged
## # weights: 9
## initial value 22710.086351
## final value 19939.293200
## converged
## # weights: 25
## initial value 22983.466309
## final value 19939.293200
## converged
## # weights: 41
## initial value 22408.376367
## final value 19939.293200
## converged
## # weights: 9
## initial value 22882.255675
## iter 10 value 19947.962488
## final value 19944.800959
## converged
## # weights: 25
## initial value 21800.443684
## iter 10 value 19945.254124
## iter 20 value 19943.285915
## final value 19943.267485
## converged
## # weights: 41
## initial value 22541.341303
## iter 10 value 19944.551923
## iter 20 value 19942.608267
## iter 20 value 19942.608240
## iter 20 value 19942.608237
## final value 19942.608237
## converged
## # weights: 9
## initial value 22972.636691
## iter 10 value 19948.977173
## iter 20 value 19939.404849
## iter 20 value 19939.404804
## final value 19939.404804
## converged
## # weights: 25
## initial value 22912.728376
## iter 10 value 19953.635080

```

```

## iter 20 value 19939.458551
## final value 19939.306564
## converged
## # weights: 41
## initial value 22122.250790
## iter 10 value 19955.360523
## iter 20 value 19939.478444
## final value 19939.303845
## converged
## # weights: 9
## initial value 22188.521910
## final value 20046.523700
## converged
## # weights: 25
## initial value 22524.871014
## final value 20046.523700
## converged
## # weights: 41
## initial value 21546.016040
## final value 20046.523700
## converged
## # weights: 9
## initial value 23176.370580
## iter 10 value 20054.556939
## final value 20052.034136
## converged
## # weights: 25
## initial value 23850.094675
## iter 10 value 20051.703161
## final value 20050.499770
## converged
## # weights: 41
## initial value 21554.415873
## iter 10 value 20050.744035
## final value 20049.840245
## converged
## # weights: 9
## initial value 23235.459320
## iter 10 value 20056.785700
## iter 20 value 20046.642013
## iter 20 value 20046.641965
## final value 20046.641965
## converged
## # weights: 25
## initial value 22812.610880
## iter 10 value 20061.032562
## iter 20 value 20046.690976
## final value 20046.541320
## converged
## # weights: 41
## initial value 21648.027486
## iter 10 value 20059.518878
## iter 20 value 20046.673524
## final value 20046.533256

```



```

## converged
## # weights: 9
## initial value 22459.147551
## final value 20039.453200
## converged
## # weights: 25
## initial value 23094.042105
## final value 20039.453200
## converged
## # weights: 41
## initial value 23052.711179
## final value 20039.453200
## converged
## # weights: 9
## initial value 23243.156456
## iter 10 value 20046.407596
## final value 20044.963346
## converged
## # weights: 25
## initial value 23385.018653
## iter 10 value 20045.109186
## iter 20 value 20043.431369
## final value 20043.429119
## converged
## # weights: 41
## initial value 23458.164629
## iter 10 value 20049.428976
## iter 20 value 20042.770323
## final value 20042.769602
## converged
## # weights: 9
## initial value 21998.977933
## iter 10 value 20047.732521
## iter 20 value 20039.548654
## iter 20 value 20039.548616
## final value 20039.548616
## converged
## # weights: 25
## initial value 22880.581464
## iter 10 value 20054.045181
## iter 20 value 20039.621434
## final value 20039.467026
## converged
## # weights: 41
## initial value 21561.938775
## iter 10 value 20051.290138
## iter 20 value 20039.589671
## final value 20039.462405
## converged
## # weights: 9
## initial value 22875.779676
## final value 19979.630500
## converged
## # weights: 25

```

```

## initial value 23347.897407
## final value 19979.630500
## converged
## # weights: 41
## initial value 22389.617289
## final value 19979.630500
## converged
## # weights: 9
## initial value 22620.111093
## iter 10 value 19985.749793
## iter 20 value 19985.139873
## final value 19985.139189
## converged
## # weights: 25
## initial value 23328.822193
## iter 10 value 19984.504465
## final value 19983.605366
## converged
## # weights: 41
## initial value 22724.546208
## iter 10 value 19984.238631
## iter 20 value 19982.946170
## iter 20 value 19982.946063
## iter 20 value 19982.946039
## final value 19982.946039
## converged
## # weights: 9
## initial value 22508.046693
## iter 10 value 19991.120734
## iter 20 value 19979.762973
## iter 20 value 19979.762920
## final value 19979.762920
## converged
## # weights: 25
## initial value 23221.453510
## iter 10 value 19994.737524
## iter 20 value 19979.804672
## final value 19979.656810
## converged
## # weights: 41
## initial value 24393.483508
## iter 10 value 19988.154414
## iter 20 value 19979.728774
## final value 19979.645460
## converged
## # weights: 9
## initial value 22086.077210
## final value 19869.960100
## converged
## # weights: 25
## initial value 22136.204983
## final value 19869.960100
## converged
## # weights: 41

```

```

## initial value 22245.820073
## final value 19869.960100
## converged
## # weights: 9
## initial value 22877.802530
## iter 10 value 19876.253557
## final value 19875.466887
## converged
## # weights: 25
## initial value 22699.485275
## iter 10 value 19880.368135
## iter 20 value 19873.934971
## final value 19873.933750
## converged
## # weights: 41
## initial value 22253.517377
## iter 10 value 19887.181138
## iter 20 value 19873.277402
## final value 19873.274673
## converged
## # weights: 9
## initial value 22417.018699
## iter 10 value 19880.366212
## iter 20 value 19870.080074
## iter 20 value 19870.080026
## final value 19870.080026
## converged
## # weights: 25
## initial value 22607.288445
## iter 10 value 19884.801902
## iter 20 value 19870.131214
## final value 19869.972179
## converged
## # weights: 41
## initial value 22738.268957
## iter 10 value 19887.362561
## iter 20 value 19870.160737
## final value 19869.969713
## converged
## # weights: 9
## initial value 23053.604356
## final value 20009.441200
## converged
## # weights: 25
## initial value 21843.391531
## final value 20009.441200
## converged
## # weights: 41
## initial value 21977.341963
## final value 20009.441200
## converged
## # weights: 9
## initial value 22135.943649
## iter 10 value 20016.775501

```

```

## final value 20014.950392
## converged
## # weights: 25
## initial value 23619.963041
## iter 10 value 20015.781054
## final value 20013.416471
## converged
## # weights: 41
## initial value 22466.733831
## iter 10 value 20016.283323
## iter 20 value 20012.757324
## iter 20 value 20012.757133
## iter 20 value 20012.757070
## final value 20012.757070
## converged
## # weights: 9
## initial value 22668.635272
## iter 10 value 20020.862000
## iter 20 value 20009.572873
## iter 20 value 20009.572820
## final value 20009.572820
## converged
## # weights: 25
## initial value 22356.871621
## iter 10 value 20024.672266
## iter 20 value 20009.616802
## final value 20009.455538
## converged
## # weights: 41
## initial value 22757.330585
## iter 10 value 20026.363896
## iter 20 value 20009.636305
## final value 20009.450728
## converged
## # weights: 9
## initial value 22601.556979
## final value 20044.937200
## converged
## # weights: 25
## initial value 23206.951264
## final value 20044.937200
## converged
## # weights: 41
## initial value 22842.920023
## final value 20044.937200
## converged
## # weights: 9
## initial value 21854.406522
## iter 10 value 20051.408430
## final value 20050.447540
## converged
## # weights: 25
## initial value 21408.611914
## iter 10 value 20049.753263

```

```

## final value 20048.913152
## converged
## # weights: 41
## initial value 23492.843017
## iter 10 value 20048.933932
## final value 20048.253737
## converged
## # weights: 9
## initial value 22880.347027
## iter 10 value 20056.935159
## iter 20 value 20045.075527
## iter 20 value 20045.075472
## final value 20045.075472
## converged
## # weights: 25
## initial value 22297.925888
## iter 10 value 20057.883882
## iter 20 value 20045.086465
## final value 20044.950407
## converged
## # weights: 41
## initial value 24248.941902
## iter 10 value 20054.544001
## iter 20 value 20045.047959
## final value 20044.952907
## converged
## # weights: 9
## initial value 23528.744931
## final value 20059.210000
## converged
## # weights: 25
## initial value 23699.408474
## final value 20059.210000
## converged
## # weights: 41
## initial value 22993.565905
## final value 20059.210000
## converged
## # weights: 9
## initial value 23794.048708
## iter 10 value 20066.736350
## final value 20064.721165
## converged
## # weights: 25
## initial value 21817.715391
## iter 10 value 20063.588076
## final value 20063.186508
## converged
## # weights: 41
## initial value 23894.388821
## iter 10 value 20063.917948
## iter 20 value 20062.527043
## iter 20 value 20062.526911
## iter 20 value 20062.526898

```

```

## final value 20062.526898
## converged
## # weights: 9
## initial value 21894.803846
## iter 10 value 20067.029885
## iter 20 value 20059.300157
## iter 20 value 20059.300121
## final value 20059.300121
## converged
## # weights: 25
## initial value 22862.990715
## iter 10 value 20073.137429
## iter 20 value 20059.370572
## final value 20059.223114
## converged
## # weights: 41
## initial value 23025.952229
## iter 10 value 20079.358300
## iter 20 value 20059.442294
## final value 20059.220654
## converged
## # weights: 9
## initial value 22658.484851
## final value 20016.794000
## converged
## # weights: 25
## initial value 22112.622400
## final value 20016.794000
## converged
## # weights: 41
## initial value 22331.501679
## final value 20016.794000
## converged
## # weights: 9
## initial value 22817.025966
## iter 10 value 20023.146000
## final value 20022.303378
## converged
## # weights: 25
## initial value 23090.200273
## iter 10 value 20021.948349
## final value 20020.769507
## converged
## # weights: 41
## initial value 22624.718462
## iter 10 value 20026.320949
## iter 20 value 20020.110403
## final value 20020.109988
## converged
## # weights: 9
## initial value 22437.113823
## iter 10 value 20026.493630
## iter 20 value 20016.905829
## iter 20 value 20016.905784

```

```

## final value 20016.905784
## converged
## # weights: 25
## initial value 23980.241958
## iter 10 value 20027.804641
## iter 20 value 20016.920944
## final value 20016.809627
## converged
## # weights: 41
## initial value 21017.440217
## iter 10 value 20022.758575
## iter 20 value 20016.862767
## final value 20016.803074
## converged
## # weights: 9
## initial value 23855.492016
## final value 19905.667600
## converged
## # weights: 25
## initial value 21232.608422
## final value 19905.667600
## converged
## # weights: 41
## initial value 22475.804999
## final value 19905.667600
## converged
## # weights: 9
## initial value 22354.671341
## iter 10 value 19911.897794
## final value 19911.174977
## converged
## # weights: 25
## initial value 23469.372172
## iter 10 value 19911.123496
## final value 19909.641713
## converged
## # weights: 41
## initial value 22754.359558
## iter 10 value 19911.531785
## iter 20 value 19908.983010
## final value 19908.982570
## converged
## # weights: 9
## initial value 23381.657271
## iter 10 value 19914.764247
## iter 20 value 19905.772477
## iter 20 value 19905.772435
## final value 19905.772435
## converged
## # weights: 25
## initial value 22921.260955
## iter 10 value 19918.509352
## iter 20 value 19905.815655
## final value 19905.680905

```

```

## converged
## # weights: 41
## initial value 22806.119425
## iter 10 value 19924.995466
## iter 20 value 19905.890435
## final value 19905.678771
## converged
## # weights: 9
## initial value 21996.892941
## final value 20010.607600
## converged
## # weights: 25
## initial value 22087.910141
## final value 20010.607600
## converged
## # weights: 41
## initial value 22857.897110
## final value 20010.607600
## converged
## # weights: 9
## initial value 22347.275462
## iter 10 value 20017.826625
## final value 20016.116821
## converged
## # weights: 25
## initial value 22979.513426
## iter 10 value 20016.352273
## iter 20 value 20014.584327
## final value 20014.582810
## converged
## # weights: 41
## initial value 23580.652385
## iter 10 value 20014.772880
## iter 20 value 20013.923599
## iter 20 value 20013.923462
## iter 20 value 20013.923445
## final value 20013.923445
## converged
## # weights: 9
## initial value 23053.196678
## iter 10 value 20021.465740
## iter 20 value 20010.732786
## iter 20 value 20010.732736
## final value 20010.732736
## converged
## # weights: 25
## initial value 22176.679108
## iter 10 value 20024.747729
## iter 20 value 20010.770625
## final value 20010.620303
## converged
## # weights: 41
## initial value 22962.183304
## iter 10 value 20029.755288

```



```

## iter 20 value 20010.828358
## final value 20010.619756
## converged
## # weights: 9
## initial value 21886.661333
## final value 20036.130100
## converged
## # weights: 25
## initial value 22795.610278
## final value 20036.130100
## converged
## # weights: 41
## initial value 23383.039282
## final value 20036.130100
## converged
## # weights: 9
## initial value 23583.555506
## iter 10 value 20056.772011
## iter 20 value 20041.641542
## final value 20041.640115
## converged
## # weights: 25
## initial value 22909.252301
## iter 10 value 20041.599499
## iter 20 value 20040.105951
## iter 20 value 20040.105863
## iter 20 value 20040.105841
## final value 20040.105841
## converged
## # weights: 41
## initial value 23396.457207
## iter 10 value 20040.884547
## iter 20 value 20039.446505
## iter 20 value 20039.446428
## iter 20 value 20039.446423
## final value 20039.446423
## converged
## # weights: 9
## initial value 22556.288335
## iter 10 value 20045.854466
## iter 20 value 20036.242214
## iter 20 value 20036.242169
## final value 20036.242169
## converged
## # weights: 25
## initial value 23425.425679
## iter 10 value 20049.787899
## iter 20 value 20036.287564
## final value 20036.143310
## converged
## # weights: 41
## initial value 23186.366568
## iter 10 value 20057.477555
## iter 20 value 20036.376219

```

```

## final value 20036.140893
## converged
## # weights: 9
## initial value 23160.324385
## final value 20002.797200
## converged
## # weights: 25
## initial value 22510.031136
## final value 20002.797200
## converged
## # weights: 41
## initial value 22862.860621
## final value 20002.797200
## converged
## # weights: 9
## initial value 22495.523203
## iter 10 value 20008.494047
## final value 20008.306231
## converged
## # weights: 25
## initial value 22757.805959
## iter 10 value 20007.490767
## final value 20006.772282
## converged
## # weights: 41
## initial value 22564.352860
## iter 10 value 20007.397555
## final value 20006.113025
## converged
## # weights: 9
## initial value 23464.858055
## iter 10 value 20013.576966
## iter 20 value 20002.921482
## iter 20 value 20002.921433
## final value 20002.921433
## converged
## # weights: 25
## initial value 22410.428800
## iter 10 value 20017.044444
## iter 20 value 20002.961460
## final value 20002.813234
## converged
## # weights: 41
## initial value 23387.178222
## iter 10 value 20020.420523
## iter 20 value 20003.000383
## final value 20002.812548
## converged
## # weights: 9
## initial value 23531.081470
## final value 20060.381200
## converged
## # weights: 25
## initial value 21573.088074

```

```

## final value 20060.381200
## converged
## # weights: 41
## initial value 21355.186120
## final value 20060.381200
## converged
## # weights: 9
## initial value 22241.772819
## iter 10 value 20066.245884
## final value 20065.892598
## converged
## # weights: 25
## initial value 21923.586107
## iter 10 value 20066.030591
## iter 20 value 20064.358147
## iter 20 value 20064.357965
## iter 20 value 20064.357915
## final value 20064.357915
## converged
## # weights: 41
## initial value 21099.562934
## iter 10 value 20073.781474
## iter 20 value 20063.698863
## final value 20063.698328
## converged
## # weights: 9
## initial value 22809.681674
## iter 10 value 20070.196005
## iter 20 value 20060.494357
## iter 20 value 20060.494312
## final value 20060.494312
## converged
## # weights: 25
## initial value 21653.331986
## iter 10 value 20069.561677
## iter 20 value 20060.487044
## final value 20060.393605
## converged
## # weights: 41
## initial value 22822.409523
## iter 10 value 20080.790665
## iter 20 value 20060.616505
## final value 20060.390852
## converged
## # weights: 9
## initial value 21502.057384
## final value 19961.765200
## converged
## # weights: 25
## initial value 23226.978226
## final value 19961.765200
## converged
## # weights: 41
## initial value 22337.231875

```

```

## final value 19961.765200
## converged
## # weights: 9
## initial value 22691.054643
## iter 10 value 19968.134559
## final value 19967.273444
## converged
## # weights: 25
## initial value 23232.636006
## iter 10 value 19966.199429
## final value 19965.739864
## converged
## # weights: 41
## initial value 22464.844304
## iter 10 value 19979.490637
## iter 20 value 19965.084015
## final value 19965.080593
## converged
## # weights: 9
## initial value 21951.365107
## iter 10 value 19971.273157
## iter 20 value 19961.874819
## iter 20 value 19961.874775
## final value 19961.874775
## converged
## # weights: 25
## initial value 22356.514958
## iter 10 value 19975.224017
## iter 20 value 19961.920370
## final value 19961.777262
## converged
## # weights: 41
## initial value 23532.639745
## iter 10 value 19978.170445
## iter 20 value 19961.954340
## final value 19961.778525
## converged
## # weights: 9
## initial value 22537.125572
## final value 20000.918000
## converged
## # weights: 25
## initial value 22035.145057
## final value 20000.918000
## converged
## # weights: 41
## initial value 22556.756738
## final value 20000.918000
## converged
## # weights: 9
## initial value 22460.148210
## iter 10 value 20007.855918
## final value 20006.426969
## converged

```

```

## # weights: 25
## initial value 22333.302435
## iter 10 value 20006.068476
## final value 20004.893038
## converged
## # weights: 41
## initial value 22011.003783
## iter 10 value 20006.696952
## iter 20 value 20004.233934
## iter 20 value 20004.233748
## iter 20 value 20004.233743
## final value 20004.233743
## converged
## # weights: 9
## initial value 22220.325953
## iter 10 value 20011.209988
## iter 20 value 20001.036659
## iter 20 value 20001.036611
## final value 20001.036611
## converged
## # weights: 25
## initial value 23035.568814
## iter 10 value 20017.002643
## iter 20 value 20001.103443
## final value 20000.929936
## converged
## # weights: 41
## initial value 22941.911017
## iter 10 value 20022.005877
## iter 20 value 20001.161127
## final value 20000.929022
## converged
## # weights: 9
## initial value 22789.784530
## final value 20047.567600
## converged
## # weights: 25
## initial value 22213.681601
## final value 20047.567600
## converged
## # weights: 41
## initial value 22972.653100
## final value 20047.567600
## converged
## # weights: 9
## initial value 23745.073876
## iter 10 value 20054.950095
## final value 20053.078064
## converged
## # weights: 25
## initial value 23284.642172
## iter 10 value 20053.467841
## iter 20 value 20051.543689
## iter 20 value 20051.543633

```

```

## iter 20 value 20051.543631
## final value 20051.543631
## converged
## # weights: 41
## initial value 24143.611282
## iter 10 value 20052.110569
## iter 20 value 20050.884535
## final value 20050.884128
## converged
## # weights: 9
## initial value 23052.608416
## iter 10 value 20058.947251
## iter 20 value 20047.698798
## iter 20 value 20047.698746
## final value 20047.698746
## converged
## # weights: 25
## initial value 23266.130476
## iter 10 value 20061.421893
## iter 20 value 20047.727329
## final value 20047.580766
## converged
## # weights: 41
## initial value 23077.442410
## iter 10 value 20067.467091
## iter 20 value 20047.797026
## final value 20047.582219
## converged
## # weights: 9
## initial value 23066.466405
## final value 20031.922000
## converged
## # weights: 25
## initial value 22012.887505
## final value 20031.922000
## converged
## # weights: 41
## initial value 23770.201383
## final value 20031.922000
## converged
## # weights: 9
## initial value 21934.132027
## iter 10 value 20039.197281
## final value 20037.431846
## converged
## # weights: 25
## initial value 21980.990417
## iter 10 value 20037.297664
## final value 20035.897647
## converged
## # weights: 41
## initial value 22796.197464
## iter 10 value 20047.928826
## iter 20 value 20035.240740

```

```

## final value 20035.238257
## converged
## # weights: 9
## initial value 23641.125657
## iter 10 value 20041.964748
## iter 20 value 20032.037785
## iter 20 value 20032.037739
## final value 20032.037739
## converged
## # weights: 25
## initial value 22101.077515
## iter 10 value 20046.167753
## iter 20 value 20032.086242
## final value 20031.934743
## converged
## # weights: 41
## initial value 21666.589513
## iter 10 value 20043.290929
## iter 20 value 20032.053075
## final value 20031.932025
## converged
## # weights: 9
## initial value 22713.172498
## final value 20058.152500
## converged
## # weights: 25
## initial value 23511.869498
## final value 20058.152500
## converged
## # weights: 41
## initial value 22288.558029
## final value 20058.152500
## converged
## # weights: 9
## initial value 23378.589520
## iter 10 value 20064.080999
## final value 20063.663664
## converged
## # weights: 25
## initial value 22518.322937
## iter 10 value 20065.685876
## iter 20 value 20062.129067
## iter 20 value 20062.129036
## iter 20 value 20062.129032
## final value 20062.129032
## converged
## # weights: 41
## initial value 22733.312822
## iter 10 value 20062.197032
## final value 20061.469441
## converged
## # weights: 9
## initial value 23192.934322
## iter 10 value 20069.118840

```

```

## iter 20 value 20058.278933
## iter 20 value 20058.278883
## final value 20058.278883
## converged
## # weights: 25
## initial value 21872.160364
## iter 10 value 20069.375403
## iter 20 value 20058.281891
## final value 20058.165388
## converged
## # weights: 41
## initial value 21925.796970
## iter 10 value 20075.011475
## iter 20 value 20058.346871
## final value 20058.162382
## converged
## # weights: 9
## initial value 22004.608529
## final value 20062.025200
## converged
## # weights: 25
## initial value 22312.460264
## final value 20062.025200
## converged
## # weights: 41
## initial value 22370.392645
## final value 20062.025200
## converged
## # weights: 9
## initial value 22850.725673
## iter 10 value 20067.718580
## final value 20067.536888
## converged
## # weights: 25
## initial value 23282.795965
## iter 10 value 20066.911890
## final value 20066.002163
## converged
## # weights: 41
## initial value 23367.193155
## iter 10 value 20066.432449
## iter 20 value 20065.342530
## iter 20 value 20065.342460
## iter 20 value 20065.342454
## final value 20065.342454
## converged
## # weights: 9
## initial value 22377.499258
## iter 10 value 20071.655206
## iter 20 value 20062.136226
## iter 20 value 20062.136182
## final value 20062.136182
## converged
## # weights: 25

```



```

## initial value 21655.210680
## iter 10 value 20073.494942
## iter 20 value 20062.157437
## final value 20062.037330
## converged
## # weights: 41
## initial value 22535.914546
## iter 10 value 20078.016378
## iter 20 value 20062.209566
## iter 30 value 20062.034647
## iter 30 value 20062.034647
## iter 30 value 20062.034646
## final value 20062.034646
## converged
## # weights: 9
## initial value 22607.496383
## final value 20014.728500
## converged
## # weights: 25
## initial value 22089.996870
## final value 20014.728500
## converged
## # weights: 41
## initial value 22503.147756
## final value 20014.728500
## converged
## # weights: 9
## initial value 22501.481154
## iter 10 value 20020.795296
## final value 20020.237788
## converged
## # weights: 25
## initial value 23098.238312
## iter 10 value 20020.721532
## final value 20018.703753
## converged
## # weights: 41
## initial value 24265.741796
## iter 10 value 20027.091929
## iter 20 value 20018.044812
## final value 20018.044396
## converged
## # weights: 9
## initial value 22522.218139
## iter 10 value 20024.304132
## iter 20 value 20014.838900
## iter 20 value 20014.838855
## final value 20014.838855
## converged
## # weights: 25
## initial value 23391.209649
## iter 10 value 20028.644798
## iter 20 value 20014.888944
## final value 20014.745318

```

```

## converged
## # weights: 41
## initial value 22081.827645
## iter 10 value 20032.926436
## iter 20 value 20014.938308
## final value 20014.739308
## converged
## # weights: 9
## initial value 22389.206813
## final value 19974.245200
## converged
## # weights: 25
## initial value 22529.850243
## final value 19974.245200
## converged
## # weights: 41
## initial value 21032.330155
## final value 19974.245200
## converged
## # weights: 9
## initial value 22099.319504
## iter 10 value 19980.141976
## final value 19979.753631
## converged
## # weights: 25
## initial value 23376.140592
## iter 10 value 19978.788402
## final value 19978.220007
## converged
## # weights: 41
## initial value 22590.233881
## iter 10 value 19986.298170
## iter 20 value 19977.561435
## final value 19977.560697
## converged
## # weights: 9
## initial value 23531.466835
## iter 10 value 19983.525742
## iter 20 value 19974.352197
## iter 20 value 19974.352155
## final value 19974.352155
## converged
## # weights: 25
## initial value 22697.258879
## iter 10 value 19988.300724
## iter 20 value 19974.407249
## final value 19974.260595
## converged
## # weights: 41
## initial value 23039.596158
## iter 10 value 19994.598833
## iter 20 value 19974.479861
## final value 19974.257490
## converged

```

```

## # weights: 9
## initial value 22764.546527
## final value 20053.435700
## converged
## # weights: 25
## initial value 22858.435648
## final value 20053.435700
## converged
## # weights: 41
## initial value 23374.596196
## final value 20053.435700
## converged
## # weights: 9
## initial value 22670.502140
## iter 10 value 20059.441737
## final value 20058.946580
## converged
## # weights: 25
## initial value 22213.286329
## iter 10 value 20057.889973
## final value 20057.412033
## converged
## # weights: 41
## initial value 23002.521444
## iter 10 value 20057.694813
## iter 20 value 20056.752747
## final value 20056.752414
## converged
## # weights: 9
## initial value 22631.737184
## iter 10 value 20063.437453
## iter 20 value 20053.551012
## iter 20 value 20053.550966
## final value 20053.550966
## converged
## # weights: 25
## initial value 23986.743743
## iter 10 value 20063.719615
## iter 20 value 20053.554265
## final value 20053.453930
## converged
## # weights: 41
## initial value 22737.147803
## iter 10 value 20071.892767
## iter 20 value 20053.648495
## final value 20053.447133
## converged
## # weights: 9
## initial value 22351.603120
## final value 20053.184500
## converged
## # weights: 25
## initial value 22893.994875
## final value 20053.184500

```

```

## converged
## # weights: 41
## initial value 23529.982793
## final value 20053.184500
## converged
## # weights: 9
## initial value 22210.294189
## iter 10 value 20059.485231
## final value 20058.695228
## converged
## # weights: 25
## initial value 23392.745021
## iter 10 value 20058.221793
## final value 20057.160716
## converged
## # weights: 41
## initial value 21827.611337
## iter 10 value 20056.981329
## final value 20056.501162
## converged
## # weights: 9
## initial value 21999.057589
## iter 10 value 20061.335495
## iter 20 value 20053.278475
## iter 20 value 20053.278437
## final value 20053.278437
## converged
## # weights: 25
## initial value 23727.641446
## iter 10 value 20066.419055
## iter 20 value 20053.337084
## final value 20053.198526
## converged
## # weights: 41
## initial value 21711.030915
## iter 10 value 20067.930620
## iter 20 value 20053.354511
## final value 20053.193583
## converged
## # weights: 9
## initial value 21960.097704
## final value 20050.496500
## converged
## # weights: 25
## initial value 22307.271620
## final value 20050.496500
## converged
## # weights: 41
## initial value 23323.477736
## final value 20050.496500
## converged
## # weights: 9
## initial value 23945.421484
## iter 10 value 20059.521781

```

```

## final value 20056.007153
## converged
## # weights: 25
## initial value 23690.026254
## iter 10 value 20055.523161
## final value 20054.472730
## converged
## # weights: 41
## initial value 23202.654557
## iter 10 value 20066.502041
## iter 20 value 20053.813420
## iter 20 value 20053.813263
## iter 20 value 20053.813217
## final value 20053.813217
## converged
## # weights: 9
## initial value 22803.704276
## iter 10 value 20060.828897
## iter 20 value 20050.615624
## iter 20 value 20050.615577
## final value 20050.615577
## converged
## # weights: 25
## initial value 21901.680400
## iter 10 value 20061.955049
## iter 20 value 20050.628608
## final value 20050.509266
## converged
## # weights: 41
## initial value 21778.708033
## iter 10 value 20065.501264
## iter 20 value 20050.669493
## final value 20050.506439
## converged
## # weights: 9
## initial value 21725.477858
## final value 19932.296500
## converged
## # weights: 25
## initial value 21176.129012
## final value 19932.296500
## converged
## # weights: 41
## initial value 23302.014804
## final value 19932.296500
## converged
## # weights: 9
## initial value 22138.366713
## iter 10 value 19939.246354
## final value 19937.804308
## converged
## # weights: 25
## initial value 23570.115121
## iter 10 value 19939.054195

```

```

## iter 20 value 19936.270995
## iter 20 value 19936.270907
## iter 20 value 19936.270899
## final value 19936.270899
## converged
## # weights: 41
## initial value 23320.186829
## iter 10 value 19937.603148
## iter 20 value 19935.612195
## final value 19935.611672
## converged
## # weights: 9
## initial value 22160.396893
## iter 10 value 19942.151157
## iter 20 value 19932.410116
## iter 20 value 19932.410071
## final value 19932.410071
## converged
## # weights: 25
## initial value 23522.853184
## iter 10 value 19944.856315
## iter 20 value 19932.441305
## final value 19932.312828
## converged
## # weights: 41
## initial value 22745.860141
## iter 10 value 19950.992402
## iter 20 value 19932.512049
## final value 19932.308663
## converged
## # weights: 9
## initial value 22249.254902
## final value 20051.745700
## converged
## # weights: 25
## initial value 22716.277608
## final value 20051.745700
## converged
## # weights: 41
## initial value 22137.758307
## final value 20051.745700
## converged
## # weights: 9
## initial value 23171.038772
## iter 10 value 20057.658751
## final value 20057.256376
## converged
## # weights: 25
## initial value 23568.062729
## iter 10 value 20057.605307
## iter 20 value 20055.722038
## iter 20 value 20055.721949
## iter 20 value 20055.721923
## final value 20055.721923

```

```

## converged
## # weights: 41
## initial value 24039.008965
## iter 10 value 20068.205594
## iter 20 value 20055.063534
## final value 20055.062324
## converged
## # weights: 9
## initial value 22481.461165
## iter 10 value 20062.666617
## iter 20 value 20051.871610
## iter 20 value 20051.871559
## final value 20051.871559
## converged
## # weights: 25
## initial value 22858.213882
## iter 10 value 20066.883965
## iter 20 value 20051.920232
## final value 20051.757142
## converged
## # weights: 41
## initial value 22094.800316
## iter 10 value 20069.179633
## iter 20 value 20051.946700
## final value 20051.759325
## converged
## # weights: 9
## initial value 23347.223879
## final value 20054.702000
## converged
## # weights: 25
## initial value 23197.555168
## final value 20054.702000
## converged
## # weights: 41
## initial value 23178.725147
## final value 20054.702000
## converged
## # weights: 9
## initial value 22487.863151
## iter 10 value 20060.355210
## final value 20060.212892
## converged
## # weights: 25
## initial value 21925.252292
## iter 10 value 20059.288827
## final value 20058.678394
## converged
## # weights: 41
## initial value 22066.987308
## iter 10 value 20073.217457
## iter 20 value 20058.020737
## final value 20058.018788
## converged

```

```

## # weights: 9
## initial value 23106.117602
## iter 10 value 20065.121956
## iter 20 value 20054.822134
## iter 20 value 20054.822086
## final value 20054.822086
## converged
## # weights: 25
## initial value 22175.219140
## iter 10 value 20068.487370
## iter 20 value 20054.860934
## final value 20054.714125
## converged
## # weights: 41
## initial value 22585.968062
## iter 10 value 20072.547018
## iter 20 value 20054.907739
## final value 20054.712982
## converged
## # weights: 9
## initial value 21891.711953
## final value 19970.818000
## converged
## # weights: 25
## initial value 23720.005232
## final value 19970.818000
## converged
## # weights: 41
## initial value 23178.170398
## final value 19970.818000
## converged
## # weights: 9
## initial value 22235.857415
## iter 10 value 20027.976179
## iter 20 value 19976.441120
## final value 19976.326228
## converged
## # weights: 25
## initial value 23266.811899
## iter 10 value 19975.634155
## final value 19974.792560
## converged
## # weights: 41
## initial value 22979.888651
## iter 10 value 19987.579848
## iter 20 value 19974.133401
## iter 20 value 19974.133314
## iter 20 value 19974.133285
## final value 19974.133285
## converged
## # weights: 9
## initial value 22965.518040
## iter 10 value 19981.302257
## iter 20 value 19970.938875

```



```

## iter 20 value 19970.938827
## final value 19970.938827
## converged
## # weights: 25
## initial value 22851.204008
## iter 10 value 19985.008161
## iter 20 value 19970.981601
## final value 19970.832356
## converged
## # weights: 41
## initial value 22347.005586
## iter 10 value 19987.777541
## iter 20 value 19971.013530
## final value 19970.828446
## converged
## # weights: 9
## initial value 21652.100252
## final value 20062.993700
## converged
## # weights: 25
## initial value 22260.517928
## final value 20062.993700
## converged
## # weights: 41
## initial value 22785.864454
## final value 20062.993700
## converged
## # weights: 9
## initial value 22327.746326
## iter 10 value 20069.345737
## final value 20068.505466
## converged
## # weights: 25
## initial value 23622.559023
## iter 10 value 20068.046097
## final value 20066.970606
## converged
## # weights: 41
## initial value 23506.610132
## iter 10 value 20068.918494
## final value 20066.310935
## converged
## # weights: 9
## initial value 23165.440481
## iter 10 value 20073.164584
## iter 20 value 20063.110962
## iter 20 value 20063.110915
## final value 20063.110915
## converged
## # weights: 25
## initial value 23291.820840
## iter 10 value 20078.498437
## iter 20 value 20063.172457
## final value 20063.006225

```

```

## converged
## # weights: 41
## initial value 22407.306516
## iter 10 value 20084.666950
## iter 20 value 20063.243576
## final value 20063.002882
## converged
## # weights: 9
## initial value 22765.974477
## final value 20051.473700
## converged
## # weights: 25
## initial value 23544.067382
## final value 20051.473700
## converged
## # weights: 41
## initial value 23160.414351
## final value 20051.473700
## converged
## # weights: 9
## initial value 23702.925474
## iter 10 value 20058.264672
## final value 20056.984396
## converged
## # weights: 25
## initial value 22912.755407
## iter 10 value 20056.228569
## final value 20055.449939
## converged
## # weights: 41
## initial value 23510.874912
## iter 10 value 20067.817795
## iter 20 value 20054.793200
## final value 20054.790417
## converged
## # weights: 9
## initial value 23546.049241
## iter 10 value 20062.233657
## iter 20 value 20051.597754
## iter 20 value 20051.597704
## final value 20051.597704
## converged
## # weights: 25
## initial value 22284.065372
## iter 10 value 20065.219617
## iter 20 value 20051.632180
## final value 20051.487740
## converged
## # weights: 41
## initial value 21834.147009
## iter 10 value 20065.999653
## iter 20 value 20051.641173
## final value 20051.482961
## converged

```

```

## # weights: 9
## initial value 23395.537278
## final value 20015.422000
## converged
## # weights: 25
## initial value 21885.302770
## final value 20015.422000
## converged
## # weights: 41
## initial value 23601.628396
## final value 20015.422000
## converged
## # weights: 9
## initial value 21653.523209
## iter 10 value 20022.304355
## final value 20020.931330
## converged
## # weights: 25
## initial value 21617.060926
## iter 10 value 20019.964685
## final value 20019.397281
## converged
## # weights: 41
## initial value 23907.963863
## iter 10 value 20030.833548
## iter 20 value 20018.739216
## final value 20018.737940
## converged
## # weights: 9
## initial value 23779.220710
## iter 10 value 20024.375068
## iter 20 value 20015.525222
## iter 20 value 20015.525181
## final value 20015.525181
## converged
## # weights: 25
## initial value 22063.231777
## iter 10 value 20029.120009
## iter 20 value 20015.579927
## final value 20015.435268
## converged
## # weights: 41
## initial value 22385.276627
## iter 10 value 20034.956810
## iter 20 value 20015.647221
## final value 20015.431778
## converged
## # weights: 9
## initial value 22666.251936
## final value 20028.123700
## converged
## # weights: 25
## initial value 22401.205883
## final value 20028.123700

```

```

## converged
## # weights: 41
## initial value 22400.209263
## final value 20028.123700
## converged
## # weights: 9
## initial value 22208.663891
## iter 10 value 20036.367915
## final value 20033.633415
## converged
## # weights: 25
## initial value 23303.998113
## iter 10 value 20034.493967
## iter 20 value 20032.099708
## final value 20032.099247
## converged
## # weights: 41
## initial value 22476.371716
## iter 10 value 20044.725491
## iter 20 value 20031.439937
## iter 20 value 20031.439854
## iter 20 value 20031.439848
## final value 20031.439848
## converged
## # weights: 9
## initial value 22462.038498
## iter 10 value 20038.823874
## iter 20 value 20028.247065
## iter 20 value 20028.247015
## final value 20028.247015
## converged
## # weights: 25
## initial value 23266.346684
## iter 10 value 20040.971165
## iter 20 value 20028.271821
## final value 20028.140214
## converged
## # weights: 41
## initial value 23041.303345
## iter 10 value 20048.045782
## iter 20 value 20028.353386
## final value 20028.134663
## converged
## # weights: 9
## initial value 22372.093211
## final value 20047.960100
## converged
## # weights: 25
## initial value 21547.952514
## final value 20047.960100
## converged
## # weights: 41
## initial value 21159.363406
## final value 20047.960100

```

```

## converged
## # weights: 9
## initial value 22532.018822
## iter 10 value 20055.296580
## final value 20053.470613
## converged
## # weights: 25
## initial value 22529.413584
## iter 10 value 20059.860493
## iter 20 value 20051.980978
## final value 20051.936193
## converged
## # weights: 41
## initial value 21491.687377
## iter 10 value 20051.804457
## final value 20051.276709
## converged
## # weights: 9
## initial value 23793.675160
## iter 10 value 20057.231445
## iter 20 value 20048.066991
## iter 20 value 20048.066949
## final value 20048.066949
## converged
## # weights: 25
## initial value 23005.213003
## iter 10 value 20061.867313
## iter 20 value 20048.120439
## final value 20047.973539
## converged
## # weights: 41
## initial value 22575.908238
## iter 10 value 20065.801558
## iter 20 value 20048.165798
## final value 20047.970286
## converged
## # weights: 9
## initial value 22652.776313
## final value 20028.947600
## converged
## # weights: 25
## initial value 24565.934514
## final value 20028.947600
## converged
## # weights: 41
## initial value 24019.171896
## final value 20028.947600
## converged
## # weights: 9
## initial value 22043.375097
## iter 10 value 20036.731899
## final value 20034.457336
## converged
## # weights: 25

```

```

## initial value 22172.164142
## iter 10 value 20033.062841
## final value 20032.923127
## converged
## # weights: 41
## initial value 23554.137645
## iter 10 value 20033.635983
## final value 20032.263763
## converged
## # weights: 9
## initial value 21782.013327
## iter 10 value 20038.028598
## iter 20 value 20029.052297
## iter 20 value 20029.052255
## final value 20029.052255
## converged
## # weights: 25
## initial value 22991.632531
## iter 10 value 20043.896468
## iter 20 value 20029.119949
## final value 20028.960475
## converged
## # weights: 41
## initial value 23494.244513
## iter 10 value 20044.899148
## iter 20 value 20029.131509
## final value 20028.958565
## converged
## # weights: 9
## initial value 22370.217495
## final value 19944.142000
## converged
## # weights: 25
## initial value 23769.409391
## final value 19944.142000
## converged
## # weights: 41
## initial value 21888.935352
## final value 19944.142000
## converged
## # weights: 9
## initial value 22530.681512
## iter 10 value 19949.832043
## final value 19949.649909
## converged
## # weights: 25
## initial value 22189.786303
## iter 10 value 19949.023907
## final value 19948.116426
## converged
## # weights: 41
## initial value 24020.155397
## iter 10 value 19959.944656
## iter 20 value 19947.465683

```

```

## final value 19947.457178
## converged
## # weights: 9
## initial value 23378.296135
## iter 10 value 19952.985739
## iter 20 value 19944.243961
## iter 20 value 19944.243921
## final value 19944.243921
## converged
## # weights: 25
## initial value 21867.929102
## iter 10 value 19955.762171
## iter 20 value 19944.275971
## final value 19944.154257
## converged
## # weights: 41
## initial value 22810.775170
## iter 10 value 19964.819926
## iter 20 value 19944.380400
## final value 19944.151655
## converged
## # weights: 9
## initial value 23194.445854
## final value 20063.162000
## converged
## # weights: 25
## initial value 22683.639116
## final value 20063.162000
## converged
## # weights: 41
## initial value 21879.428760
## final value 20063.162000
## converged
## # weights: 9
## initial value 23252.006383
## iter 10 value 20069.311946
## final value 20068.674098
## converged
## # weights: 25
## initial value 22835.539110
## iter 10 value 20068.179954
## final value 20067.139196
## converged
## # weights: 41
## initial value 23084.436250
## iter 10 value 20074.521171
## iter 20 value 20066.481352
## final value 20066.479483
## converged
## # weights: 9
## initial value 23157.500680
## iter 10 value 20073.784377
## iter 20 value 20063.284468
## iter 20 value 20063.284419

```

```

## final value 20063.284419
## converged
## # weights: 25
## initial value 22643.812896
## iter 10 value 20079.266077
## iter 20 value 20063.347667
## final value 20063.174816
## converged
## # weights: 41
## initial value 23197.091574
## iter 10 value 20082.594784
## iter 20 value 20063.386045
## final value 20063.173398
## converged
## # weights: 9
## initial value 23748.376636
## final value 20043.633700
## converged
## # weights: 25
## initial value 22136.061773
## final value 20043.633700
## converged
## # weights: 41
## initial value 23190.697017
## final value 20043.633700
## converged
## # weights: 9
## initial value 22230.654959
## iter 10 value 20050.350088
## final value 20049.143942
## converged
## # weights: 25
## initial value 23252.997912
## iter 10 value 20056.519813
## iter 20 value 20047.637469
## final value 20047.609599
## converged
## # weights: 41
## initial value 22714.740528
## iter 10 value 20047.801020
## iter 20 value 20046.950119
## iter 20 value 20046.950071
## iter 20 value 20046.950065
## final value 20046.950065
## converged
## # weights: 9
## initial value 21623.061606
## iter 10 value 20051.447996
## iter 20 value 20043.723793
## iter 20 value 20043.723757
## final value 20043.723757
## converged
## # weights: 25
## initial value 23305.880049

```



```

## iter 10 value 20057.370869
## iter 20 value 20043.792079
## final value 20043.646004
## converged
## # weights: 41
## initial value 24009.878970
## iter 10 value 20056.736380
## iter 20 value 20043.784764
## final value 20043.649207
## converged
## # weights: 9
## initial value 22487.750026
## final value 20045.446000
## converged
## # weights: 25
## initial value 22632.185151
## final value 20045.446000
## converged
## # weights: 41
## initial value 22488.636859
## final value 20045.446000
## converged
## # weights: 9
## initial value 22502.287408
## iter 10 value 20051.279677
## final value 20050.956392
## converged
## # weights: 25
## initial value 23408.812916
## iter 10 value 20049.839363
## final value 20049.422048
## converged
## # weights: 41
## initial value 22235.536926
## iter 10 value 20060.881824
## iter 20 value 20048.767806
## final value 20048.762529
## converged
## # weights: 9
## initial value 23047.876326
## iter 10 value 20055.077173
## iter 20 value 20045.557040
## iter 20 value 20045.556995
## final value 20045.556995
## converged
## # weights: 25
## initial value 21843.428471
## iter 10 value 20055.350826
## iter 20 value 20045.560195
## final value 20045.459567
## converged
## # weights: 41
## initial value 22524.142253
## iter 10 value 20068.313107

```

```

## iter 20 value 20045.709640
## final value 20045.456511
## converged
## # weights: 9
## initial value 23583.538999
## final value 20009.587700
## converged
## # weights: 25
## initial value 22542.344846
## final value 20009.587700
## converged
## # weights: 41
## initial value 22689.663578
## final value 20009.587700
## converged
## # weights: 9
## initial value 22150.891329
## iter 10 value 20017.638751
## final value 20015.096888
## converged
## # weights: 25
## initial value 23889.661976
## iter 10 value 20014.895495
## final value 20013.562920
## converged
## # weights: 41
## initial value 23617.116948
## iter 10 value 20017.624122
## iter 20 value 20012.903879
## final value 20012.903540
## converged
## # weights: 9
## initial value 21781.897223
## iter 10 value 20017.380212
## iter 20 value 20009.677542
## iter 20 value 20009.677506
## final value 20009.677506
## converged
## # weights: 25
## initial value 23154.532948
## iter 10 value 20025.841431
## iter 20 value 20009.775093
## final value 20009.602564
## converged
## # weights: 41
## initial value 21692.356713
## iter 10 value 20023.823991
## iter 20 value 20009.751833
## final value 20009.597924
## converged
## # weights: 9
## initial value 21704.756009
## final value 20023.227700
## converged

```

```

## # weights: 25
## initial value 22757.915642
## final value 20023.227700
## converged
## # weights: 41
## initial value 22518.804604
## final value 20023.227700
## converged
## # weights: 9
## initial value 21928.785748
## iter 10 value 20028.760964
## final value 20028.737261
## converged
## # weights: 25
## initial value 21523.179848
## iter 10 value 20028.152053
## final value 20027.203237
## converged
## # weights: 41
## initial value 22967.485208
## iter 10 value 20030.498713
## iter 20 value 20026.545701
## final value 20026.543817
## converged
## # weights: 9
## initial value 22253.583505
## iter 10 value 20033.247080
## iter 20 value 20023.343216
## iter 20 value 20023.343169
## final value 20023.343169
## converged
## # weights: 25
## initial value 21716.550955
## iter 10 value 20033.736031
## iter 20 value 20023.348853
## final value 20023.239848
## converged
## # weights: 41
## initial value 22285.538390
## iter 10 value 20041.260940
## iter 20 value 20023.435609
## final value 20023.239525
## converged
## # weights: 9
## initial value 21941.901642
## final value 20062.497700
## converged
## # weights: 25
## initial value 23830.934412
## final value 20062.497700
## converged
## # weights: 41
## initial value 23286.228076
## final value 20062.497700

```

```

## converged
## # weights: 9
## initial value 22357.760988
## iter 10 value 20069.375860
## final value 20068.009580
## converged
## # weights: 25
## initial value 22398.937759
## iter 10 value 20071.124983
## iter 20 value 20066.513016
## final value 20066.474863
## converged
## # weights: 41
## initial value 21394.453964
## iter 10 value 20067.556731
## iter 20 value 20065.815465
## final value 20065.815129
## converged
## # weights: 9
## initial value 23429.860328
## iter 10 value 20073.392942
## iter 20 value 20062.623314
## iter 20 value 20062.623263
## final value 20062.623263
## converged
## # weights: 25
## initial value 24070.168587
## iter 10 value 20073.045532
## iter 20 value 20062.619308
## final value 20062.518268
## converged
## # weights: 41
## initial value 22708.642663
## iter 10 value 20082.950425
## iter 20 value 20062.733504
## final value 20062.507189
## converged
## # weights: 9
## initial value 21587.066586
## final value 20007.369200
## converged
## # weights: 25
## initial value 22781.921608
## final value 20007.369200
## converged
## # weights: 41
## initial value 22749.736787
## final value 20007.369200
## converged
## # weights: 9
## initial value 23104.319740
## iter 10 value 20014.786652
## iter 20 value 20012.879039
## final value 20012.878364

```

```

## converged
## # weights: 25
## initial value 22618.053711
## iter 10 value 20015.986019
## iter 20 value 20011.345493
## final value 20011.344397
## converged
## # weights: 41
## initial value 22002.173807
## iter 10 value 20013.808770
## iter 20 value 20010.685362
## iter 20 value 20010.685195
## iter 20 value 20010.685115
## final value 20010.685115
## converged
## # weights: 9
## initial value 22553.965001
## iter 10 value 20019.325833
## iter 20 value 20007.507051
## iter 20 value 20007.506995
## final value 20007.506995
## converged
## # weights: 25
## initial value 23318.522655
## iter 10 value 20021.379555
## iter 20 value 20007.530728
## final value 20007.383903
## converged
## # weights: 41
## initial value 21870.789108
## iter 10 value 20024.593873
## iter 20 value 20007.567787
## final value 20007.378255
## converged
## # weights: 9
## initial value 21937.885818
## final value 20016.930100
## converged
## # weights: 25
## initial value 22819.161973
## final value 20016.930100
## converged
## # weights: 41
## initial value 21409.385707
## final value 20016.930100
## converged
## # weights: 9
## initial value 22502.931469
## iter 10 value 20023.344336
## final value 20022.439479
## converged
## # weights: 25
## initial value 22484.881399
## iter 10 value 20021.427066

```

```

## final value 20020.905415
## converged
## # weights: 41
## initial value 22272.936779
## iter 10 value 20020.667453
## final value 20020.246060
## converged
## # weights: 9
## initial value 22458.534779
## iter 10 value 20026.510821
## iter 20 value 20017.040558
## iter 20 value 20017.040514
## final value 20017.040514
## converged
## # weights: 25
## initial value 22435.216773
## iter 10 value 20031.584791
## iter 20 value 20017.099057
## final value 20016.942014
## converged
## # weights: 41
## initial value 22251.785404
## iter 10 value 20038.334537
## iter 20 value 20017.176876
## final value 20016.940072
## converged
## # weights: 9
## initial value 23315.566558
## final value 20047.960100
## converged
## # weights: 25
## initial value 22687.539723
## final value 20047.960100
## converged
## # weights: 41
## initial value 23173.067302
## final value 20047.960100
## converged
## # weights: 9
## initial value 22052.308664
## iter 10 value 20053.656518
## final value 20053.470631
## converged
## # weights: 25
## initial value 23720.651633
## iter 10 value 20053.639438
## iter 20 value 20051.936335
## iter 20 value 20051.936221
## iter 20 value 20051.936216
## final value 20051.936216
## converged
## # weights: 41
## initial value 22185.613062
## iter 10 value 20063.183433

```

```

## iter 20 value 20051.277540
## final value 20051.276739
## converged
## # weights: 9
## initial value 22366.212278
## iter 10 value 20059.111874
## iter 20 value 20048.088671
## iter 20 value 20048.088620
## final value 20048.088620
## converged
## # weights: 25
## initial value 22476.153012
## iter 10 value 20062.423809
## iter 20 value 20048.126855
## final value 20047.970855
## converged
## # weights: 41
## initial value 21835.783842
## iter 10 value 20065.039463
## iter 20 value 20048.157012
## final value 20047.970240
## converged
## # weights: 9
## initial value 23327.019125
## final value 20001.547600
## converged
## # weights: 25
## initial value 21952.081253
## final value 20001.547600
## converged
## # weights: 41
## initial value 23342.603236
## final value 20001.547600
## converged
## # weights: 9
## initial value 21833.464380
## iter 10 value 20008.040419
## final value 20007.056598
## converged
## # weights: 25
## initial value 22389.011909
## iter 10 value 20006.065565
## final value 20005.522667
## converged
## # weights: 41
## initial value 22356.807265
## iter 10 value 20005.955597
## final value 20004.863343
## converged
## # weights: 9
## initial value 22058.795527
## iter 10 value 20012.002057
## iter 20 value 20001.668132
## iter 20 value 20001.668083

```

```

## final value 20001.668083
## converged
## # weights: 25
## initial value 22651.655788
## iter 10 value 20016.267524
## iter 20 value 20001.717309
## final value 20001.559420
## converged
## # weights: 41
## initial value 22846.100623
## iter 10 value 20021.142405
## iter 20 value 20001.773513
## final value 20001.560808
## converged
## # weights: 9
## initial value 23087.517554
## final value 19999.010000
## converged
## # weights: 25
## initial value 21013.943329
## final value 19999.010000
## converged
## # weights: 41
## initial value 22952.953213
## final value 19999.010000
## converged
## # weights: 9
## initial value 23540.590133
## iter 10 value 20004.729940
## final value 20004.518954
## converged
## # weights: 25
## initial value 21937.895291
## iter 10 value 20003.443071
## final value 20002.985126
## converged
## # weights: 41
## initial value 22347.494801
## iter 10 value 20019.662500
## iter 20 value 20002.331162
## final value 20002.325797
## converged
## # weights: 9
## initial value 22719.636170
## iter 10 value 20009.007789
## iter 20 value 19999.125267
## iter 20 value 19999.125221
## final value 19999.125221
## converged
## # weights: 25
## initial value 23486.014789
## iter 10 value 20011.668518
## iter 20 value 19999.155943
## final value 19999.023894

```



```

## converged
## # weights: 41
## initial value 22799.930607
## iter 10 value 20018.706024
## iter 20 value 19999.237080
## final value 19999.021346
## converged
## # weights: 9
## initial value 22306.572642
## final value 19909.658000
## converged
## # weights: 25
## initial value 22128.900248
## final value 19909.658000
## converged
## # weights: 41
## initial value 22404.307606
## final value 19909.658000
## converged
## # weights: 9
## initial value 21486.764240
## iter 10 value 19915.461344
## final value 19915.165302
## converged
## # weights: 25
## initial value 22441.843795
## iter 10 value 19914.611903
## iter 20 value 19913.632014
## iter 20 value 19913.631959
## iter 20 value 19913.631956
## final value 19913.631956
## converged
## # weights: 41
## initial value 22729.842873
## iter 10 value 19914.787685
## final value 19912.972881
## converged
## # weights: 9
## initial value 21573.957490
## iter 10 value 19917.907217
## iter 20 value 19909.753107
## iter 20 value 19909.753069
## final value 19909.753069
## converged
## # weights: 25
## initial value 23702.286216
## iter 10 value 19921.978799
## iter 20 value 19909.800049
## final value 19909.677554
## converged
## # weights: 41
## initial value 22254.076914
## iter 10 value 19927.803063
## iter 20 value 19909.867198

```

```

## final value 19909.669280
## converged
## # weights: 9
## initial value 23002.376845
## final value 20014.310000
## converged
## # weights: 25
## initial value 22532.359871
## final value 20014.310000
## converged
## # weights: 41
## initial value 22358.573114
## final value 20014.310000
## converged
## # weights: 9
## initial value 23852.743265
## iter 10 value 20021.872642
## final value 20019.819309
## converged
## # weights: 25
## initial value 22888.004951
## iter 10 value 20020.164715
## final value 20018.285295
## converged
## # weights: 41
## initial value 23004.074252
## iter 10 value 20020.404909
## iter 20 value 20017.627086
## final value 20017.625970
## converged
## # weights: 9
## initial value 22905.592812
## iter 10 value 20024.418308
## iter 20 value 20014.426541
## iter 20 value 20014.426494
## final value 20014.426494
## converged
## # weights: 25
## initial value 21787.299700
## iter 10 value 20023.598850
## iter 20 value 20014.417093
## final value 20014.322451
## converged
## # weights: 41
## initial value 22485.222397
## iter 10 value 20033.731516
## iter 20 value 20014.533915
## final value 20014.320539
## converged
## # weights: 9
## initial value 21753.791513
## final value 19991.598500
## converged
## # weights: 25

```

```

## initial value 22929.999410
## final value 19991.598500
## converged
## # weights: 41
## initial value 21910.509525
## final value 19991.598500
## converged
## # weights: 9
## initial value 23346.260232
## iter 10 value 19997.429935
## final value 19997.107424
## converged
## # weights: 25
## initial value 21955.663305
## iter 10 value 19996.119196
## final value 19995.573498
## converged
## # weights: 41
## initial value 22799.680171
## iter 10 value 20007.284048
## iter 20 value 19994.918622
## final value 19994.914182
## converged
## # weights: 9
## initial value 23269.849807
## iter 10 value 20002.307509
## iter 20 value 19991.721966
## iter 20 value 19991.721917
## final value 19991.721917
## converged
## # weights: 25
## initial value 21145.771721
## iter 10 value 19998.252486
## iter 20 value 19991.675215
## final value 19991.609683
## converged
## # weights: 41
## initial value 22372.369349
## iter 10 value 20009.591489
## iter 20 value 19991.805945
## final value 19991.608561
## converged
## # weights: 9
## initial value 22224.428586
## final value 20032.920100
## converged
## # weights: 25
## initial value 22297.427837
## final value 20032.920100
## converged
## # weights: 41
## initial value 21839.901719
## final value 20032.920100
## converged

```

```

## # weights: 9
## initial value 23691.873152
## iter 10 value 20040.103762
## final value 20038.429973
## converged
## # weights: 25
## initial value 21933.906193
## iter 10 value 20037.660264
## final value 20036.895794
## converged
## # weights: 41
## initial value 22739.787409
## iter 10 value 20048.767215
## iter 20 value 20036.241911
## final value 20036.236352
## converged
## # weights: 9
## initial value 23439.860982
## iter 10 value 20042.552097
## iter 20 value 20033.031149
## iter 20 value 20033.031105
## final value 20033.031105
## converged
## # weights: 25
## initial value 21656.821003
## iter 10 value 20044.217468
## iter 20 value 20033.050350
## final value 20032.932982
## converged
## # weights: 41
## initial value 22391.375987
## iter 10 value 20051.142355
## iter 20 value 20033.130188
## final value 20032.931313
## converged
## # weights: 9
## initial value 23273.416884
## final value 20042.739700
## converged
## # weights: 25
## initial value 23562.987608
## final value 20042.739700
## converged
## # weights: 41
## initial value 23077.968051
## final value 20042.739700
## converged
## # weights: 9
## initial value 23217.267539
## iter 10 value 20049.148062
## final value 20048.249936
## converged
## # weights: 25
## initial value 21662.274795

```

```

## iter 10 value 20047.278614
## final value 20046.715581
## converged
## # weights: 41
## initial value 23699.047785
## iter 10 value 20059.449508
## iter 20 value 20046.057763
## final value 20046.056124
## converged
## # weights: 9
## initial value 22638.083512
## iter 10 value 20053.314078
## iter 20 value 20042.861614
## iter 20 value 20042.861566
## final value 20042.861566
## converged
## # weights: 25
## initial value 22668.622788
## iter 10 value 20060.876938
## iter 20 value 20042.948808
## final value 20042.755711
## converged
## # weights: 41
## initial value 22442.899125
## iter 10 value 20061.748892
## iter 20 value 20042.958861
## final value 20042.749553
## converged
## # weights: 9
## initial value 22515.566744
## final value 19928.378000
## converged
## # weights: 25
## initial value 23665.464812
## final value 19928.378000
## converged
## # weights: 41
## initial value 23028.828832
## final value 19928.378000
## converged
## # weights: 9
## initial value 21930.257423
## iter 10 value 19935.946202
## final value 19933.885727
## converged
## # weights: 25
## initial value 23027.638286
## iter 10 value 19933.369477
## final value 19932.352353
## converged
## # weights: 41
## initial value 23560.336983
## iter 10 value 19933.248844
## final value 19931.693155

```

```

## converged
## # weights: 9
## initial value 22358.842041
## iter 10 value 19938.448214
## iter 20 value 19928.494102
## iter 20 value 19928.494055
## final value 19928.494055
## converged
## # weights: 25
## initial value 22940.356803
## iter 10 value 19943.887443
## iter 20 value 19928.556812
## final value 19928.393437
## converged
## # weights: 41
## initial value 23537.544309
## iter 10 value 19943.549897
## iter 20 value 19928.552920
## final value 19928.391595
## converged
## # weights: 9
## initial value 22726.824657
## final value 20036.130100
## converged
## # weights: 25
## initial value 22963.425022
## final value 20036.130100
## converged
## # weights: 41
## initial value 23158.214499
## final value 20036.130100
## converged
## # weights: 9
## initial value 22523.782078
## iter 10 value 20042.064900
## final value 20041.640099
## converged
## # weights: 25
## initial value 21979.689515
## iter 10 value 20040.658788
## final value 20040.105906
## converged
## # weights: 41
## initial value 23925.627298
## iter 10 value 20040.468165
## final value 20039.446410
## converged
## # weights: 9
## initial value 23246.444035
## iter 10 value 20046.901596
## iter 20 value 20036.254287
## iter 20 value 20036.254237
## final value 20036.254237
## converged

```

```

## # weights: 25
## initial value 23291.191937
## iter 10 value 20049.428964
## iter 20 value 20036.283425
## final value 20036.148675
## converged
## # weights: 41
## initial value 23501.834487
## iter 10 value 20054.729019
## iter 20 value 20036.344531
## final value 20036.141469
## converged
## # weights: 9
## initial value 22785.442655
## final value 20006.167600
## converged
## # weights: 25
## initial value 22702.138675
## final value 20006.167600
## converged
## # weights: 41
## initial value 23856.935638
## final value 20006.167600
## converged
## # weights: 9
## initial value 22688.488290
## iter 10 value 20013.796468
## final value 20011.676678
## converged
## # weights: 25
## initial value 23738.366848
## iter 10 value 20011.154914
## final value 20010.142704
## converged
## # weights: 41
## initial value 23307.245103
## iter 10 value 20010.826190
## iter 20 value 20009.483563
## iter 20 value 20009.483428
## iter 20 value 20009.483415
## final value 20009.483415
## converged
## # weights: 9
## initial value 23142.672277
## iter 10 value 20016.485714
## iter 20 value 20006.286560
## iter 20 value 20006.286512
## final value 20006.286512
## converged
## # weights: 25
## initial value 23385.803037
## iter 10 value 20020.078413
## iter 20 value 20006.327981
## final value 20006.180743

```

```

## converged
## # weights: 41
## initial value 22727.093420
## iter 10 value 20024.250391
## iter 20 value 20006.376080
## final value 20006.178808
## converged
## # weights: 9
## initial value 23492.640663
## final value 19970.240500
## converged
## # weights: 25
## initial value 21806.988928
## final value 19970.240500
## converged
## # weights: 41
## initial value 22233.929705
## final value 19970.240500
## converged
## # weights: 9
## initial value 23342.678061
## iter 10 value 19977.035133
## final value 19975.748888
## converged
## # weights: 25
## initial value 23550.913969
## iter 10 value 19974.624436
## final value 19974.215198
## converged
## # weights: 41
## initial value 23881.197784
## iter 10 value 19975.798007
## iter 20 value 19973.556324
## final value 19973.555937
## converged
## # weights: 9
## initial value 23419.202552
## iter 10 value 19979.065209
## iter 20 value 19970.342242
## iter 20 value 19970.342201
## final value 19970.342201
## converged
## # weights: 25
## initial value 22212.913296
## iter 10 value 19983.000343
## iter 20 value 19970.387611
## final value 19970.252122
## converged
## # weights: 41
## initial value 21658.833614
## iter 10 value 19984.610133
## iter 20 value 19970.406171
## final value 19970.250821
## converged

```



```

## # weights: 9
## initial value 21549.027089
## final value 20018.280100
## converged
## # weights: 25
## initial value 23306.008280
## final value 20018.280100
## converged
## # weights: 41
## initial value 23190.467130
## final value 20018.280100
## converged
## # weights: 9
## initial value 23183.225491
## iter 10 value 20027.367263
## iter 20 value 20023.789584
## iter 20 value 20023.789535
## final value 20023.789535
## converged
## # weights: 25
## initial value 22882.261126
## iter 10 value 20022.903841
## final value 20022.255447
## converged
## # weights: 41
## initial value 22386.859856
## iter 10 value 20022.011817
## final value 20021.596038
## converged
## # weights: 9
## initial value 21606.369846
## iter 10 value 20025.705327
## iter 20 value 20018.365707
## iter 20 value 20018.365673
## final value 20018.365673
## converged
## # weights: 25
## initial value 21667.058285
## iter 10 value 20029.011531
## iter 20 value 20018.403825
## final value 20018.292818
## converged
## # weights: 41
## initial value 23730.161353
## iter 10 value 20034.164600
## iter 20 value 20018.463236
## final value 20018.293193
## converged
## # weights: 9
## initial value 22587.758378
## final value 20051.405200
## converged
## # weights: 25
## initial value 23743.549697

```

```

## final value 20051.405200
## converged
## # weights: 41
## initial value 21444.972831
## final value 20051.405200
## converged
## # weights: 9
## initial value 22605.025370
## iter 10 value 20058.888507
## final value 20056.915946
## converged
## # weights: 25
## initial value 21609.796970
## iter 10 value 20055.750086
## final value 20055.381533
## converged
## # weights: 41
## initial value 22592.402791
## iter 10 value 20055.746096
## iter 20 value 20054.722014
## iter 20 value 20054.721943
## iter 20 value 20054.721934
## final value 20054.721934
## converged
## # weights: 9
## initial value 22662.172183
## iter 10 value 20061.661937
## iter 20 value 20051.523452
## iter 20 value 20051.523405
## final value 20051.523405
## converged
## # weights: 25
## initial value 22309.736992
## iter 10 value 20065.013445
## iter 20 value 20051.562092
## final value 20051.418161
## converged
## # weights: 41
## initial value 23411.074561
## iter 10 value 20068.792547
## iter 20 value 20051.605662
## final value 20051.417141
## converged
## # weights: 9
## initial value 22259.903199
## final value 19996.910500
## converged
## # weights: 25
## initial value 23920.978094
## final value 19996.910500
## converged
## # weights: 41
## initial value 23433.497551
## final value 19996.910500

```

```

## converged
## # weights: 9
## initial value 22140.852935
## iter 10 value 20003.511897
## final value 20002.419425
## converged
## # weights: 25
## initial value 21362.834508
## iter 10 value 20002.698593
## final value 20000.885600
## converged
## # weights: 41
## initial value 22827.076785
## iter 10 value 20011.956001
## iter 20 value 20000.226686
## final value 20000.226207
## converged
## # weights: 9
## initial value 21560.704655
## iter 10 value 20003.474478
## iter 20 value 19996.986178
## iter 20 value 19996.986147
## final value 19996.986147
## converged
## # weights: 25
## initial value 22512.215057
## iter 10 value 20012.427252
## iter 20 value 19997.089396
## final value 19996.926131
## converged
## # weights: 41
## initial value 22970.188614
## iter 10 value 20017.858652
## iter 20 value 19997.152016
## final value 19996.922759
## converged
## # weights: 9
## initial value 23118.681932
## final value 20014.030000
## converged
## # weights: 25
## initial value 22167.881335
## final value 20014.030000
## converged
## # weights: 41
## initial value 22562.503742
## final value 20014.030000
## converged
## # weights: 9
## initial value 23467.729223
## iter 10 value 20020.562849
## final value 20019.539280
## converged
## # weights: 25

```

```

## initial value 21910.392813
## iter 10 value 20018.866777
## final value 20018.005258
## converged
## # weights: 41
## initial value 21723.990707
## iter 10 value 20029.514939
## iter 20 value 20017.347009
## final value 20017.345888
## converged
## # weights: 9
## initial value 22378.331763
## iter 10 value 20024.785296
## iter 20 value 20014.154000
## iter 20 value 20014.153951
## final value 20014.153951
## converged
## # weights: 25
## initial value 22883.828759
## iter 10 value 20028.967641
## iter 20 value 20014.202219
## final value 20014.042633
## converged
## # weights: 41
## initial value 22508.474244
## iter 10 value 20032.601725
## iter 20 value 20014.244117
## final value 20014.039254
## converged
## # weights: 9
## initial value 22296.957818
## final value 20020.659700
## converged
## # weights: 25
## initial value 23574.912667
## final value 20020.659700
## converged
## # weights: 41
## initial value 22913.602463
## final value 20020.659700
## converged
## # weights: 9
## initial value 23164.609779
## iter 10 value 20026.484174
## final value 20026.169156
## converged
## # weights: 25
## initial value 23545.034917
## iter 10 value 20025.572135
## final value 20024.635070
## converged
## # weights: 41
## initial value 22741.222447
## iter 10 value 20026.169142

```

```

## iter 20 value 20023.993696
## final value 20023.975719
## converged
## # weights: 9
## initial value 22405.702880
## iter 10 value 20031.007189
## iter 20 value 20020.778998
## iter 20 value 20020.778951
## final value 20020.778951
## converged
## # weights: 25
## initial value 22310.129466
## iter 10 value 20035.248103
## iter 20 value 20020.827893
## final value 20020.671523
## converged
## # weights: 41
## initial value 21931.266833
## iter 10 value 20034.992236
## iter 20 value 20020.824943
## final value 20020.669994
## converged
## # weights: 9
## initial value 21937.894696
## final value 19950.385700
## converged
## # weights: 25
## initial value 22372.085295
## final value 19950.385700
## converged
## # weights: 41
## initial value 22788.015057
## final value 19950.385700
## converged
## # weights: 9
## initial value 23229.550782
## iter 10 value 19958.541091
## final value 19955.893615
## converged
## # weights: 25
## initial value 23287.533559
## iter 10 value 19956.106332
## iter 20 value 19954.360146
## iter 20 value 19954.360060
## iter 20 value 19954.360055
## final value 19954.360055
## converged
## # weights: 41
## initial value 23606.704999
## iter 10 value 19967.266799
## iter 20 value 19953.743148
## final value 19953.700905
## converged
## # weights: 9

```

```

## initial value 23899.336176
## iter 10 value 19957.976708
## iter 20 value 19950.473218
## iter 20 value 19950.473183
## final value 19950.473183
## converged
## # weights: 25
## initial value 21912.724619
## iter 10 value 19961.697186
## iter 20 value 19950.516113
## final value 19950.397802
## converged
## # weights: 41
## initial value 21123.981725
## iter 10 value 19959.258598
## iter 20 value 19950.487998
## final value 19950.395083
## converged
## # weights: 9
## initial value 23008.545932
## final value 20051.473700
## converged
## # weights: 25
## initial value 23798.338310
## final value 20051.473700
## converged
## # weights: 41
## initial value 24030.026724
## final value 20051.473700
## converged
## # weights: 9
## initial value 22462.728073
## iter 10 value 20072.119066
## iter 20 value 20056.992245
## final value 20056.984317
## converged
## # weights: 25
## initial value 22206.783750
## iter 10 value 20056.608136
## iter 20 value 20055.449873
## iter 20 value 20055.449812
## iter 20 value 20055.449806
## final value 20055.449806
## converged
## # weights: 41
## initial value 22534.627551
## iter 10 value 20056.861575
## iter 20 value 20054.790348
## iter 20 value 20054.790286
## iter 20 value 20054.790273
## final value 20054.790273
## converged
## # weights: 9
## initial value 22703.015930

```

```

## iter 10 value 20062.036968
## iter 20 value 20051.595486
## iter 20 value 20051.595437
## final value 20051.595437
## converged
## # weights: 25
## initial value 22320.472690
## iter 10 value 20065.278036
## iter 20 value 20051.632853
## final value 20051.488143
## converged
## # weights: 41
## initial value 22913.143820
## iter 10 value 20072.729066
## iter 20 value 20051.718758
## final value 20051.485135
## converged
## # weights: 9
## initial value 22039.476278
## final value 20061.657200
## converged
## # weights: 25
## initial value 21444.245448
## final value 20061.657200
## converged
## # weights: 41
## initial value 22457.235440
## final value 20061.657200
## converged
## # weights: 9
## initial value 22669.153116
## iter 10 value 20068.326809
## final value 20067.168765
## converged
## # weights: 25
## initial value 21740.306699
## iter 10 value 20066.042775
## final value 20065.634022
## converged
## # weights: 41
## initial value 23988.247453
## iter 10 value 20068.313953
## iter 20 value 20064.974989
## final value 20064.974402
## converged
## # weights: 9
## initial value 22694.984947
## iter 10 value 20071.232819
## iter 20 value 20061.767599
## iter 20 value 20061.767555
## final value 20061.767555
## converged
## # weights: 25
## initial value 22221.754678

```

```

## iter 10 value 20075.580925
## iter 20 value 20061.817730
## final value 20061.671353
## converged
## # weights: 41
## initial value 23760.775254
## iter 10 value 20076.524138
## iter 20 value 20061.828604
## final value 20061.669170
## converged
## # weights: 9
## initial value 22096.468895
## final value 20007.369200
## converged
## # weights: 25
## initial value 23657.203273
## final value 20007.369200
## converged
## # weights: 41
## initial value 23190.767868
## final value 20007.369200
## converged
## # weights: 9
## initial value 21991.157333
## iter 10 value 20013.031399
## final value 20012.878342
## converged
## # weights: 25
## initial value 22312.028088
## iter 10 value 20012.322213
## final value 20011.344479
## converged
## # weights: 41
## initial value 23109.127807
## iter 10 value 20020.248238
## iter 20 value 20010.687701
## final value 20010.685007
## converged
## # weights: 9
## initial value 22953.352651
## iter 10 value 20019.378237
## iter 20 value 20007.507655
## iter 20 value 20007.507599
## final value 20007.507599
## converged
## # weights: 25
## initial value 23814.392032
## iter 10 value 20018.706261
## iter 20 value 20007.499907
## final value 20007.388184
## converged
## # weights: 41
## initial value 21498.636647
## iter 10 value 20018.195465

```



```

## iter 20 value 20007.494018
## final value 20007.379557
## converged
## # weights: 9
## initial value 22841.753671
## final value 20003.880100
## converged
## # weights: 25
## initial value 23744.329992
## final value 20003.880100
## converged
## # weights: 41
## initial value 23687.272227
## final value 20003.880100
## converged
## # weights: 9
## initial value 23232.439112
## iter 10 value 20014.503884
## final value 20009.389113
## converged
## # weights: 25
## initial value 22154.814993
## iter 10 value 20010.829621
## iter 20 value 20007.858873
## final value 20007.855257
## converged
## # weights: 41
## initial value 23126.458118
## iter 10 value 20019.880188
## iter 20 value 20007.199675
## final value 20007.195849
## converged
## # weights: 9
## initial value 22449.897467
## iter 10 value 20014.862880
## iter 20 value 20004.006723
## iter 20 value 20004.006672
## final value 20004.006672
## converged
## # weights: 25
## initial value 23568.656589
## iter 10 value 20017.997232
## iter 20 value 20004.042859
## final value 20003.902025
## converged
## # weights: 41
## initial value 22967.845573
## iter 10 value 20026.506628
## iter 20 value 20004.140966
## final value 20003.893515
## converged
## # weights: 9
## initial value 22999.116375
## final value 19948.680100

```

```

## converged
## # weights: 25
## initial value 21882.977796
## final value 19948.680100
## converged
## # weights: 41
## initial value 23696.951673
## final value 19948.680100
## converged
## # weights: 9
## initial value 23421.078425
## iter 10 value 19956.663650
## final value 19954.188060
## converged
## # weights: 25
## initial value 22239.993326
## iter 10 value 19953.162683
## final value 19952.654466
## converged
## # weights: 41
## initial value 22042.267888
## iter 10 value 19952.846174
## iter 20 value 19951.995303
## iter 20 value 19951.995211
## iter 20 value 19951.995190
## final value 19951.995190
## converged
## # weights: 9
## initial value 21688.553310
## iter 10 value 19956.307070
## iter 20 value 19948.768033
## iter 20 value 19948.767998
## final value 19948.767998
## converged
## # weights: 25
## initial value 21934.760913
## iter 10 value 19962.299203
## iter 20 value 19948.837118
## final value 19948.692870
## converged
## # weights: 41
## initial value 22166.329352
## iter 10 value 19965.943749
## iter 20 value 19948.879136
## final value 19948.691527
## converged
## # weights: 9
## initial value 22413.584665
## final value 20032.256500
## converged
## # weights: 25
## initial value 21617.656592
## final value 20032.256500
## converged

```

```

## # weights: 41
## initial value 22840.070401
## final value 20032.256500
## converged
## # weights: 9
## initial value 22240.398632
## iter 10 value 20038.594473
## final value 20037.766359
## converged
## # weights: 25
## initial value 21248.084325
## iter 10 value 20037.982308
## final value 20036.232268
## converged
## # weights: 41
## initial value 23574.497675
## iter 10 value 20037.294054
## final value 20035.572737
## converged
## # weights: 9
## initial value 23573.963184
## iter 10 value 20042.415883
## iter 20 value 20032.373630
## iter 20 value 20032.373583
## final value 20032.373583
## converged
## # weights: 25
## initial value 22145.261447
## iter 10 value 20046.511591
## iter 20 value 20032.420850
## final value 20032.270365
## converged
## # weights: 41
## initial value 21591.076704
## iter 10 value 20046.443727
## iter 20 value 20032.420068
## final value 20032.266243
## converged
## # weights: 9
## initial value 23228.165820
## final value 20014.867600
## converged
## # weights: 25
## initial value 22200.021062
## final value 20014.867600
## converged
## # weights: 41
## initial value 21839.686603
## final value 20014.867600
## converged
## # weights: 9
## initial value 22398.575130
## iter 10 value 20020.860484
## final value 20020.376926

```

```

## converged
## # weights: 25
## initial value 22679.021791
## iter 10 value 20025.296434
## iter 20 value 20018.842958
## iter 20 value 20018.842896
## iter 20 value 20018.842887
## final value 20018.842887
## converged
## # weights: 41
## initial value 23643.159731
## iter 10 value 20030.543009
## iter 20 value 20018.183653
## iter 20 value 20018.183539
## iter 20 value 20018.183533
## final value 20018.183533
## converged
## # weights: 9
## initial value 23000.075620
## iter 10 value 20024.640413
## iter 20 value 20014.980273
## iter 20 value 20014.980228
## final value 20014.980228
## converged
## # weights: 25
## initial value 22987.639320
## iter 10 value 20029.825571
## iter 20 value 20015.040054
## final value 20014.881625
## converged
## # weights: 41
## initial value 22645.824416
## iter 10 value 20034.570523
## iter 20 value 20015.094759
## final value 20014.878309
## converged
## # weights: 9
## initial value 23221.233589
## final value 20044.421200
## converged
## # weights: 25
## initial value 22697.727700
## final value 20044.421200
## converged
## # weights: 41
## initial value 22891.234095
## final value 20044.421200
## converged
## # weights: 9
## initial value 21920.669457
## iter 10 value 20051.097115
## final value 20049.931544
## converged
## # weights: 25

```

```

## initial value 22515.967030
## iter 10 value 20049.080421
## final value 20048.397159
## converged
## # weights: 41
## initial value 22875.637063
## iter 10 value 20059.896594
## iter 20 value 20047.737793
## iter 20 value 20047.737699
## iter 20 value 20047.737698
## final value 20047.737698
## converged
## # weights: 9
## initial value 22673.015177
## iter 10 value 20055.079046
## iter 20 value 20044.544077
## iter 20 value 20044.544027
## final value 20044.544027
## converged
## # weights: 25
## initial value 22437.340734
## iter 10 value 20057.520596
## iter 20 value 20044.572226
## final value 20044.436368
## converged
## # weights: 41
## initial value 22998.988530
## iter 10 value 20064.466774
## iter 20 value 20044.652310
## final value 20044.435241
## converged
## # weights: 9
## initial value 23198.184956
## final value 20048.654000
## converged
## # weights: 25
## initial value 24313.614667
## final value 20048.654000
## converged
## # weights: 41
## initial value 21713.846599
## final value 20048.654000
## converged
## # weights: 9
## initial value 22673.877599
## iter 10 value 20055.872650
## final value 20054.164523
## converged
## # weights: 25
## initial value 22876.468702
## iter 10 value 20054.363762
## final value 20052.630146
## converged
## # weights: 41

```

```

## initial value 21369.445128
## iter 10 value 20054.996768
## iter 20 value 20051.970956
## final value 20051.970591
## converged
## # weights: 9
## initial value 22810.420487
## iter 10 value 20058.749049
## iter 20 value 20048.770388
## iter 20 value 20048.770341
## final value 20048.770341
## converged
## # weights: 25
## initial value 23487.538359
## iter 10 value 20061.410678
## iter 20 value 20048.801074
## final value 20048.669779
## converged
## # weights: 41
## initial value 22850.928658
## iter 10 value 20066.065600
## iter 20 value 20048.854742
## final value 20048.664226
## converged
## # weights: 9
## initial value 22298.803085
## final value 20050.709200
## converged
## # weights: 25
## initial value 23761.229878
## final value 20050.709200
## converged
## # weights: 41
## initial value 23842.370746
## final value 20050.709200
## converged
## # weights: 9
## initial value 21953.171910
## iter 10 value 20056.451685
## final value 20056.219794
## converged
## # weights: 25
## initial value 24106.673410
## iter 10 value 20058.227394
## iter 20 value 20054.691475
## final value 20054.685423
## converged
## # weights: 41
## initial value 22235.871127
## iter 10 value 20068.188507
## iter 20 value 20054.029953
## final value 20054.025755
## converged
## # weights: 9

```

```

## initial value 21896.262658
## iter 10 value 20060.104453
## iter 20 value 20050.817520
## iter 20 value 20050.817477
## final value 20050.817477
## converged
## # weights: 25
## initial value 22412.963936
## iter 10 value 20067.602490
## iter 20 value 20050.903966
## final value 20050.724298
## converged
## # weights: 41
## initial value 24176.127251
## iter 10 value 20061.135436
## iter 20 value 20050.829406
## final value 20050.723134
## converged
## # weights: 9
## initial value 23363.846348
## final value 20001.390500
## converged
## # weights: 25
## initial value 23497.698700
## final value 20001.390500
## converged
## # weights: 41
## initial value 22723.085292
## final value 20001.390500
## converged
## # weights: 9
## initial value 21539.871518
## iter 10 value 20007.088994
## final value 20006.899465
## converged
## # weights: 25
## initial value 22866.822773
## iter 10 value 20006.296701
## final value 20005.365567
## converged
## # weights: 41
## initial value 21871.436647
## iter 10 value 20018.060612
## iter 20 value 20004.706669
## final value 20004.706232
## converged
## # weights: 9
## initial value 22148.310093
## iter 10 value 20011.013954
## iter 20 value 20001.501451
## iter 20 value 20001.501406
## final value 20001.501406
## converged
## # weights: 25

```

```

## initial value 22623.422926
## iter 10 value 20014.892337
## iter 20 value 20001.546166
## final value 20001.402479
## converged
## # weights: 41
## initial value 22030.258807
## iter 10 value 20017.771273
## iter 20 value 20001.579357
## final value 20001.402265
## converged
## # weights: 9
## initial value 22841.607589
## final value 20008.558000
## converged
## # weights: 25
## initial value 22839.927639
## final value 20008.558000
## converged
## # weights: 41
## initial value 23336.002118
## final value 20008.558000
## converged
## # weights: 9
## initial value 23572.034305
## iter 10 value 20014.423585
## final value 20014.067190
## converged
## # weights: 25
## initial value 23714.878254
## iter 10 value 20014.656295
## iter 20 value 20012.534735
## final value 20012.533180
## converged
## # weights: 41
## initial value 23614.893605
## iter 10 value 20013.290091
## iter 20 value 20011.874212
## final value 20011.873823
## converged
## # weights: 9
## initial value 23776.387781
## iter 10 value 20017.433061
## iter 20 value 20008.660322
## iter 20 value 20008.660282
## final value 20008.660282
## converged
## # weights: 25
## initial value 23129.778083
## iter 10 value 20021.442331
## iter 20 value 20008.706546
## final value 20008.570988
## converged
## # weights: 41

```



```

## initial value 21820.444544
## iter 10 value 20022.434275
## iter 20 value 20008.717983
## final value 20008.567968
## converged
## # weights: 9
## initial value 23104.739011
## final value 20042.193700
## converged
## # weights: 25
## initial value 23203.629327
## final value 20042.193700
## converged
## # weights: 41
## initial value 23148.656655
## final value 20042.193700
## converged
## # weights: 9
## initial value 22451.681284
## iter 10 value 20048.070845
## final value 20047.703952
## converged
## # weights: 25
## initial value 23701.386038
## iter 10 value 20048.606631
## final value 20046.169721
## converged
## # weights: 41
## initial value 23715.030460
## iter 10 value 20047.757136
## iter 20 value 20045.510208
## iter 20 value 20045.510140
## iter 20 value 20045.510125
## final value 20045.510125
## converged
## # weights: 9
## initial value 22592.338594
## iter 10 value 20051.766747
## iter 20 value 20042.304070
## iter 20 value 20042.304026
## final value 20042.304026
## converged
## # weights: 25
## initial value 23744.761086
## iter 10 value 20054.592404
## iter 20 value 20042.336647
## final value 20042.207724
## converged
## # weights: 41
## initial value 22822.747537
## iter 10 value 20063.113827
## iter 20 value 20042.434893
## final value 20042.205446
## converged

```

```

## # weights: 9
## initial value 23750.902400
## final value 19991.259700
## converged
## # weights: 25
## initial value 23244.085294
## final value 19991.259700
## converged
## # weights: 41
## initial value 22871.244388
## final value 19991.259700
## converged
## # weights: 9
## initial value 22889.342141
## iter 10 value 19997.250291
## final value 19996.768363
## converged
## # weights: 25
## initial value 22987.114621
## iter 10 value 20008.543661
## iter 20 value 19995.235035
## final value 19995.234588
## converged
## # weights: 41
## initial value 23003.843660
## iter 10 value 19996.057267
## iter 20 value 19994.575810
## final value 19994.575186
## converged
## # weights: 9
## initial value 22804.704945
## iter 10 value 20001.171414
## iter 20 value 19991.373974
## iter 20 value 19991.373929
## final value 19991.373929
## converged
## # weights: 25
## initial value 22232.399055
## iter 10 value 20006.482843
## iter 20 value 19991.435211
## final value 19991.275909
## converged
## # weights: 41
## initial value 23454.261220
## iter 10 value 20009.586960
## iter 20 value 19991.470999
## final value 19991.270794
## converged
## # weights: 9
## initial value 22814.631259
## final value 20021.567600
## converged
## # weights: 25
## initial value 23068.511040

```

```

## final value 20021.567600
## converged
## # weights: 41
## initial value 23172.756712
## final value 20021.567600
## converged
## # weights: 9
## initial value 23701.169232
## iter 10 value 20027.887834
## final value 20027.077116
## converged
## # weights: 25
## initial value 22710.862438
## iter 10 value 20027.947890
## iter 20 value 20025.552921
## final value 20025.543055
## converged
## # weights: 41
## initial value 22870.134403
## iter 10 value 20051.728559
## iter 20 value 20024.908584
## final value 20024.883637
## converged
## # weights: 9
## initial value 23424.357707
## iter 10 value 20031.908853
## iter 20 value 20021.686827
## iter 20 value 20021.686779
## final value 20021.686779
## converged
## # weights: 25
## initial value 22945.048114
## iter 10 value 20034.789754
## iter 20 value 20021.720041
## final value 20021.580304
## converged
## # weights: 41
## initial value 22280.132197
## iter 10 value 20040.750555
## iter 20 value 20021.788764
## final value 20021.579322
## converged
## # weights: 9
## initial value 22891.484068
## final value 19931.150000
## converged
## # weights: 25
## initial value 21769.383505
## final value 19931.150000
## converged
## # weights: 41
## initial value 21258.885376
## final value 19931.150000
## converged

```

```

## # weights: 9
## initial value 22254.321271
## iter 10 value 19941.271486
## final value 19936.657750
## converged
## # weights: 25
## initial value 23348.913982
## iter 10 value 19936.805859
## final value 19935.124316
## converged
## # weights: 41
## initial value 21707.704260
## iter 10 value 19935.389281
## final value 19934.465128
## converged
## # weights: 9
## initial value 22287.244688
## iter 10 value 19942.707548
## iter 20 value 19931.283249
## iter 20 value 19931.283196
## final value 19931.283196
## converged
## # weights: 25
## initial value 24014.337639
## iter 10 value 19941.247482
## iter 20 value 19931.266416
## final value 19931.168815
## converged
## # weights: 41
## initial value 22461.388125
## iter 10 value 19951.655527
## iter 20 value 19931.386413
## final value 19931.161748
## converged
## # weights: 9
## initial value 23078.493188
## final value 20048.115700
## converged
## # weights: 25
## initial value 23705.867605
## final value 20048.115700
## converged
## # weights: 41
## initial value 22235.357074
## final value 20048.115700
## converged
## # weights: 9
## initial value 22993.675593
## iter 10 value 20057.955865
## final value 20053.626262
## converged
## # weights: 25
## initial value 22913.905180
## iter 10 value 20052.442034

```

```

## final value 20052.091782
## converged
## # weights: 41
## initial value 22365.812218
## iter 10 value 20058.544825
## iter 20 value 20051.432801
## final value 20051.432249
## converged
## # weights: 9
## initial value 23261.582384
## iter 10 value 20058.056505
## iter 20 value 20048.230310
## iter 20 value 20048.230264
## final value 20048.230264
## converged
## # weights: 25
## initial value 23652.024057
## iter 10 value 20060.511959
## iter 20 value 20048.258619
## final value 20048.130318
## converged
## # weights: 41
## initial value 21609.977132
## iter 10 value 20061.053440
## iter 20 value 20048.264862
## final value 20048.125177
## converged
## # weights: 9
## initial value 23192.836549
## final value 20053.498000
## converged
## # weights: 25
## initial value 23394.747693
## final value 20053.498000
## converged
## # weights: 41
## initial value 23161.350364
## final value 20053.498000
## converged
## # weights: 9
## initial value 22147.546158
## iter 10 value 20073.468853
## iter 20 value 20059.012405
## final value 20059.008761
## converged
## # weights: 25
## initial value 22876.118163
## iter 10 value 20059.226508
## iter 20 value 20057.474364
## iter 20 value 20057.474237
## iter 20 value 20057.474231
## final value 20057.474231
## converged
## # weights: 41

```

```

## initial value 22098.341815
## iter 10 value 20067.922919
## iter 20 value 20056.814819
## iter 20 value 20056.814732
## iter 20 value 20056.814717
## final value 20056.814717
## converged
## # weights: 9
## initial value 21553.246838
## iter 10 value 20060.073418
## iter 20 value 20053.573809
## iter 20 value 20053.573779
## final value 20053.573779
## converged
## # weights: 25
## initial value 22015.718979
## iter 10 value 20066.313543
## iter 20 value 20053.645753
## final value 20053.510865
## converged
## # weights: 41
## initial value 22207.372208
## iter 10 value 20070.296221
## iter 20 value 20053.691670
## iter 30 value 20053.508239
## iter 30 value 20053.508239
## iter 30 value 20053.508239
## final value 20053.508239
## converged
## # weights: 9
## initial value 22686.402223
## final value 20036.130100
## converged
## # weights: 25
## initial value 22997.480415
## final value 20036.130100
## converged
## # weights: 41
## initial value 23033.328878
## final value 20036.130100
## converged
## # weights: 9
## initial value 23600.542830
## iter 10 value 20057.644876
## iter 20 value 20041.642829
## final value 20041.640126
## converged
## # weights: 25
## initial value 23073.934563
## iter 10 value 20041.450893
## final value 20040.105857
## converged
## # weights: 41
## initial value 20920.184423

```

```

## iter 10 value 20049.341633
## iter 20 value 20039.446564
## iter 20 value 20039.446440
## iter 20 value 20039.446392
## final value 20039.446392
## converged
## # weights: 9
## initial value 22154.069996
## iter 10 value 20046.514572
## iter 20 value 20036.249825
## iter 20 value 20036.249777
## final value 20036.249777
## converged
## # weights: 25
## initial value 22881.066294
## iter 10 value 20049.404986
## iter 20 value 20036.283149
## final value 20036.146004
## converged
## # weights: 41
## initial value 22288.965205
## iter 10 value 20055.558439
## iter 20 value 20036.354093
## final value 20036.140556
## converged
## # weights: 9
## initial value 22725.196483
## final value 20044.680100
## converged
## # weights: 25
## initial value 21350.872363
## final value 20044.680100
## converged
## # weights: 41
## initial value 23430.704329
## final value 20044.680100
## converged
## # weights: 9
## initial value 22250.450352
## iter 10 value 20050.426067
## final value 20050.190447
## converged
## # weights: 25
## initial value 22037.273809
## iter 10 value 20053.455060
## iter 20 value 20048.658245
## final value 20048.656096
## converged
## # weights: 41
## initial value 22445.159842
## iter 10 value 20062.076401
## iter 20 value 20047.999139
## final value 20047.996604
## converged

```

```

## # weights: 9
## initial value 22025.041889
## iter 10 value 20054.628574
## iter 20 value 20044.794798
## iter 20 value 20044.794752
## final value 20044.794752
## converged
## # weights: 25
## initial value 22668.388494
## iter 10 value 20061.200299
## iter 20 value 20044.870565
## final value 20044.691882
## converged
## # weights: 41
## initial value 23981.123543
## iter 10 value 20057.334044
## iter 20 value 20044.825990
## final value 20044.692760
## converged
## # weights: 9
## initial value 23743.994288
## final value 20046.605200
## converged
## # weights: 25
## initial value 21948.627232
## final value 20046.605200
## converged
## # weights: 41
## initial value 21930.876646
## final value 20046.605200
## converged
## # weights: 9
## initial value 23370.733084
## iter 10 value 20053.120555
## final value 20052.115641
## converged
## # weights: 25
## initial value 21988.854754
## iter 10 value 20051.679657
## final value 20050.581260
## converged
## # weights: 41
## initial value 22149.941510
## iter 10 value 20062.888844
## iter 20 value 20049.928475
## final value 20049.921704
## converged
## # weights: 9
## initial value 22939.638982
## iter 10 value 20056.734830
## iter 20 value 20046.721987
## iter 20 value 20046.721940
## final value 20046.721940
## converged

```



```

## # weights: 25
## initial value 22511.271395
## iter 10 value 20061.496469
## iter 20 value 20046.776885
## final value 20046.616853
## converged
## # weights: 41
## initial value 22714.568767
## iter 10 value 20066.284296
## iter 20 value 20046.832085
## final value 20046.616228
## converged
## # weights: 9
## initial value 22247.198016
## final value 20050.065700
## converged
## # weights: 25
## initial value 22751.525719
## final value 20050.065700
## converged
## # weights: 41
## initial value 24168.391251
## final value 20050.065700
## converged
## # weights: 9
## initial value 23501.026985
## iter 10 value 20055.762543
## final value 20055.576335
## converged
## # weights: 25
## initial value 22442.104337
## iter 10 value 20055.199736
## final value 20054.041990
## converged
## # weights: 41
## initial value 21742.915797
## iter 10 value 20060.213752
## iter 20 value 20053.384362
## final value 20053.382430
## converged
## # weights: 9
## initial value 22217.729756
## iter 10 value 20059.465846
## iter 20 value 20050.174076
## iter 20 value 20050.174033
## final value 20050.174033
## converged
## # weights: 25
## initial value 23635.663492
## iter 10 value 20062.468089
## iter 20 value 20050.208690
## final value 20050.084456
## converged
## # weights: 41

```

```

## initial value 23715.439874
## iter 10 value 20066.100481
## iter 20 value 20050.250568
## final value 20050.086462
## converged
## # weights: 9
## initial value 22161.921807
## final value 20042.467600
## converged
## # weights: 25
## initial value 24340.904803
## final value 20042.467600
## converged
## # weights: 41
## initial value 23493.550515
## final value 20042.467600
## converged
## # weights: 9
## initial value 22732.991157
## iter 10 value 20048.054504
## final value 20047.977787
## converged
## # weights: 25
## initial value 21931.623340
## iter 10 value 20053.767275
## iter 20 value 20046.445467
## final value 20046.443446
## converged
## # weights: 41
## initial value 22735.703249
## iter 10 value 20048.236632
## iter 20 value 20045.784312
## final value 20045.783953
## converged
## # weights: 9
## initial value 22537.041320
## iter 10 value 20053.522036
## iter 20 value 20042.595049
## iter 20 value 20042.594998
## final value 20042.594998
## converged
## # weights: 25
## initial value 23755.545780
## iter 10 value 20053.056228
## iter 20 value 20042.589679
## final value 20042.484183
## converged
## # weights: 41
## initial value 21946.666507
## iter 10 value 20058.007677
## iter 20 value 20042.646765
## final value 20042.477675
## converged
## # weights: 9

```

```

## initial value 23926.092582
## final value 20062.464500
## converged
## # weights: 25
## initial value 22033.028071
## final value 20062.464500
## converged
## # weights: 41
## initial value 22858.777546
## final value 20062.464500
## converged
## # weights: 9
## initial value 21732.762292
## iter 10 value 20068.158054
## final value 20067.977118
## converged
## # weights: 25
## initial value 23191.567166
## iter 10 value 20067.504982
## iter 20 value 20066.466764
## final value 20066.442189
## converged
## # weights: 41
## initial value 23168.992555
## iter 10 value 20068.684664
## iter 20 value 20065.782964
## final value 20065.782485
## converged
## # weights: 9
## initial value 23603.933206
## iter 10 value 20071.157519
## iter 20 value 20062.564724
## iter 20 value 20062.564684
## final value 20062.564684
## converged
## # weights: 25
## initial value 22995.714202
## iter 10 value 20079.293589
## iter 20 value 20062.658526
## final value 20062.483962
## converged
## # weights: 41
## initial value 22187.641510
## iter 10 value 20081.234056
## iter 20 value 20062.680898
## final value 20062.473984
## converged
## # weights: 9
## initial value 23729.465301
## final value 20006.167600
## converged
## # weights: 25
## initial value 22111.037644
## final value 20006.167600

```

```

## converged
## # weights: 41
## initial value 22562.193189
## final value 20006.167600
## converged
## # weights: 9
## initial value 22342.912707
## iter 10 value 20012.107645
## final value 20011.676702
## converged
## # weights: 25
## initial value 22632.092074
## iter 10 value 20010.447406
## final value 20010.142750
## converged
## # weights: 41
## initial value 23138.999550
## iter 10 value 20011.042195
## iter 20 value 20009.483840
## final value 20009.483364
## converged
## # weights: 9
## initial value 23300.835713
## iter 10 value 20016.092518
## iter 20 value 20006.282027
## iter 20 value 20006.281981
## final value 20006.281981
## converged
## # weights: 25
## initial value 22539.156497
## iter 10 value 20020.496236
## iter 20 value 20006.332798
## final value 20006.180757
## converged
## # weights: 41
## initial value 22860.946990
## iter 10 value 20025.854191
## iter 20 value 20006.394571
## final value 20006.178216
## converged
## # weights: 9
## initial value 23154.603790
## final value 20057.069200
## converged
## # weights: 25
## initial value 23502.415077
## final value 20057.069200
## converged
## # weights: 41
## initial value 23663.035785
## final value 20057.069200
## converged
## # weights: 9
## initial value 22058.947450

```

```

## iter 10 value 20064.268092
## final value 20062.580230
## converged
## # weights: 25
## initial value 22804.732721
## iter 10 value 20062.682545
## final value 20061.045692
## converged
## # weights: 41
## initial value 22936.468945
## iter 10 value 20075.285715
## iter 20 value 20060.387256
## final value 20060.386035
## converged
## # weights: 9
## initial value 23569.387624
## iter 10 value 20066.195918
## iter 20 value 20057.174424
## iter 20 value 20057.174382
## final value 20057.174382
## converged
## # weights: 25
## initial value 23264.103331
## iter 10 value 20072.734946
## iter 20 value 20057.249814
## final value 20057.087572
## converged
## # weights: 41
## initial value 21715.954922
## iter 10 value 20069.326006
## iter 20 value 20057.210511
## final value 20057.079363
## converged
## # weights: 9
## initial value 22750.776258
## final value 19999.489700
## converged
## # weights: 25
## initial value 23255.686614
## final value 19999.489700
## converged
## # weights: 41
## initial value 22734.576719
## final value 19999.489700
## converged
## # weights: 9
## initial value 22946.566794
## iter 10 value 20006.006842
## final value 20004.998644
## converged
## # weights: 25
## initial value 23112.427396
## iter 10 value 20004.849067
## final value 20003.464764

```

```

## converged
## # weights: 41
## initial value 23755.957708
## iter 10 value 20016.274473
## iter 20 value 20002.805922
## final value 20002.805507
## converged
## # weights: 9
## initial value 23340.553299
## iter 10 value 20009.673718
## iter 20 value 19999.607114
## iter 20 value 19999.607067
## final value 19999.607067
## converged
## # weights: 25
## initial value 21829.185882
## iter 10 value 20010.549068
## iter 20 value 19999.617206
## final value 19999.501219
## converged
## # weights: 41
## initial value 21478.061817
## iter 10 value 20012.194933
## iter 20 value 19999.636181
## final value 19999.499295
## converged
## # weights: 9
## initial value 22400.746987
## final value 19999.170100
## converged
## # weights: 25
## initial value 23032.788785
## final value 19999.170100
## converged
## # weights: 41
## initial value 23304.892430
## final value 19999.170100
## converged
## # weights: 9
## initial value 21730.497686
## iter 10 value 20005.894392
## final value 20004.679048
## converged
## # weights: 25
## initial value 22271.985893
## iter 10 value 20003.500630
## final value 20003.145140
## converged
## # weights: 41
## initial value 23071.829116
## iter 10 value 20007.488146
## iter 20 value 20002.490030
## final value 20002.485856
## converged

```

```

## # weights: 9
## initial value 21791.161995
## iter 10 value 20006.583597
## iter 20 value 19999.255572
## iter 20 value 19999.255538
## final value 19999.255538
## converged
## # weights: 25
## initial value 21870.850795
## iter 10 value 20011.542951
## iter 20 value 19999.312749
## final value 19999.181276
## converged
## # weights: 41
## initial value 23416.328997
## iter 10 value 20018.604821
## iter 20 value 19999.394167
## final value 19999.183214
## converged
## # weights: 9
## initial value 23802.452303
## final value 20031.585700
## converged
## # weights: 25
## initial value 23489.317764
## final value 20031.585700
## converged
## # weights: 41
## initial value 22167.551947
## final value 20031.585700
## converged
## # weights: 9
## initial value 23527.647346
## iter 10 value 20038.747802
## final value 20037.095522
## converged
## # weights: 25
## initial value 22876.116284
## iter 10 value 20036.432403
## final value 20035.561423
## converged
## # weights: 41
## initial value 22176.896454
## iter 10 value 20038.720989
## iter 20 value 20034.901941
## iter 20 value 20034.901882
## iter 20 value 20034.901863
## final value 20034.901863
## converged
## # weights: 9
## initial value 23240.684481
## iter 10 value 20041.200104
## iter 20 value 20031.696547
## iter 20 value 20031.696502

```

```

## final value 20031.696502
## converged
## # weights: 25
## initial value 22336.678992
## iter 10 value 20045.422328
## iter 20 value 20031.745225
## final value 20031.600603
## converged
## # weights: 41
## initial value 21412.355348
## iter 10 value 20041.326945
## iter 20 value 20031.698009
## final value 20031.595229
## converged
## # weights: 9
## initial value 23560.043626
## final value 20031.021200
## converged
## # weights: 25
## initial value 23162.832681
## final value 20031.021200
## converged
## # weights: 41
## initial value 20993.626344
## final value 20031.021200
## converged
## # weights: 9
## initial value 23615.960371
## iter 10 value 20038.007210
## final value 20036.531018
## converged
## # weights: 25
## initial value 22225.033306
## iter 10 value 20037.466305
## iter 20 value 20034.997132
## iter 20 value 20034.996941
## iter 20 value 20034.996890
## final value 20034.996890
## converged
## # weights: 41
## initial value 22994.943433
## iter 10 value 20036.563537
## final value 20034.337437
## converged
## # weights: 9
## initial value 22368.390651
## iter 10 value 20042.436778
## iter 20 value 20031.152813
## iter 20 value 20031.152760
## final value 20031.152760
## converged
## # weights: 25
## initial value 21518.958281
## iter 10 value 20040.392455

```



```

## iter 20 value 20031.129243
## final value 20031.032874
## converged
## # weights: 41
## initial value 21731.291062
## iter 10 value 20045.238748
## iter 20 value 20031.185117
## final value 20031.030687
## converged
## # weights: 9
## initial value 22813.119494
## final value 20038.070000
## converged
## # weights: 25
## initial value 21574.551160
## final value 20038.070000
## converged
## # weights: 41
## initial value 22381.081831
## final value 20038.070000
## converged
## # weights: 9
## initial value 21838.460260
## iter 10 value 20044.750865
## final value 20043.580051
## converged
## # weights: 25
## initial value 23366.615276
## iter 10 value 20043.473073
## final value 20042.045803
## converged
## # weights: 41
## initial value 23419.853596
## iter 10 value 20052.789915
## iter 20 value 20041.388157
## final value 20041.386289
## converged
## # weights: 9
## initial value 23444.353721
## iter 10 value 20047.666051
## iter 20 value 20038.180635
## iter 20 value 20038.180591
## final value 20038.180591
## converged
## # weights: 25
## initial value 23677.542038
## iter 10 value 20048.695658
## iter 20 value 20038.192505
## final value 20038.084615
## converged
## # weights: 41
## initial value 24321.026796
## iter 10 value 20048.462411
## iter 20 value 20038.189816

```

```

## final value 20038.085941
## converged
## # weights: 9
## initial value 23178.594173
## final value 19994.114000
## converged
## # weights: 25
## initial value 22858.645024
## final value 19994.114000
## converged
## # weights: 41
## initial value 23656.823125
## final value 19994.114000
## converged
## # weights: 9
## initial value 23029.003549
## iter 10 value 20000.327314
## final value 19999.622838
## converged
## # weights: 25
## initial value 22596.363476
## iter 10 value 19998.953104
## final value 19998.088977
## converged
## # weights: 41
## initial value 22403.903440
## iter 10 value 19998.442869
## iter 20 value 19997.429721
## iter 20 value 19997.429648
## iter 20 value 19997.429645
## final value 19997.429645
## converged
## # weights: 9
## initial value 21987.689560
## iter 10 value 20003.869820
## iter 20 value 19994.226477
## iter 20 value 19994.226432
## final value 19994.226432
## converged
## # weights: 25
## initial value 22414.469350
## iter 10 value 20011.860710
## iter 20 value 19994.318606
## final value 19994.127063
## converged
## # weights: 41
## initial value 21894.904502
## iter 10 value 20009.807445
## iter 20 value 19994.294933
## final value 19994.124388
## converged
## # weights: 9
## initial value 21985.760490
## final value 20006.318500

```

```

## converged
## # weights: 25
## initial value 21801.180716
## final value 20006.318500
## converged
## # weights: 41
## initial value 21845.345175
## final value 20006.318500
## converged
## # weights: 9
## initial value 23025.660674
## iter 10 value 20013.516971
## final value 20011.827574
## converged
## # weights: 25
## initial value 22900.411467
## iter 10 value 20012.681263
## iter 20 value 20010.297824
## final value 20010.293586
## converged
## # weights: 41
## initial value 21653.016835
## iter 10 value 20015.474459
## iter 20 value 20009.634504
## final value 20009.634253
## converged
## # weights: 9
## initial value 22406.011304
## iter 10 value 20016.453093
## iter 20 value 20006.435344
## iter 20 value 20006.435297
## final value 20006.435297
## converged
## # weights: 25
## initial value 21066.430254
## iter 10 value 20011.802292
## iter 20 value 20006.381724
## final value 20006.329430
## converged
## # weights: 41
## initial value 22345.679653
## iter 10 value 20022.737131
## iter 20 value 20006.507794
## final value 20006.327524
## converged
## # weights: 9
## initial value 21996.126564
## final value 20046.523700
## converged
## # weights: 25
## initial value 23043.872506
## final value 20046.523700
## converged
## # weights: 41

```

```

## initial value 22164.085353
## final value 20046.523700
## converged
## # weights: 9
## initial value 23679.194973
## iter 10 value 20052.966651
## final value 20052.034162
## converged
## # weights: 25
## initial value 23666.037260
## iter 10 value 20051.788555
## final value 20050.499810
## converged
## # weights: 41
## initial value 21387.385882
## iter 10 value 20060.617034
## iter 20 value 20049.841148
## final value 20049.840250
## converged
## # weights: 9
## initial value 21927.888130
## iter 10 value 20055.419098
## iter 20 value 20046.626257
## iter 20 value 20046.626216
## final value 20046.626216
## converged
## # weights: 25
## initial value 21725.358263
## iter 10 value 20057.777004
## iter 20 value 20046.653442
## final value 20046.536593
## converged
## # weights: 41
## initial value 23333.837912
## iter 10 value 20066.331648
## iter 20 value 20046.752070
## final value 20046.538328
## converged
## # weights: 9
## initial value 23238.604882
## final value 20002.330100
## converged
## # weights: 25
## initial value 21242.553176
## final value 20002.330100
## converged
## # weights: 41
## initial value 22278.012279
## final value 20002.330100
## converged
## # weights: 9
## initial value 22805.802042
## iter 10 value 20008.362737
## final value 20007.839097

```

```

## converged
## # weights: 25
## initial value 22866.460726
## iter 10 value 20007.519708
## final value 20006.305148
## converged
## # weights: 41
## initial value 24306.334619
## iter 10 value 20016.975991
## iter 20 value 20005.649753
## final value 20005.645839
## converged
## # weights: 9
## initial value 22337.723953
## iter 10 value 20012.182105
## iter 20 value 20002.443686
## iter 20 value 20002.443640
## final value 20002.443640
## converged
## # weights: 25
## initial value 21706.920672
## iter 10 value 20011.472763
## iter 20 value 20002.435508
## final value 20002.342927
## converged
## # weights: 41
## initial value 23452.620290
## iter 10 value 20019.722235
## iter 20 value 20002.530618
## final value 20002.341723
## converged
## # weights: 9
## initial value 23362.200556
## final value 20020.005200
## converged
## # weights: 25
## initial value 22710.324421
## final value 20020.005200
## converged
## # weights: 41
## initial value 23746.747469
## final value 20020.005200
## converged
## # weights: 9
## initial value 23672.575997
## iter 10 value 20025.959309
## final value 20025.514673
## converged
## # weights: 25
## initial value 23314.396549
## iter 10 value 20025.277600
## iter 20 value 20023.980608
## iter 20 value 20023.980577
## iter 20 value 20023.980575

```

```

## final value 20023.980575
## converged
## # weights: 41
## initial value 22987.117297
## iter 10 value 20024.539978
## iter 20 value 20023.321330
## iter 20 value 20023.321248
## iter 20 value 20023.321212
## final value 20023.321212
## converged
## # weights: 9
## initial value 22436.890500
## iter 10 value 20030.677669
## iter 20 value 20020.128245
## iter 20 value 20020.128196
## final value 20020.128196
## converged
## # weights: 25
## initial value 22666.838483
## iter 10 value 20035.016573
## iter 20 value 20020.178269
## final value 20020.023522
## converged
## # weights: 41
## initial value 22697.428300
## iter 10 value 20038.539911
## iter 20 value 20020.218891
## final value 20020.018376
## converged
## # weights: 9
## initial value 22707.365645
## final value 20022.593200
## converged
## # weights: 25
## initial value 23428.487031
## final value 20022.593200
## converged
## # weights: 41
## initial value 21420.193395
## final value 20022.593200
## converged
## # weights: 9
## initial value 22249.423122
## iter 10 value 20029.306883
## final value 20028.102745
## converged
## # weights: 25
## initial value 21891.827153
## iter 10 value 20028.238414
## iter 20 value 20026.568667
## iter 20 value 20026.568624
## iter 20 value 20026.568622
## final value 20026.568622
## converged

```

```

## # weights: 41
## initial value 22191.585042
## iter 10 value 20039.536167
## iter 20 value 20025.909723
## final value 20025.909255
## converged
## # weights: 9
## initial value 22146.989774
## iter 10 value 20031.694432
## iter 20 value 20022.698130
## iter 20 value 20022.698088
## final value 20022.698088
## converged
## # weights: 25
## initial value 22384.754442
## iter 10 value 20036.190112
## iter 20 value 20022.749962
## final value 20022.605297
## converged
## # weights: 41
## initial value 22205.654431
## iter 10 value 20041.714705
## iter 20 value 20022.813656
## final value 20022.604461
## converged
## # weights: 9
## initial value 22761.310789
## final value 20028.713200
## converged
## # weights: 25
## initial value 21973.100497
## final value 20028.713200
## converged
## # weights: 41
## initial value 22437.779703
## final value 20028.713200
## converged
## # weights: 9
## initial value 21585.588339
## iter 10 value 20034.386643
## final value 20034.222935
## converged
## # weights: 25
## initial value 23137.553883
## iter 10 value 20034.201024
## final value 20032.688816
## converged
## # weights: 41
## initial value 23461.335726
## iter 10 value 20032.937038
## final value 20032.029360
## converged
## # weights: 9
## initial value 23027.968074

```

```

## iter 10 value 20039.582025
## iter 20 value 20028.838509
## iter 20 value 20028.838459
## final value 20028.838459
## converged
## # weights: 25
## initial value 21883.806376
## iter 10 value 20040.034715
## iter 20 value 20028.843728
## final value 20028.726778
## converged
## # weights: 41
## initial value 23588.477025
## iter 10 value 20047.029171
## iter 20 value 20028.924369
## final value 20028.728951
## converged
## # weights: 9
## initial value 23822.066493
## final value 19949.321200
## converged
## # weights: 25
## initial value 21599.351987
## final value 19949.321200
## converged
## # weights: 41
## initial value 23046.362079
## final value 19949.321200
## converged
## # weights: 9
## initial value 23637.075027
## iter 10 value 19956.053281
## final value 19954.829264
## converged
## # weights: 25
## initial value 21419.526802
## iter 10 value 19953.658520
## final value 19953.295786
## converged
## # weights: 41
## initial value 22367.233145
## iter 10 value 19966.882463
## iter 20 value 19952.637541
## final value 19952.636526
## converged
## # weights: 9
## initial value 22285.342764
## iter 10 value 19958.703167
## iter 20 value 19949.429367
## iter 20 value 19949.429323
## final value 19949.429323
## converged
## # weights: 25
## initial value 21572.242611

```



```

## iter 10 value 19959.541198
## iter 20 value 19949.439029
## final value 19949.333676
## converged
## # weights: 41
## initial value 22188.223953
## iter 10 value 19966.005132
## iter 20 value 19949.513553
## final value 19949.330412
## converged
## # weights: 9
## initial value 21992.875268
## final value 20028.595700
## converged
## # weights: 25
## initial value 22143.658076
## final value 20028.595700
## converged
## # weights: 41
## initial value 22019.116467
## final value 20028.595700
## converged
## # weights: 9
## initial value 23745.359972
## iter 10 value 20034.749069
## final value 20034.105437
## converged
## # weights: 25
## initial value 23343.282278
## iter 10 value 20034.771151
## iter 20 value 20032.583881
## final value 20032.571245
## converged
## # weights: 41
## initial value 21803.015894
## iter 10 value 20033.537711
## iter 20 value 20031.912042
## iter 20 value 20031.911906
## iter 20 value 20031.911897
## final value 20031.911897
## converged
## # weights: 9
## initial value 23119.265058
## iter 10 value 20039.351074
## iter 20 value 20028.719701
## iter 20 value 20028.719651
## final value 20028.719651
## converged
## # weights: 25
## initial value 21637.107686
## iter 10 value 20039.451030
## iter 20 value 20028.720853
## final value 20028.607984
## converged

```

```

## # weights: 41
## initial value 22075.783382
## iter 10 value 20045.187101
## iter 20 value 20028.786986
## iter 30 value 20028.605788
## iter 30 value 20028.605787
## iter 30 value 20028.605784
## final value 20028.605784
## converged
## # weights: 9
## initial value 21620.802185
## final value 20011.474000
## converged
## # weights: 25
## initial value 23339.448034
## final value 20011.474000
## converged
## # weights: 41
## initial value 21754.253686
## final value 20011.474000
## converged
## # weights: 9
## initial value 22325.757413
## iter 10 value 20021.424366
## final value 20016.983192
## converged
## # weights: 25
## initial value 22537.103002
## iter 10 value 20016.761438
## final value 20015.449170
## converged
## # weights: 41
## initial value 23099.506511
## iter 10 value 20015.686089
## iter 20 value 20014.789999
## iter 20 value 20014.789823
## iter 20 value 20014.789813
## final value 20014.789813
## converged
## # weights: 9
## initial value 23538.057584
## iter 10 value 20021.196998
## iter 20 value 20011.586099
## iter 20 value 20011.586054
## final value 20011.586054
## converged
## # weights: 25
## initial value 23040.465169
## iter 10 value 20024.732773
## iter 20 value 20011.626863
## final value 20011.486103
## converged
## # weights: 41
## initial value 23464.508890

```

```

## iter 10 value 20028.730186
## iter 20 value 20011.672950
## final value 20011.489452
## converged
## # weights: 9
## initial value 22846.141103
## final value 20001.233200
## converged
## # weights: 25
## initial value 24015.123822
## final value 20001.233200
## converged
## # weights: 41
## initial value 21564.486088
## final value 20001.233200
## converged
## # weights: 9
## initial value 22149.881885
## iter 10 value 20007.956071
## final value 20006.742156
## converged
## # weights: 25
## initial value 22727.352243
## iter 10 value 20018.342030
## iter 20 value 20005.209753
## final value 20005.208226
## converged
## # weights: 41
## initial value 22443.685379
## iter 10 value 20005.190223
## final value 20004.548959
## converged
## # weights: 9
## initial value 23344.685445
## iter 10 value 20012.484398
## iter 20 value 20001.362917
## iter 20 value 20001.362866
## final value 20001.362866
## converged
## # weights: 25
## initial value 22167.060963
## iter 10 value 20016.004530
## iter 20 value 20001.403502
## final value 20001.246605
## converged
## # weights: 41
## initial value 23576.786110
## iter 10 value 20019.308344
## iter 20 value 20001.441592
## final value 20001.244322
## converged
## # weights: 9
## initial value 22858.594988
## final value 19993.614500

```

```

## converged
## # weights: 25
## initial value 24344.049799
## final value 19993.614500
## converged
## # weights: 41
## initial value 23872.495536
## final value 19993.614500
## converged
## # weights: 9
## initial value 22982.031288
## iter 10 value 19999.480166
## final value 19999.123334
## converged
## # weights: 25
## initial value 21758.430763
## iter 10 value 19998.723781
## final value 19997.589471
## converged
## # weights: 41
## initial value 23301.826101
## iter 10 value 20000.207660
## iter 20 value 19996.930244
## iter 20 value 19996.930152
## iter 20 value 19996.930140
## final value 19996.930140
## converged
## # weights: 9
## initial value 21779.443703
## iter 10 value 20002.999853
## iter 20 value 19993.722706
## iter 20 value 19993.722662
## final value 19993.722662
## converged
## # weights: 25
## initial value 23421.133453
## iter 10 value 20007.876146
## iter 20 value 19993.778926
## final value 19993.628136
## converged
## # weights: 41
## initial value 22587.958295
## iter 10 value 20011.691820
## iter 20 value 19993.822917
## final value 19993.624367
## converged
## # weights: 9
## initial value 22190.183827
## final value 19957.697200
## converged
## # weights: 25
## initial value 22595.557776
## final value 19957.697200
## converged

```

```

## # weights: 41
## initial value 22201.635597
## final value 19957.697200
## converged
## # weights: 9
## initial value 22972.601281
## iter 10 value 19966.532375
## final value 19963.205141
## converged
## # weights: 25
## initial value 22145.083852
## iter 10 value 19962.006336
## final value 19961.671542
## converged
## # weights: 41
## initial value 24143.653353
## iter 10 value 19978.193693
## iter 20 value 19961.149833
## iter 30 value 19961.012879
## final value 19961.012318
## converged
## # weights: 9
## initial value 22085.687644
## iter 10 value 19967.973734
## iter 20 value 19957.815680
## iter 20 value 19957.815633
## final value 19957.815633
## converged
## # weights: 25
## initial value 23064.158198
## iter 10 value 19971.386335
## iter 20 value 19957.855025
## final value 19957.718879
## converged
## # weights: 41
## initial value 21732.715754
## iter 10 value 19971.088959
## iter 20 value 19957.851596
## final value 19957.706990
## converged
## # weights: 9
## initial value 23114.949059
## final value 20032.699700
## converged
## # weights: 25
## initial value 23355.497565
## final value 20032.699700
## converged
## # weights: 41
## initial value 22683.761791
## final value 20032.699700
## converged
## # weights: 9
## initial value 23079.751682

```

```

## iter 10 value 20041.223828
## final value 20038.209574
## converged
## # weights: 25
## initial value 22100.449267
## iter 10 value 20037.476562
## final value 20036.675403
## converged
## # weights: 41
## initial value 23017.264191
## iter 10 value 20045.124163
## iter 20 value 20036.016279
## final value 20036.015930
## converged
## # weights: 9
## initial value 23118.643345
## iter 10 value 20043.739884
## iter 20 value 20032.826985
## iter 20 value 20032.826934
## final value 20032.826934
## converged
## # weights: 25
## initial value 22927.930117
## iter 10 value 20047.408660
## iter 20 value 20032.869283
## final value 20032.716015
## converged
## # weights: 41
## initial value 22549.230725
## iter 10 value 20054.467601
## iter 20 value 20032.950667
## final value 20032.710662
## converged
## # weights: 9
## initial value 23381.852131
## final value 20047.488500
## converged
## # weights: 25
## initial value 23297.520009
## final value 20047.488500
## converged
## # weights: 41
## initial value 24187.205432
## final value 20047.488500
## converged
## # weights: 9
## initial value 22046.185086
## iter 10 value 20053.203683
## final value 20052.998983
## converged
## # weights: 25
## initial value 23863.938294
## iter 10 value 20055.318356
## iter 20 value 20051.464748

```

```

## iter 20 value 20051.464582
## iter 20 value 20051.464565
## final value 20051.464565
## converged
## # weights: 41
## initial value 22980.607832
## iter 10 value 20051.812945
## iter 20 value 20050.805078
## iter 20 value 20050.805033
## iter 20 value 20050.805027
## final value 20050.805027
## converged
## # weights: 9
## initial value 23954.572630
## iter 10 value 20054.626183
## iter 20 value 20047.570792
## iter 20 value 20047.570759
## final value 20047.570759
## converged
## # weights: 25
## initial value 21684.342366
## iter 10 value 20057.608229
## iter 20 value 20047.605173
## final value 20047.499703
## converged
## # weights: 41
## initial value 21983.712533
## iter 10 value 20062.635234
## iter 20 value 20047.663130
## final value 20047.497817
## converged
## # weights: 9
## initial value 23598.422852
## final value 20051.129200
## converged
## # weights: 25
## initial value 23124.421802
## final value 20051.129200
## converged
## # weights: 41
## initial value 22341.608958
## final value 20051.129200
## converged
## # weights: 9
## initial value 21831.934671
## iter 10 value 20057.600888
## final value 20056.639841
## converged
## # weights: 25
## initial value 22803.377353
## iter 10 value 20056.483664
## final value 20055.105355
## converged
## # weights: 41

```

```

## initial value 23228.201159
## iter 10 value 20064.802743
## iter 20 value 20054.453393
## final value 20054.445827
## converged
## # weights: 9
## initial value 22050.049175
## iter 10 value 20060.304958
## iter 20 value 20051.234989
## iter 20 value 20051.234947
## final value 20051.234947
## converged
## # weights: 25
## initial value 22326.520437
## iter 10 value 20063.802339
## iter 20 value 20051.275311
## final value 20051.146579
## converged
## # weights: 41
## initial value 23674.312412
## iter 10 value 20067.228332
## iter 20 value 20051.314810
## final value 20051.142320
## converged
## # weights: 9
## initial value 22252.541953
## final value 20008.262000
## converged
## # weights: 25
## initial value 24011.283382
## final value 20008.262000
## converged
## # weights: 41
## initial value 22952.544980
## final value 20008.262000
## converged
## # weights: 9
## initial value 22082.560891
## iter 10 value 20014.922022
## final value 20013.771143
## converged
## # weights: 25
## initial value 23008.031348
## iter 10 value 20014.662621
## final value 20012.237209
## converged
## # weights: 41
## initial value 22386.720708
## iter 10 value 20012.577775
## iter 20 value 20011.577836
## iter 20 value 20011.577788
## iter 20 value 20011.577784
## final value 20011.577784
## converged

```



```

## # weights: 9
## initial value 22573.976570
## iter 10 value 20017.967042
## iter 20 value 20008.373892
## iter 20 value 20008.373847
## final value 20008.373847
## converged
## # weights: 25
## initial value 22453.495686
## iter 10 value 20022.710685
## iter 20 value 20008.428582
## final value 20008.274913
## converged
## # weights: 41
## initial value 21488.177584
## iter 10 value 20019.873740
## iter 20 value 20008.395874
## final value 20008.271209
## converged
## # weights: 9
## initial value 22783.829566
## final value 20032.920100
## converged
## # weights: 25
## initial value 22305.658185
## final value 20032.920100
## converged
## # weights: 41
## initial value 23596.865093
## final value 20032.920100
## converged
## # weights: 9
## initial value 23571.343088
## iter 10 value 20053.464332
## iter 20 value 20038.430289
## iter 20 value 20038.430140
## final value 20038.430140
## converged
## # weights: 25
## initial value 21918.641316
## iter 10 value 20037.304207
## final value 20036.895846
## converged
## # weights: 41
## initial value 23484.626473
## iter 10 value 20037.146480
## final value 20036.236336
## converged
## # weights: 9
## initial value 22947.125799
## iter 10 value 20044.319320
## iter 20 value 20033.051524
## iter 20 value 20033.051471
## final value 20033.051471

```

```

## converged
## # weights: 25
## initial value 22208.594996
## iter 10 value 20048.728624
## iter 20 value 20033.102360
## final value 20032.932783
## converged
## # weights: 41
## initial value 22797.966618
## iter 10 value 20051.198624
## iter 20 value 20033.130837
## final value 20032.930271
## converged
## # weights: 9
## initial value 23857.715027
## final value 19990.238500
## converged
## # weights: 25
## initial value 21731.531953
## final value 19990.238500
## converged
## # weights: 41
## initial value 23662.000137
## final value 19990.238500
## converged
## # weights: 9
## initial value 23440.727959
## iter 10 value 19996.659044
## final value 19995.747181
## converged
## # weights: 25
## initial value 23678.258226
## iter 10 value 19994.888040
## final value 19994.213423
## converged
## # weights: 41
## initial value 22704.322949
## iter 10 value 19994.813005
## final value 19993.554117
## converged
## # weights: 9
## initial value 22217.704511
## iter 10 value 19999.636378
## iter 20 value 19990.346850
## iter 20 value 19990.346807
## final value 19990.346807
## converged
## # weights: 25
## initial value 22611.335921
## iter 10 value 20003.855081
## iter 20 value 19990.395488
## final value 19990.252872
## converged
## # weights: 41

```

```

## initial value 23312.570180
## iter 10 value 20009.801758
## iter 20 value 19990.464049
## final value 19990.248409
## converged
## # weights: 9
## initial value 22492.404686
## final value 20019.345700
## converged
## # weights: 25
## initial value 21383.441816
## final value 20019.345700
## converged
## # weights: 41
## initial value 23964.538347
## final value 20019.345700
## converged
## # weights: 9
## initial value 23270.242395
## iter 10 value 20027.020724
## final value 20024.855154
## converged
## # weights: 25
## initial value 22776.843220
## iter 10 value 20024.350386
## iter 20 value 20023.321131
## iter 20 value 20023.321075
## iter 20 value 20023.321073
## final value 20023.321073
## converged
## # weights: 41
## initial value 21448.888157
## iter 10 value 20034.457345
## final value 20022.661712
## converged
## # weights: 9
## initial value 22742.046290
## iter 10 value 20029.999964
## iter 20 value 20019.468535
## iter 20 value 20019.468486
## final value 20019.468486
## converged
## # weights: 25
## initial value 21931.567442
## iter 10 value 20033.320384
## iter 20 value 20019.506817
## final value 20019.358684
## converged
## # weights: 41
## initial value 21585.690958
## iter 10 value 20032.323651
## iter 20 value 20019.495326
## final value 20019.355622
## converged

```

```

## # weights: 9
## initial value 23911.037073
## final value 20056.041200
## converged
## # weights: 25
## initial value 22860.688736
## final value 20056.041200
## converged
## # weights: 41
## initial value 22157.827830
## final value 20056.041200
## converged
## # weights: 9
## initial value 23283.012216
## iter 10 value 20062.578223
## final value 20061.552288
## converged
## # weights: 25
## initial value 22189.049759
## iter 10 value 20062.077039
## iter 20 value 20060.019267
## final value 20060.017733
## converged
## # weights: 41
## initial value 21546.476207
## iter 10 value 20066.568497
## iter 20 value 20059.358507
## final value 20059.358155
## converged
## # weights: 9
## initial value 22679.436426
## iter 10 value 20066.160877
## iter 20 value 20056.157872
## iter 20 value 20056.157825
## final value 20056.157825
## converged
## # weights: 25
## initial value 23952.504156
## iter 10 value 20065.984437
## iter 20 value 20056.155838
## final value 20056.061142
## converged
## # weights: 41
## initial value 21521.984082
## iter 10 value 20067.304708
## iter 20 value 20056.171059
## final value 20056.051135
## converged
## # weights: 9
## initial value 22695.050141
## final value 20033.576500
## converged
## # weights: 25
## initial value 22084.365610

```

```

## final value 20033.576500
## converged
## # weights: 41
## initial value 22309.506283
## final value 20033.576500
## converged
## # weights: 9
## initial value 22361.505601
## iter 10 value 20062.964990
## iter 20 value 20039.087466
## final value 20039.086539
## converged
## # weights: 25
## initial value 22427.120751
## iter 10 value 20042.959264
## iter 20 value 20037.552476
## final value 20037.552147
## converged
## # weights: 41
## initial value 22704.567149
## iter 10 value 20049.113083
## iter 20 value 20036.892978
## final value 20036.892665
## converged
## # weights: 9
## initial value 22292.812616
## iter 10 value 20043.928449
## iter 20 value 20033.695850
## iter 20 value 20033.695802
## final value 20033.695802
## converged
## # weights: 25
## initial value 22327.329213
## iter 10 value 20048.311563
## iter 20 value 20033.746384
## final value 20033.590357
## converged
## # weights: 41
## initial value 24321.813659
## iter 10 value 20044.555706
## iter 20 value 20033.703082
## final value 20033.589752
## converged
## # weights: 9
## initial value 22021.284286
## final value 20045.781200
## converged
## # weights: 25
## initial value 23012.160204
## final value 20045.781200
## converged
## # weights: 41
## initial value 21530.239245
## final value 20045.781200

```

```

## converged
## # weights: 9
## initial value 23206.712360
## iter 10 value 20052.481120
## final value 20051.291617
## converged
## # weights: 25
## initial value 22119.241414
## iter 10 value 20050.568260
## final value 20049.757274
## converged
## # weights: 41
## initial value 21908.091318
## iter 10 value 20062.457637
## iter 20 value 20049.100091
## final value 20049.097752
## converged
## # weights: 9
## initial value 22267.191126
## iter 10 value 20054.994319
## iter 20 value 20045.887420
## iter 20 value 20045.887378
## final value 20045.887378
## converged
## # weights: 25
## initial value 21928.772583
## iter 10 value 20058.960270
## iter 20 value 20045.933144
## final value 20045.793972
## converged
## # weights: 41
## initial value 22409.217993
## iter 10 value 20062.793367
## iter 20 value 20045.977337
## final value 20045.791021
## converged
## # weights: 9
## initial value 22183.263449
## final value 20032.699700
## converged
## # weights: 25
## initial value 22815.101751
## final value 20032.699700
## converged
## # weights: 41
## initial value 22853.836743
## final value 20032.699700
## converged
## # weights: 9
## initial value 21920.149154
## iter 10 value 20038.445797
## final value 20038.209561
## converged
## # weights: 25

```

```

## initial value 21439.278358
## iter 10 value 20041.406783
## iter 20 value 20036.675427
## iter 20 value 20036.675349
## iter 20 value 20036.675344
## final value 20036.675344
## converged
## # weights: 41
## initial value 21396.646861
## iter 10 value 20048.706859
## iter 20 value 20036.019281
## final value 20036.015933
## converged
## # weights: 9
## initial value 23386.057374
## iter 10 value 20042.605359
## iter 20 value 20032.813904
## iter 20 value 20032.813859
## final value 20032.813859
## converged
## # weights: 25
## initial value 22739.028876
## iter 10 value 20048.968700
## iter 20 value 20032.887269
## final value 20032.710752
## converged
## # weights: 41
## initial value 22777.081304
## iter 10 value 20050.614942
## iter 20 value 20032.906249
## final value 20032.711692
## converged
## # weights: 9
## initial value 22398.047479
## final value 19977.237200
## converged
## # weights: 25
## initial value 23869.516626
## final value 19977.237200
## converged
## # weights: 41
## initial value 23848.554265
## final value 19977.237200
## converged
## # weights: 9
## initial value 22579.335321
## iter 10 value 19982.937027
## final value 19982.745720
## converged
## # weights: 25
## initial value 23724.038244
## iter 10 value 19981.679093
## final value 19981.212098
## converged

```

```

## # weights: 41
## initial value 21676.630410
## iter 10 value 19983.785996
## iter 20 value 19980.553055
## final value 19980.552726
## converged
## # weights: 9
## initial value 22564.579666
## iter 10 value 19987.339311
## iter 20 value 19977.353669
## iter 20 value 19977.353623
## final value 19977.353623
## converged
## # weights: 25
## initial value 22264.459706
## iter 10 value 19990.920763
## iter 20 value 19977.394961
## final value 19977.254525
## converged
## # weights: 41
## initial value 23058.853848
## iter 10 value 19996.561436
## iter 20 value 19977.459993
## final value 19977.248934
## converged
## # weights: 9
## initial value 22281.264122
## final value 19935.480100
## converged
## # weights: 25
## initial value 23237.953498
## final value 19935.480100
## converged
## # weights: 41
## initial value 22145.158629
## final value 19935.480100
## converged
## # weights: 9
## initial value 21404.678652
## iter 10 value 19941.505963
## final value 19940.987931
## converged
## # weights: 25
## initial value 22475.839673
## iter 10 value 19941.008429
## final value 19939.454567
## converged
## # weights: 41
## initial value 21977.138149
## iter 10 value 19947.758442
## iter 20 value 19938.796386
## final value 19938.795271
## converged
## # weights: 9

```



```

## initial value 23145.671649
## iter 10 value 19946.354369
## iter 20 value 19935.605472
## iter 20 value 19935.605422
## final value 19935.605422
## converged
## # weights: 25
## initial value 21929.028547
## iter 10 value 19948.322978
## iter 20 value 19935.628168
## final value 19935.491979
## converged
## # weights: 41
## initial value 22385.555401
## iter 10 value 19954.595037
## iter 20 value 19935.700480
## final value 19935.489650
## converged
## # weights: 9
## initial value 22937.213920
## final value 20037.869200
## converged
## # weights: 25
## initial value 22571.223247
## final value 20037.869200
## converged
## # weights: 41
## initial value 23780.750178
## final value 20037.869200
## converged
## # weights: 9
## initial value 23102.852624
## iter 10 value 20043.422482
## final value 20043.379254
## converged
## # weights: 25
## initial value 21442.253852
## iter 10 value 20043.292497
## final value 20041.845005
## converged
## # weights: 41
## initial value 23120.913550
## iter 10 value 20044.269209
## iter 20 value 20041.185873
## final value 20041.185494
## converged
## # weights: 9
## initial value 22974.100976
## iter 10 value 20048.215906
## iter 20 value 20037.988489
## iter 20 value 20037.988442
## final value 20037.988442
## converged
## # weights: 25

```

```

## initial value 22394.009493
## iter 10 value 20051.726247
## iter 20 value 20038.028961
## final value 20037.887557
## converged
## # weights: 41
## initial value 21834.844338
## iter 10 value 20052.021776
## iter 20 value 20038.032368
## final value 20037.880230
## converged
## # weights: 9
## initial value 22666.307212
## final value 20032.589200
## converged
## # weights: 25
## initial value 21930.217312
## final value 20032.589200
## converged
## # weights: 41
## initial value 23150.307863
## final value 20032.589200
## converged
## # weights: 9
## initial value 23857.555353
## iter 10 value 20039.438012
## final value 20038.099065
## converged
## # weights: 25
## initial value 22909.898821
## iter 10 value 20040.173687
## iter 20 value 20036.608803
## final value 20036.564927
## converged
## # weights: 41
## initial value 23695.133118
## iter 10 value 20041.985987
## iter 20 value 20035.906792
## final value 20035.905400
## converged
## # weights: 9
## initial value 22710.319578
## iter 10 value 20043.752882
## iter 20 value 20032.717908
## iter 20 value 20032.717857
## final value 20032.717857
## converged
## # weights: 25
## initial value 23872.925114
## iter 10 value 20043.639467
## iter 20 value 20032.716601
## final value 20032.605803
## converged
## # weights: 41

```

```

## initial value 23297.521741
## iter 10 value 20051.562342
## iter 20 value 20032.807945
## final value 20032.599499
## converged
## # weights: 9
## initial value 22421.281817
## final value 20021.696500
## converged
## # weights: 25
## initial value 22476.567506
## final value 20021.696500
## converged
## # weights: 41
## initial value 23223.034216
## final value 20021.696500
## converged
## # weights: 9
## initial value 22534.136608
## iter 10 value 20027.652452
## final value 20027.206009
## converged
## # weights: 25
## initial value 23941.907119
## iter 10 value 20027.393075
## final value 20025.671951
## converged
## # weights: 41
## initial value 23894.184563
## iter 10 value 20028.101260
## iter 20 value 20025.012640
## iter 20 value 20025.012538
## iter 20 value 20025.012527
## final value 20025.012527
## converged
## # weights: 9
## initial value 22865.826585
## iter 10 value 20033.354944
## iter 20 value 20021.830913
## iter 20 value 20021.830859
## final value 20021.830859
## converged
## # weights: 25
## initial value 22285.651627
## iter 10 value 20035.540704
## iter 20 value 20021.856113
## final value 20021.708212
## converged
## # weights: 41
## initial value 21454.262313
## iter 10 value 20034.426369
## iter 20 value 20021.843265
## final value 20021.706438
## converged

```

```

## # weights: 9
## initial value 23639.687642
## final value 20062.949200
## converged
## # weights: 25
## initial value 22812.734333
## final value 20062.949200
## converged
## # weights: 41
## initial value 22711.531042
## final value 20062.949200
## converged
## # weights: 9
## initial value 23443.859027
## iter 10 value 20139.368451
## iter 20 value 20068.587331
## final value 20068.461394
## converged
## # weights: 25
## initial value 23691.516102
## iter 10 value 20074.671265
## iter 20 value 20066.928143
## final value 20066.926430
## converged
## # weights: 41
## initial value 22244.588225
## iter 10 value 20081.712874
## iter 20 value 20066.268038
## final value 20066.266717
## converged
## # weights: 9
## initial value 24059.392803
## iter 10 value 20070.434809
## iter 20 value 20063.035503
## iter 20 value 20063.035469
## final value 20063.035469
## converged
## # weights: 25
## initial value 22250.800653
## iter 10 value 20076.946434
## iter 20 value 20063.110577
## final value 20062.961410
## converged
## # weights: 41
## initial value 24012.039749
## iter 10 value 20077.240212
## iter 20 value 20063.113964
## final value 20062.963270
## converged
## # weights: 9
## initial value 22240.324661
## final value 19997.722000
## converged
## # weights: 25

```

```

## initial value 23862.548006
## final value 19997.722000
## converged
## # weights: 41
## initial value 21547.694742
## final value 19997.722000
## converged
## # weights: 9
## initial value 23239.101892
## iter 10 value 20003.890166
## final value 20003.230896
## converged
## # weights: 25
## initial value 23259.502730
## iter 10 value 20001.976834
## final value 20001.697102
## converged
## # weights: 41
## initial value 22030.556144
## iter 10 value 20014.214801
## iter 20 value 20001.041239
## final value 20001.037661
## converged
## # weights: 9
## initial value 22776.970883
## iter 10 value 20007.616104
## iter 20 value 19997.836071
## iter 20 value 19997.836026
## final value 19997.836026
## converged
## # weights: 25
## initial value 23273.640363
## iter 10 value 20014.196051
## iter 20 value 19997.911933
## final value 19997.736738
## converged
## # weights: 41
## initial value 23517.877942
## iter 10 value 20016.176033
## iter 20 value 19997.934761
## final value 19997.733049
## converged
## # weights: 9
## initial value 23161.245262
## final value 20002.797200
## converged
## # weights: 25
## initial value 22358.206717
## final value 20002.797200
## converged
## # weights: 41
## initial value 21498.327157
## final value 20002.797200
## converged

```

```

## # weights: 9
## initial value 22298.790555
## iter 10 value 20009.563998
## final value 20008.306235
## converged
## # weights: 25
## initial value 21906.323446
## iter 10 value 20008.408650
## final value 20006.772292
## converged
## # weights: 41
## initial value 22433.851552
## iter 10 value 20006.999740
## final value 20006.112987
## converged
## # weights: 9
## initial value 22443.688232
## iter 10 value 20012.571508
## iter 20 value 20002.909890
## iter 20 value 20002.909845
## final value 20002.909845
## converged
## # weights: 25
## initial value 22561.055038
## iter 10 value 20016.783960
## iter 20 value 20002.958456
## final value 20002.814773
## converged
## # weights: 41
## initial value 22574.882144
## iter 10 value 20019.123173
## iter 20 value 20002.985426
## final value 20002.808013
## converged
## # weights: 9
## initial value 22939.702861
## final value 20054.760100
## converged
## # weights: 25
## initial value 23056.124578
## final value 20054.760100
## converged
## # weights: 41
## initial value 22219.330880
## final value 20054.760100
## converged
## # weights: 9
## initial value 23061.932627
## iter 10 value 20063.125793
## final value 20060.270990
## converged
## # weights: 25
## initial value 23671.527446
## iter 10 value 20060.274743

```

```

## final value 20058.736514
## converged
## # weights: 41
## initial value 22947.498898
## iter 10 value 20059.808331
## final value 20058.077031
## converged
## # weights: 9
## initial value 22133.545300
## iter 10 value 20063.657040
## iter 20 value 20054.862675
## iter 20 value 20054.862634
## final value 20054.862634
## converged
## # weights: 25
## initial value 22471.883149
## iter 10 value 20069.485710
## iter 20 value 20054.929875
## final value 20054.773476
## converged
## # weights: 41
## initial value 24380.674366
## iter 10 value 20063.828697
## iter 20 value 20054.864654
## final value 20054.778307
## converged
## # weights: 9
## initial value 22335.820822
## final value 19972.730000
## converged
## # weights: 25
## initial value 21849.030709
## final value 19972.730000
## converged
## # weights: 41
## initial value 22841.164262
## final value 19972.730000
## converged
## # weights: 9
## initial value 23060.486175
## iter 10 value 19978.536735
## final value 19978.238399
## converged
## # weights: 25
## initial value 23808.503534
## iter 10 value 19979.359548
## iter 20 value 19976.704834
## iter 20 value 19976.704692
## iter 20 value 19976.704683
## final value 19976.704683
## converged
## # weights: 41
## initial value 23978.933344
## iter 10 value 19977.198287

```

```

## final value 19976.045445
## converged
## # weights: 9
## initial value 22667.800013
## iter 10 value 19983.313583
## iter 20 value 19972.852020
## iter 20 value 19972.851972
## final value 19972.851972
## converged
## # weights: 25
## initial value 22346.882632
## iter 10 value 19988.700479
## iter 20 value 19972.914127
## final value 19972.742318
## converged
## # weights: 41
## initial value 22383.044906
## iter 10 value 19992.494675
## iter 20 value 19972.957871
## final value 19972.740357
## converged
## # weights: 9
## initial value 23697.219808
## final value 20020.136500
## converged
## # weights: 25
## initial value 22912.814574
## final value 20020.136500
## converged
## # weights: 41
## initial value 22389.636428
## final value 20020.136500
## converged
## # weights: 9
## initial value 23341.145405
## iter 10 value 20027.877782
## final value 20025.645975
## converged
## # weights: 25
## initial value 21993.718335
## iter 10 value 20024.521197
## final value 20024.111884
## converged
## # weights: 41
## initial value 23745.691516
## iter 10 value 20024.434143
## final value 20023.452565
## converged
## # weights: 9
## initial value 22608.212804
## iter 10 value 20030.605766
## iter 20 value 20020.257202
## iter 20 value 20020.257154
## final value 20020.257154

```



```

## converged
## # weights: 25
## initial value 21823.689532
## iter 10 value 20031.452611
## iter 20 value 20020.266966
## final value 20020.149384
## converged
## # weights: 41
## initial value 22222.360885
## iter 10 value 20039.965811
## iter 20 value 20020.365116
## final value 20020.147688
## converged
## # weights: 9
## initial value 23140.584862
## final value 19953.339700
## converged
## # weights: 25
## initial value 22009.805287
## final value 19953.339700
## converged
## # weights: 41
## initial value 21181.451325
## final value 19953.339700
## converged
## # weights: 9
## initial value 22657.956239
## iter 10 value 19961.239394
## final value 19958.847818
## converged
## # weights: 25
## initial value 23709.032543
## iter 10 value 19958.438236
## final value 19957.314278
## converged
## # weights: 41
## initial value 23662.069309
## iter 10 value 19958.509595
## iter 20 value 19956.655283
## iter 20 value 19956.655093
## iter 20 value 19956.655083
## final value 19956.655083
## converged
## # weights: 9
## initial value 22270.930091
## iter 10 value 19962.831382
## iter 20 value 19953.449132
## iter 20 value 19953.449088
## final value 19953.449088
## converged
## # weights: 25
## initial value 21696.063241
## iter 10 value 19964.491987
## iter 20 value 19953.468277

```

```

## final value 19953.352612
## converged
## # weights: 41
## initial value 23818.029877
## iter 10 value 19966.335540
## iter 20 value 19953.489532
## final value 19953.352598
## converged
## # weights: 9
## initial value 22730.936613
## final value 19973.110000
## converged
## # weights: 25
## initial value 22630.336091
## final value 19973.110000
## converged
## # weights: 41
## initial value 23020.953733
## final value 19973.110000
## converged
## # weights: 9
## initial value 23277.283258
## iter 10 value 19978.861497
## final value 19978.618398
## converged
## # weights: 25
## initial value 22294.166137
## iter 10 value 19978.689860
## iter 20 value 19977.084778
## iter 20 value 19977.084714
## iter 20 value 19977.084699
## final value 19977.084699
## converged
## # weights: 41
## initial value 23512.696850
## iter 10 value 19982.483612
## iter 20 value 19976.427989
## final value 19976.425477
## converged
## # weights: 9
## initial value 23282.637702
## iter 10 value 19982.752502
## iter 20 value 19973.221170
## iter 20 value 19973.221126
## final value 19973.221126
## converged
## # weights: 25
## initial value 21885.596091
## iter 10 value 19985.924349
## iter 20 value 19973.257739
## final value 19973.122166
## converged
## # weights: 41
## initial value 22593.806982

```

```

## iter 10 value 19992.794830
## iter 20 value 19973.336951
## final value 19973.121289
## converged
## # weights: 9
## initial value 22393.690511
## final value 19967.717200
## converged
## # weights: 25
## initial value 21802.185692
## final value 19967.717200
## converged
## # weights: 41
## initial value 23548.417499
## final value 19967.717200
## converged
## # weights: 9
## initial value 21580.078911
## iter 10 value 19975.093236
## final value 19973.225499
## converged
## # weights: 25
## initial value 23434.964344
## iter 10 value 19972.069789
## final value 19971.691818
## converged
## # weights: 41
## initial value 22439.649040
## iter 10 value 19971.579098
## final value 19971.032614
## converged
## # weights: 9
## initial value 24035.291024
## iter 10 value 19974.533536
## iter 20 value 19967.795787
## iter 20 value 19967.795756
## final value 19967.795756
## converged
## # weights: 25
## initial value 22915.883888
## iter 10 value 19984.325317
## iter 20 value 19967.908679
## final value 19967.734866
## converged
## # weights: 41
## initial value 21683.245907
## iter 10 value 19981.249049
## iter 20 value 19967.873212
## final value 19967.727696
## converged
## # weights: 9
## initial value 22329.649303
## final value 20019.080500
## converged

```

```

## # weights: 25
## initial value 22434.110401
## final value 20019.080500
## converged
## # weights: 41
## initial value 22333.738450
## final value 20019.080500
## converged
## # weights: 9
## initial value 22183.909875
## iter 10 value 20026.204856
## final value 20024.589934
## converged
## # weights: 25
## initial value 21607.469251
## iter 10 value 20023.847574
## final value 20023.055916
## converged
## # weights: 41
## initial value 22045.891336
## iter 10 value 20023.677291
## final value 20022.396569
## converged
## # weights: 9
## initial value 21709.843326
## iter 10 value 20025.976827
## iter 20 value 20019.160009
## iter 20 value 20019.159977
## final value 20019.159977
## converged
## # weights: 25
## initial value 23120.091122
## iter 10 value 20035.832392
## iter 20 value 20019.273636
## final value 20019.093113
## converged
## # weights: 41
## initial value 22224.141140
## iter 10 value 20038.289075
## iter 20 value 20019.301960
## final value 20019.091269
## converged
## # weights: 9
## initial value 22461.256422
## final value 20038.865200
## converged
## # weights: 25
## initial value 21774.943008
## final value 20038.865200
## converged
## # weights: 41
## initial value 24036.039261
## final value 20038.865200
## converged

```

```

## # weights: 9
## initial value 22876.973496
## iter 10 value 20044.797042
## final value 20044.375298
## converged
## # weights: 25
## initial value 23113.683249
## iter 10 value 20044.494977
## iter 20 value 20042.841232
## iter 20 value 20042.841063
## iter 20 value 20042.841033
## final value 20042.841033
## converged
## # weights: 41
## initial value 23757.543357
## iter 10 value 20048.126845
## iter 20 value 20042.182660
## final value 20042.181541
## converged
## # weights: 9
## initial value 22560.412823
## iter 10 value 20049.506421
## iter 20 value 20038.987885
## iter 20 value 20038.987836
## final value 20038.987836
## converged
## # weights: 25
## initial value 22015.975311
## iter 10 value 20052.241365
## iter 20 value 20039.019417
## final value 20038.876948
## converged
## # weights: 41
## initial value 20927.783583
## iter 10 value 20044.858777
## iter 20 value 20038.934301
## final value 20038.874114
## converged
## # weights: 9
## initial value 23241.531214
## final value 20028.478000
## converged
## # weights: 25
## initial value 23006.391580
## final value 20028.478000
## converged
## # weights: 41
## initial value 22366.505699
## final value 20028.478000
## converged
## # weights: 9
## initial value 23788.658018
## iter 10 value 20034.820380
## final value 20033.987724

```

```

## converged
## # weights: 25
## initial value 22484.258198
## iter 10 value 20034.909510
## final value 20032.453589
## converged
## # weights: 41
## initial value 22322.470560
## iter 10 value 20036.405136
## iter 20 value 20031.796381
## final value 20031.794128
## converged
## # weights: 9
## initial value 22516.333253
## iter 10 value 20038.476285
## iter 20 value 20028.593272
## iter 20 value 20028.593226
## final value 20028.593226
## converged
## # weights: 25
## initial value 22424.700129
## iter 10 value 20042.006599
## iter 20 value 20028.633974
## final value 20028.489704
## converged
## # weights: 41
## initial value 23250.351474
## iter 10 value 20047.464562
## iter 20 value 20028.696900
## final value 20028.493517
## converged
## # weights: 9
## initial value 23182.787288
## final value 20018.146000
## converged
## # weights: 25
## initial value 23926.863230
## final value 20018.146000
## converged
## # weights: 41
## initial value 22231.999347
## final value 20018.146000
## converged
## # weights: 9
## initial value 22727.817288
## iter 10 value 20023.916703
## final value 20023.655404
## converged
## # weights: 25
## initial value 21334.554645
## iter 10 value 20022.826987
## final value 20022.121373
## converged
## # weights: 41

```

```

## initial value 23402.477954
## iter 10 value 20033.986181
## iter 20 value 20021.463972
## final value 20021.461929
## converged
## # weights: 9
## initial value 23906.507380
## iter 10 value 20026.324921
## iter 20 value 20018.240297
## iter 20 value 20018.240259
## final value 20018.240259
## converged
## # weights: 25
## initial value 22979.407025
## iter 10 value 20030.881933
## iter 20 value 20018.292835
## final value 20018.158882
## converged
## # weights: 41
## initial value 22385.347599
## iter 10 value 20034.457021
## iter 20 value 20018.334053
## final value 20018.154827
## converged
## # weights: 9
## initial value 22713.636754
## final value 20021.050000
## converged
## # weights: 25
## initial value 23406.479350
## final value 20021.050000
## converged
## # weights: 41
## initial value 22972.200634
## final value 20021.050000
## converged
## # weights: 9
## initial value 22488.766103
## iter 10 value 20052.378104
## iter 20 value 20026.571167
## final value 20026.559463
## converged
## # weights: 25
## initial value 23540.758110
## iter 10 value 20025.646760
## final value 20025.025289
## converged
## # weights: 41
## initial value 23060.263895
## iter 10 value 20025.494518
## iter 20 value 20024.366532
## final value 20024.365908
## converged
## # weights: 9

```

```

## initial value 23887.007867
## iter 10 value 20028.661849
## iter 20 value 20021.137759
## iter 20 value 20021.137724
## final value 20021.137724
## converged
## # weights: 25
## initial value 23020.576445
## iter 10 value 20034.243031
## iter 20 value 20021.202105
## final value 20021.071765
## converged
## # weights: 41
## initial value 22036.728231
## iter 10 value 20039.051463
## iter 20 value 20021.257543
## final value 20021.058832
## converged
## # weights: 9
## initial value 22566.959473
## final value 19978.346000
## converged
## # weights: 25
## initial value 22231.788316
## final value 19978.346000
## converged
## # weights: 41
## initial value 23029.852905
## final value 19978.346000
## converged
## # weights: 9
## initial value 23340.039716
## iter 10 value 19984.581875
## final value 19983.854534
## converged
## # weights: 25
## initial value 22263.172765
## iter 10 value 19983.333513
## iter 20 value 19982.320916
## iter 20 value 19982.320803
## iter 20 value 19982.320801
## final value 19982.320801
## converged
## # weights: 41
## initial value 23146.340072
## iter 10 value 19988.401988
## iter 20 value 19981.665599
## final value 19981.661530
## converged
## # weights: 9
## initial value 22081.627879
## iter 10 value 19988.429026
## iter 20 value 19978.462249
## iter 20 value 19978.462203

```



```

## final value 19978.462203
## converged
## # weights: 25
## initial value 23568.001809
## iter 10 value 19991.281525
## iter 20 value 19978.495136
## final value 19978.360035
## converged
## # weights: 41
## initial value 23107.995494
## iter 10 value 19998.080639
## iter 20 value 19978.573525
## final value 19978.357323
## converged
## # weights: 9
## initial value 21741.824558
## final value 19930.229200
## converged
## # weights: 25
## initial value 22697.795558
## final value 19930.229200
## converged
## # weights: 41
## initial value 23592.703499
## final value 19930.229200
## converged
## # weights: 9
## initial value 23378.887095
## iter 10 value 19937.727672
## final value 19935.736858
## converged
## # weights: 25
## initial value 22033.272039
## iter 10 value 19939.272240
## iter 20 value 19934.204621
## final value 19934.203455
## converged
## # weights: 41
## initial value 22163.896576
## iter 10 value 19949.102958
## iter 20 value 19933.552525
## final value 19933.544262
## converged
## # weights: 9
## initial value 23175.080348
## iter 10 value 19940.999834
## iter 20 value 19930.353377
## iter 20 value 19930.353327
## final value 19930.353327
## converged
## # weights: 25
## initial value 22477.024453
## iter 10 value 19942.976765
## iter 20 value 19930.376169

```

```

## final value 19930.247063
## converged
## # weights: 41
## initial value 22756.456015
## iter 10 value 19947.917408
## iter 20 value 19930.433131
## final value 19930.239921
## converged
## # weights: 9
## initial value 22253.419080
## final value 19993.947700
## converged
## # weights: 25
## initial value 22891.679870
## final value 19993.947700
## converged
## # weights: 41
## initial value 23306.152540
## final value 19993.947700
## converged
## # weights: 9
## initial value 22715.613204
## iter 10 value 20002.341085
## final value 19999.456536
## converged
## # weights: 25
## initial value 22602.554649
## iter 10 value 20000.590844
## iter 20 value 19997.923133
## final value 19997.922685
## converged
## # weights: 41
## initial value 23130.829791
## iter 10 value 19999.507017
## final value 19997.263407
## converged
## # weights: 9
## initial value 23619.656886
## iter 10 value 20002.800479
## iter 20 value 19994.049766
## iter 20 value 19994.049725
## final value 19994.049725
## converged
## # weights: 25
## initial value 23214.324009
## iter 10 value 20008.593749
## iter 20 value 19994.116557
## final value 19993.960999
## converged
## # weights: 41
## initial value 22907.926108
## iter 10 value 20015.466355
## iter 20 value 19994.195793
## final value 19993.958144

```

```

## converged
## # weights: 9
## initial value 22642.781267
## final value 20049.701200
## converged
## # weights: 25
## initial value 22113.645857
## final value 20049.701200
## converged
## # weights: 41
## initial value 23090.942927
## final value 20049.701200
## converged
## # weights: 9
## initial value 22906.531389
## iter 10 value 20057.161148
## final value 20055.211753
## converged
## # weights: 25
## initial value 23671.104983
## iter 10 value 20056.385814
## final value 20053.677355
## converged
## # weights: 41
## initial value 22129.356260
## iter 10 value 20067.652641
## iter 20 value 20053.018119
## final value 20053.017764
## converged
## # weights: 9
## initial value 23355.573924
## iter 10 value 20059.677995
## iter 20 value 20049.816225
## iter 20 value 20049.816179
## final value 20049.816179
## converged
## # weights: 25
## initial value 22480.776671
## iter 10 value 20064.377878
## iter 20 value 20049.870411
## final value 20049.712190
## converged
## # weights: 41
## initial value 23030.975168
## iter 10 value 20070.829113
## iter 20 value 20049.944788
## final value 20049.710967
## converged
## # weights: 9
## initial value 22827.204603
## final value 20059.445200
## converged
## # weights: 25
## initial value 22453.714214

```

```

## final value 20059.445200
## converged
## # weights: 41
## initial value 22166.231532
## final value 20059.445200
## converged
## # weights: 9
## initial value 22416.055931
## iter 10 value 20065.433727
## final value 20064.956619
## converged
## # weights: 25
## initial value 22752.863295
## iter 10 value 20064.311586
## final value 20063.422059
## converged
## # weights: 41
## initial value 22036.647255
## iter 10 value 20064.138446
## iter 20 value 20062.762497
## iter 20 value 20062.762380
## iter 20 value 20062.762372
## final value 20062.762372
## converged
## # weights: 9
## initial value 22974.127937
## iter 10 value 20070.379691
## iter 20 value 20059.571266
## iter 20 value 20059.571216
## final value 20059.571216
## converged
## # weights: 25
## initial value 23192.173188
## iter 10 value 20073.739405
## iter 20 value 20059.610001
## final value 20059.459207
## converged
## # weights: 41
## initial value 23032.806824
## iter 10 value 20079.973636
## iter 20 value 20059.681877
## final value 20059.455795
## converged
## # weights: 9
## initial value 22818.004250
## final value 20056.253200
## converged
## # weights: 25
## initial value 22061.947247
## final value 20056.253200
## converged
## # weights: 41
## initial value 22512.694877
## final value 20056.253200

```

```

## converged
## # weights: 9
## initial value 23540.461830
## iter 10 value 20061.955453
## final value 20061.764265
## converged
## # weights: 25
## initial value 23625.510951
## iter 10 value 20068.415931
## iter 20 value 20060.235300
## final value 20060.229734
## converged
## # weights: 41
## initial value 23755.065757
## iter 10 value 20063.093185
## iter 20 value 20059.570446
## final value 20059.570132
## converged
## # weights: 9
## initial value 21626.847608
## iter 10 value 20062.999544
## iter 20 value 20056.330980
## iter 20 value 20056.330949
## final value 20056.330949
## converged
## # weights: 25
## initial value 21890.967105
## iter 10 value 20067.521672
## iter 20 value 20056.383117
## final value 20056.266646
## converged
## # weights: 41
## initial value 21772.781257
## iter 10 value 20070.174755
## iter 20 value 20056.413705
## final value 20056.263824
## converged
## # weights: 9
## initial value 23038.766659
## final value 20041.267700
## converged
## # weights: 25
## initial value 24308.534793
## final value 20041.267700
## converged
## # weights: 41
## initial value 23638.579754
## final value 20041.267700
## converged
## # weights: 9
## initial value 23396.739173
## iter 10 value 20048.068528
## final value 20046.777872
## converged

```

```

## # weights: 25
## initial value 21326.858035
## iter 10 value 20056.262698
## iter 20 value 20045.244263
## final value 20045.243584
## converged
## # weights: 41
## initial value 23432.535973
## iter 10 value 20052.629207
## iter 20 value 20044.584370
## final value 20044.584060
## converged
## # weights: 9
## initial value 22890.260645
## iter 10 value 20051.615338
## iter 20 value 20041.387000
## iter 20 value 20041.386952
## final value 20041.386952
## converged
## # weights: 25
## initial value 23294.848168
## iter 10 value 20055.759038
## iter 20 value 20041.434774
## final value 20041.285446
## converged
## # weights: 41
## initial value 22737.501684
## iter 10 value 20060.748963
## iter 20 value 20041.492304
## final value 20041.278292
## converged
## # weights: 9
## initial value 23311.663797
## final value 20011.041700
## converged
## # weights: 25
## initial value 21566.350023
## final value 20011.041700
## converged
## # weights: 41
## initial value 23576.168591
## final value 20011.041700
## converged
## # weights: 9
## initial value 23239.334012
## iter 10 value 20017.074973
## final value 20016.550910
## converged
## # weights: 25
## initial value 23431.536000
## iter 10 value 20015.504442
## final value 20015.016963
## converged
## # weights: 41

```

```

## initial value 23875.742571
## iter 10 value 20016.100037
## iter 20 value 20014.357666
## iter 20 value 20014.357556
## iter 20 value 20014.357543
## final value 20014.357543
## converged
## # weights: 9
## initial value 23179.313186
## iter 10 value 20022.369960
## iter 20 value 20011.172306
## iter 20 value 20011.172254
## final value 20011.172254
## converged
## # weights: 25
## initial value 22998.406204
## iter 10 value 20026.789085
## iter 20 value 20011.223255
## final value 20011.055448
## converged
## # weights: 41
## initial value 23663.286286
## iter 10 value 20027.230670
## iter 20 value 20011.228346
## final value 20011.053375
## converged
## # weights: 9
## initial value 23435.521782
## final value 20062.773200
## converged
## # weights: 25
## initial value 23022.423853
## final value 20062.773200
## converged
## # weights: 41
## initial value 23869.986642
## final value 20062.773200
## converged
## # weights: 9
## initial value 22948.517239
## iter 10 value 20089.501241
## iter 20 value 20068.322997
## final value 20068.285648
## converged
## # weights: 25
## initial value 22817.846522
## iter 10 value 20071.188271
## iter 20 value 20066.750989
## iter 20 value 20066.750863
## iter 20 value 20066.750804
## final value 20066.750804
## converged
## # weights: 41
## initial value 22054.040235

```

```

## iter 10 value 20067.778644
## final value 20066.090966
## converged
## # weights: 9
## initial value 23645.686752
## iter 10 value 20072.643724
## iter 20 value 20062.886999
## iter 20 value 20062.886954
## final value 20062.886954
## converged
## # weights: 25
## initial value 22391.777393
## iter 10 value 20076.204236
## iter 20 value 20062.928049
## final value 20062.786240
## converged
## # weights: 41
## initial value 22613.068219
## iter 10 value 20082.967638
## iter 20 value 20063.006026
## final value 20062.782580
## converged
## # weights: 9
## initial value 22506.376933
## final value 20030.566000
## converged
## # weights: 25
## initial value 22005.095750
## final value 20030.566000
## converged
## # weights: 41
## initial value 21901.554994
## final value 20030.566000
## converged
## # weights: 9
## initial value 23496.162854
## iter 10 value 20036.365997
## final value 20036.075790
## converged
## # weights: 25
## initial value 23069.085549
## iter 10 value 20037.999184
## iter 20 value 20034.542748
## final value 20034.541584
## converged
## # weights: 41
## initial value 21128.635640
## iter 10 value 20043.355641
## iter 20 value 20033.882440
## iter 20 value 20033.882279
## iter 20 value 20033.882227
## final value 20033.882227
## converged
## # weights: 9

```



```

## initial value 23530.759830
## iter 10 value 20041.125631
## iter 20 value 20030.687744
## iter 20 value 20030.687696
## final value 20030.687696
## converged
## # weights: 25
## initial value 23103.080830
## iter 10 value 20045.382415
## iter 20 value 20030.736822
## final value 20030.579560
## converged
## # weights: 41
## initial value 21666.010469
## iter 10 value 20043.302062
## iter 20 value 20030.712837
## final value 20030.576473
## converged
## # weights: 9
## initial value 23617.817923
## final value 20030.566000
## converged
## # weights: 25
## initial value 22737.283129
## final value 20030.566000
## converged
## # weights: 41
## initial value 23704.965798
## final value 20030.566000
## converged
## # weights: 9
## initial value 23089.078491
## iter 10 value 20037.351566
## final value 20036.075797
## converged
## # weights: 25
## initial value 22838.575188
## iter 10 value 20035.326475
## final value 20034.541609
## converged
## # weights: 41
## initial value 21467.112515
## iter 10 value 20037.673741
## iter 20 value 20033.908920
## final value 20033.882187
## converged
## # weights: 9
## initial value 22573.957226
## iter 10 value 20040.250773
## iter 20 value 20030.677658
## iter 20 value 20030.677613
## final value 20030.677613
## converged
## # weights: 25

```

```

## initial value 22495.226916
## iter 10 value 20047.063431
## iter 20 value 20030.756202
## final value 20030.579876
## converged
## # weights: 41
## initial value 23411.137612
## iter 10 value 20047.981249
## iter 20 value 20030.766784
## final value 20030.576858
## converged
## # weights: 9
## initial value 23135.155661
## final value 20023.480100
## converged
## # weights: 25
## initial value 21486.060596
## final value 20023.480100
## converged
## # weights: 41
## initial value 21446.356358
## final value 20023.480100
## converged
## # weights: 9
## initial value 23470.264346
## iter 10 value 20029.674335
## final value 20028.989674
## converged
## # weights: 25
## initial value 22349.976565
## iter 10 value 20027.801227
## final value 20027.455589
## converged
## # weights: 41
## initial value 22248.731454
## iter 10 value 20040.610950
## iter 20 value 20026.801479
## final value 20026.796170
## converged
## # weights: 9
## initial value 21984.097563
## iter 10 value 20033.624318
## iter 20 value 20023.597055
## iter 20 value 20023.597008
## final value 20023.597008
## converged
## # weights: 25
## initial value 21883.920671
## iter 10 value 20037.290476
## iter 20 value 20023.639323
## final value 20023.492656
## converged
## # weights: 41
## initial value 22666.480209

```

```

## iter 10 value 20042.574863
## iter 20 value 20023.700248
## final value 20023.492177
## converged
## # weights: 9
## initial value 23342.939667
## final value 19953.339700
## converged
## # weights: 25
## initial value 21426.435685
## final value 19953.339700
## converged
## # weights: 41
## initial value 22444.187707
## final value 19953.339700
## converged
## # weights: 9
## initial value 22769.362373
## iter 10 value 19959.377241
## final value 19958.847775
## converged
## # weights: 25
## initial value 21834.009955
## iter 10 value 19960.220922
## iter 20 value 19957.314431
## iter 20 value 19957.314243
## iter 20 value 19957.314229
## final value 19957.314229
## converged
## # weights: 41
## initial value 22568.257522
## iter 10 value 19958.677204
## iter 20 value 19956.655150
## iter 20 value 19956.655015
## iter 20 value 19956.654994
## final value 19956.654994
## converged
## # weights: 9
## initial value 23163.655948
## iter 10 value 19963.383183
## iter 20 value 19953.455493
## iter 20 value 19953.455447
## final value 19953.455447
## converged
## # weights: 25
## initial value 22726.979354
## iter 10 value 19970.147883
## iter 20 value 19953.533485
## final value 19953.351843
## converged
## # weights: 41
## initial value 22592.997549
## iter 10 value 19976.112624
## iter 20 value 19953.602254

```

```

## final value 19953.349545
## converged
## # weights: 9
## initial value 22142.105212
## final value 20014.030000
## converged
## # weights: 25
## initial value 22066.301545
## final value 20014.030000
## converged
## # weights: 41
## initial value 23177.007339
## final value 20014.030000
## converged
## # weights: 9
## initial value 23183.946263
## iter 10 value 20022.077485
## final value 20019.539302
## converged
## # weights: 25
## initial value 22812.300898
## iter 10 value 20018.659472
## final value 20018.005324
## converged
## # weights: 41
## initial value 22383.421971
## iter 10 value 20018.908787
## iter 20 value 20017.346432
## final value 20017.345900
## converged
## # weights: 9
## initial value 22244.397493
## iter 10 value 20023.151955
## iter 20 value 20014.135169
## iter 20 value 20014.135127
## final value 20014.135127
## converged
## # weights: 25
## initial value 22749.446169
## iter 10 value 20028.753048
## iter 20 value 20014.199745
## final value 20014.049691
## converged
## # weights: 41
## initial value 22461.498027
## iter 10 value 20033.503231
## iter 20 value 20014.254511
## final value 20014.040566
## converged
## # weights: 9
## initial value 22637.546929
## final value 19931.150000
## converged
## # weights: 25

```

```

## initial value 23842.419448
## final value 19931.150000
## converged
## # weights: 41
## initial value 22368.167489
## final value 19931.150000
## converged
## # weights: 9
## initial value 22900.873382
## iter 10 value 19936.899643
## final value 19936.657767
## converged
## # weights: 25
## initial value 22711.743841
## iter 10 value 19938.382711
## iter 20 value 19935.124419
## iter 20 value 19935.124359
## iter 20 value 19935.124357
## final value 19935.124357
## converged
## # weights: 41
## initial value 22781.126883
## iter 10 value 19939.474275
## iter 20 value 19934.465362
## iter 20 value 19934.465237
## iter 20 value 19934.465196
## final value 19934.465196
## converged
## # weights: 9
## initial value 21728.342598
## iter 10 value 19938.526806
## iter 20 value 19931.235049
## iter 20 value 19931.235015
## final value 19931.235015
## converged
## # weights: 25
## initial value 23159.518731
## iter 10 value 19945.944248
## iter 20 value 19931.320566
## final value 19931.164679
## converged
## # weights: 41
## initial value 22318.579685
## iter 10 value 19948.936818
## iter 20 value 19931.355068
## final value 19931.159804
## converged
## # weights: 9
## initial value 22682.703193
## final value 19998.689200
## converged
## # weights: 25
## initial value 23438.980487
## final value 19998.689200

```

```

## converged
## # weights: 41
## initial value 22271.499832
## final value 19998.689200
## converged
## # weights: 9
## initial value 23411.130243
## iter 10 value 20007.032051
## final value 20004.198150
## converged
## # weights: 25
## initial value 23864.304612
## iter 10 value 20008.053799
## iter 20 value 20002.669094
## final value 20002.664280
## converged
## # weights: 41
## initial value 22079.592886
## iter 10 value 20003.407580
## iter 20 value 20002.005052
## iter 20 value 20002.004945
## iter 20 value 20002.004917
## final value 20002.004917
## converged
## # weights: 9
## initial value 23701.019391
## iter 10 value 20006.719081
## iter 20 value 19998.781778
## iter 20 value 19998.781741
## final value 19998.781741
## converged
## # weights: 25
## initial value 23792.111919
## iter 10 value 20011.289033
## iter 20 value 19998.834466
## final value 19998.704030
## converged
## # weights: 41
## initial value 21749.370256
## iter 10 value 20012.960310
## iter 20 value 19998.853735
## final value 19998.699455
## converged
## # weights: 9
## initial value 22107.147568
## final value 20034.225700
## converged
## # weights: 25
## initial value 22625.444555
## final value 20034.225700
## converged
## # weights: 41
## initial value 21626.691561
## final value 20034.225700

```

```

## converged
## # weights: 9
## initial value 22309.077745
## iter 10 value 20041.321155
## final value 20039.735629
## converged
## # weights: 25
## initial value 22868.452802
## iter 10 value 20039.749633
## iter 20 value 20038.201442
## iter 20 value 20038.201389
## iter 20 value 20038.201383
## final value 20038.201383
## converged
## # weights: 41
## initial value 22545.359558
## iter 10 value 20045.453109
## iter 20 value 20037.547716
## final value 20037.541966
## converged
## # weights: 9
## initial value 22593.375334
## iter 10 value 20046.484866
## iter 20 value 20034.367039
## iter 20 value 20034.366982
## final value 20034.366982
## converged
## # weights: 25
## initial value 21993.468879
## iter 10 value 20046.482194
## iter 20 value 20034.367008
## final value 20034.239508
## converged
## # weights: 41
## initial value 21138.887872
## iter 10 value 20042.393252
## iter 20 value 20034.319865
## final value 20034.234454
## converged
## # weights: 9
## initial value 21637.094713
## final value 20062.170100
## converged
## # weights: 25
## initial value 23361.387343
## final value 20062.170100
## converged
## # weights: 41
## initial value 22732.958676
## final value 20062.170100
## converged
## # weights: 9
## initial value 23448.799558
## iter 10 value 20067.980853

```

```

## final value 20067.683120
## converged
## # weights: 25
## initial value 21894.477039
## iter 10 value 20068.433070
## iter 20 value 20066.170976
## final value 20066.148315
## converged
## # weights: 41
## initial value 23358.813355
## iter 10 value 20066.528740
## final value 20065.488486
## converged
## # weights: 9
## initial value 23129.852761
## iter 10 value 20072.673859
## iter 20 value 20062.291200
## iter 20 value 20062.291152
## final value 20062.291152
## converged
## # weights: 25
## initial value 22957.092663
## iter 10 value 20079.410634
## iter 20 value 20062.368870
## final value 20062.181631
## converged
## # weights: 41
## initial value 21737.163462
## iter 10 value 20075.808587
## iter 20 value 20062.327341
## final value 20062.180192
## converged
## # weights: 9
## initial value 23048.367844
## final value 20020.398500
## converged
## # weights: 25
## initial value 23411.373751
## final value 20020.398500
## converged
## # weights: 41
## initial value 21822.630000
## final value 20020.398500
## converged
## # weights: 9
## initial value 21714.768483
## iter 10 value 20025.954624
## final value 20025.907990
## converged
## # weights: 25
## initial value 22442.359713
## iter 10 value 20025.334765
## iter 20 value 20024.373972
## iter 20 value 20024.373895

```



```

## iter 20 value 20024.373892
## final value 20024.373892
## converged
## # weights: 41
## initial value 23060.267422
## iter 10 value 20026.269051
## iter 20 value 20023.714564
## iter 20 value 20023.714502
## iter 20 value 20023.714474
## final value 20023.714474
## converged
## # weights: 9
## initial value 22320.032549
## iter 10 value 20031.341548
## iter 20 value 20020.524665
## iter 20 value 20020.524614
## final value 20020.524614
## converged
## # weights: 25
## initial value 23729.594786
## iter 10 value 20035.163525
## iter 20 value 20020.568729
## final value 20020.414656
## converged
## # weights: 41
## initial value 22060.392306
## iter 10 value 20037.437872
## iter 20 value 20020.594951
## final value 20020.407394
## converged
## # weights: 9
## initial value 22196.221215
## final value 20041.918000
## converged
## # weights: 25
## initial value 21395.384398
## final value 20041.918000
## converged
## # weights: 41
## initial value 22591.809348
## final value 20041.918000
## converged
## # weights: 9
## initial value 23138.532076
## iter 10 value 20048.836422
## final value 20047.428221
## converged
## # weights: 25
## initial value 21432.399363
## iter 10 value 20047.020358
## final value 20045.893951
## converged
## # weights: 41
## initial value 22356.103930

```

```

## iter 10 value 20046.484848
## final value 20045.234567
## converged
## # weights: 9
## initial value 22895.509646
## iter 10 value 20051.908345
## iter 20 value 20042.033181
## iter 20 value 20042.033135
## final value 20042.033135
## converged
## # weights: 25
## initial value 21520.283077
## iter 10 value 20050.151132
## iter 20 value 20042.012922
## final value 20041.930606
## converged
## # weights: 41
## initial value 23378.994224
## iter 10 value 20060.347673
## iter 20 value 20042.130480
## final value 20041.928058
## converged
## # weights: 9
## initial value 21722.984041
## final value 19973.299700
## converged
## # weights: 25
## initial value 23174.528852
## final value 19973.299700
## converged
## # weights: 41
## initial value 23161.155042
## final value 19973.299700
## converged
## # weights: 9
## initial value 21703.429736
## iter 10 value 19979.119552
## final value 19978.808133
## converged
## # weights: 25
## initial value 22349.797431
## iter 10 value 19978.450699
## final value 19977.274452
## converged
## # weights: 41
## initial value 22317.996549
## iter 10 value 19988.012451
## iter 20 value 19976.616134
## final value 19976.615222
## converged
## # weights: 9
## initial value 22303.863601
## iter 10 value 19984.214184
## iter 20 value 19973.425535

```

```

## iter 20 value 19973.425485
## final value 19973.425485
## converged
## # weights: 25
## initial value 23450.815981
## iter 10 value 19985.829658
## iter 20 value 19973.444161
## final value 19973.320499
## converged
## # weights: 41
## initial value 23008.336024
## iter 10 value 19992.433040
## iter 20 value 19973.520292
## final value 19973.310217
## converged
## # weights: 9
## initial value 22738.036076
## final value 19969.854500
## converged
## # weights: 25
## initial value 21798.417532
## final value 19969.854500
## converged
## # weights: 41
## initial value 23041.659915
## final value 19969.854500
## converged
## # weights: 9
## initial value 22130.200089
## iter 10 value 19975.945888
## final value 19975.362891
## converged
## # weights: 25
## initial value 22150.755373
## iter 10 value 19980.783648
## iter 20 value 19973.830922
## final value 19973.829265
## converged
## # weights: 41
## initial value 24088.298419
## iter 10 value 19981.962116
## iter 20 value 19973.172573
## final value 19973.169991
## converged
## # weights: 9
## initial value 22806.145735
## iter 10 value 19980.446176
## iter 20 value 19969.976614
## iter 20 value 19969.976565
## final value 19969.976565
## converged
## # weights: 25
## initial value 23382.544371
## iter 10 value 19983.648539

```

```

## iter 20 value 19970.013534
## final value 19969.869241
## converged
## # weights: 41
## initial value 23831.060014
## iter 10 value 19985.216132
## iter 20 value 19970.031608
## final value 19969.867098
## converged
## # weights: 9
## initial value 23374.443665
## final value 20017.201700
## converged
## # weights: 25
## initial value 22338.223960
## final value 20017.201700
## converged
## # weights: 41
## initial value 22953.027726
## final value 20017.201700
## converged
## # weights: 9
## initial value 23157.036091
## iter 10 value 20024.176890
## final value 20022.711047
## converged
## # weights: 25
## initial value 23007.579532
## iter 10 value 20022.063090
## final value 20021.176971
## converged
## # weights: 41
## initial value 20938.244050
## iter 10 value 20029.717502
## final value 20020.517638
## converged
## # weights: 9
## initial value 21971.750653
## iter 10 value 20025.672538
## iter 20 value 20017.299362
## iter 20 value 20017.299323
## final value 20017.299323
## converged
## # weights: 25
## initial value 22069.698405
## iter 10 value 20030.779128
## iter 20 value 20017.358237
## final value 20017.216010
## converged
## # weights: 41
## initial value 23202.179629
## iter 10 value 20037.664155
## iter 20 value 20017.437616
## final value 20017.213283

```

```

## converged
## # weights: 9
## initial value 22835.598547
## final value 20047.646500
## converged
## # weights: 25
## initial value 21855.877610
## final value 20047.646500
## converged
## # weights: 41
## initial value 23541.668082
## final value 20047.646500
## converged
## # weights: 9
## initial value 23241.354683
## iter 10 value 20053.616529
## final value 20053.156986
## converged
## # weights: 25
## initial value 22153.730553
## iter 10 value 20053.388236
## final value 20051.622629
## converged
## # weights: 41
## initial value 22148.759994
## iter 10 value 20052.178472
## final value 20050.963059
## converged
## # weights: 9
## initial value 22722.848305
## iter 10 value 20059.898467
## iter 20 value 20047.787756
## iter 20 value 20047.787699
## final value 20047.787699
## converged
## # weights: 25
## initial value 22463.340127
## iter 10 value 20061.410930
## iter 20 value 20047.805193
## final value 20047.658114
## converged
## # weights: 41
## initial value 21656.678247
## iter 10 value 20061.704964
## iter 20 value 20047.808583
## final value 20047.656600
## converged
## # weights: 9
## initial value 22333.664064
## final value 20021.825200
## converged
## # weights: 25
## initial value 23339.416747
## final value 20021.825200

```

```

## converged
## # weights: 41
## initial value 21448.952312
## final value 20021.825200
## converged
## # weights: 9
## initial value 21942.984366
## iter 10 value 20027.714611
## final value 20027.334721
## converged
## # weights: 25
## initial value 23221.231850
## iter 10 value 20027.805562
## final value 20025.800616
## converged
## # weights: 41
## initial value 22818.343765
## iter 10 value 20028.590391
## iter 20 value 20025.141625
## final value 20025.141231
## converged
## # weights: 9
## initial value 22743.628328
## iter 10 value 20032.067653
## iter 20 value 20021.943287
## iter 20 value 20021.943240
## final value 20021.943240
## converged
## # weights: 25
## initial value 22210.395500
## iter 10 value 20036.160619
## iter 20 value 20021.990476
## final value 20021.835930
## converged
## # weights: 41
## initial value 24284.030972
## iter 10 value 20032.640603
## iter 20 value 20021.949893
## final value 20021.842770
## converged
## # weights: 9
## initial value 22995.027484
## final value 20049.182500
## converged
## # weights: 25
## initial value 23509.381342
## final value 20049.182500
## converged
## # weights: 41
## initial value 22940.444783
## final value 20049.182500
## converged
## # weights: 9
## initial value 23676.494006

```

```

## iter 10 value 20055.702626
## iter 20 value 20054.776369
## final value 20054.693049
## converged
## # weights: 25
## initial value 22749.809796
## iter 10 value 20055.171796
## final value 20053.158672
## converged
## # weights: 41
## initial value 24058.540132
## iter 10 value 20060.418159
## iter 20 value 20052.506723
## final value 20052.499071
## converged
## # weights: 9
## initial value 22074.271075
## iter 10 value 20057.831089
## iter 20 value 20049.282211
## iter 20 value 20049.282172
## final value 20049.282172
## converged
## # weights: 25
## initial value 22662.347474
## iter 10 value 20064.691150
## iter 20 value 20049.361303
## final value 20049.196374
## converged
## # weights: 41
## initial value 23648.815145
## iter 10 value 20067.303230
## iter 20 value 20049.391418
## final value 20049.194831
## converged
## # weights: 9
## initial value 22989.457685
## final value 20044.507700
## converged
## # weights: 25
## initial value 23387.706711
## final value 20044.507700
## converged
## # weights: 41
## initial value 23739.741713
## final value 20044.507700
## converged
## # weights: 9
## initial value 23320.518206
## iter 10 value 20050.205991
## final value 20050.018033
## converged
## # weights: 25
## initial value 22989.605322
## iter 10 value 20051.171955

```

```

## iter 20 value 20048.484661
## final value 20048.483653
## converged
## # weights: 41
## initial value 22518.971056
## iter 10 value 20060.958070
## iter 20 value 20047.824353
## iter 20 value 20047.824263
## iter 20 value 20047.824256
## final value 20047.824256
## converged
## # weights: 9
## initial value 23239.183635
## iter 10 value 20056.115192
## iter 20 value 20044.641525
## iter 20 value 20044.641472
## final value 20044.641472
## converged
## # weights: 25
## initial value 23367.925046
## iter 10 value 20060.028001
## iter 20 value 20044.686637
## final value 20044.524341
## converged
## # weights: 41
## initial value 22916.724941
## iter 10 value 20061.990429
## iter 20 value 20044.709262
## final value 20044.518206
## converged
## # weights: 9
## initial value 22244.008601
## final value 19983.067600
## converged
## # weights: 25
## initial value 21651.069516
## final value 19983.067600
## converged
## # weights: 41
## initial value 22138.795202
## final value 19983.067600
## converged
## # weights: 9
## initial value 21790.225600
## iter 10 value 19988.827724
## final value 19988.576197
## converged
## # weights: 25
## initial value 23461.169941
## iter 10 value 19988.987761
## final value 19987.042419
## converged
## # weights: 41
## initial value 22833.220358

```



```

## iter 10 value 19987.630867
## iter 20 value 19986.383265
## iter 20 value 19986.383142
## iter 20 value 19986.383132
## final value 19986.383132
## converged
## # weights: 9
## initial value 22087.245208
## iter 10 value 19991.895741
## iter 20 value 19983.169382
## iter 20 value 19983.169341
## final value 19983.169341
## converged
## # weights: 25
## initial value 23343.288848
## iter 10 value 19995.831374
## iter 20 value 19983.214756
## final value 19983.081725
## converged
## # weights: 41
## initial value 22713.802811
## iter 10 value 20001.182480
## iter 20 value 19983.276450
## final value 19983.080785
## converged
## # weights: 9
## initial value 22263.311101
## final value 19980.905200
## converged
## # weights: 25
## initial value 22965.318688
## final value 19980.905200
## converged
## # weights: 41
## initial value 21549.172205
## final value 19980.905200
## converged
## # weights: 9
## initial value 21516.657634
## iter 10 value 19986.538566
## final value 19986.413768
## converged
## # weights: 25
## initial value 23109.105046
## iter 10 value 19987.080336
## iter 20 value 19984.880083
## iter 20 value 19984.880031
## iter 20 value 19984.880025
## final value 19984.880025
## converged
## # weights: 41
## initial value 22631.478814
## iter 10 value 19985.585781
## iter 20 value 19984.220969

```

```

## iter 20 value 19984.220832
## iter 20 value 19984.220799
## final value 19984.220799
## converged
## # weights: 9
## initial value 22289.565658
## iter 10 value 19989.993259
## iter 20 value 19981.009978
## iter 20 value 19981.009936
## final value 19981.009936
## converged
## # weights: 25
## initial value 24168.802205
## iter 10 value 19989.980764
## iter 20 value 19981.009834
## final value 19980.923984
## converged
## # weights: 41
## initial value 21979.115402
## iter 10 value 19998.682825
## iter 20 value 19981.110162
## final value 19980.915270
## converged
## # weights: 9
## initial value 22441.389833
## final value 20004.187700
## converged
## # weights: 25
## initial value 22530.060527
## final value 20004.187700
## converged
## # weights: 41
## initial value 24062.467508
## final value 20004.187700
## converged
## # weights: 9
## initial value 22736.482236
## iter 10 value 20010.581212
## final value 20009.696764
## converged
## # weights: 25
## initial value 23372.252705
## iter 10 value 20009.200155
## final value 20008.162856
## converged
## # weights: 41
## initial value 23713.831281
## iter 10 value 20018.989878
## iter 20 value 20007.505439
## final value 20007.503473
## converged
## # weights: 9
## initial value 21868.206585
## iter 10 value 20013.496351

```

```

## iter 20 value 20004.295021
## iter 20 value 20004.294979
## final value 20004.294979
## converged
## # weights: 25
## initial value 21957.074688
## iter 10 value 20016.267309
## iter 20 value 20004.326968
## final value 20004.199453
## converged
## # weights: 41
## initial value 24400.786459
## iter 10 value 20012.772984
## iter 20 value 20004.286682
## final value 20004.202657
## converged
## # weights: 9
## initial value 22442.536881
## final value 20037.869200
## converged
## # weights: 25
## initial value 22055.985943
## final value 20037.869200
## converged
## # weights: 41
## initial value 21797.882895
## final value 20037.869200
## converged
## # weights: 9
## initial value 22591.487845
## iter 10 value 20043.843239
## final value 20043.379257
## converged
## # weights: 25
## initial value 23265.980292
## iter 10 value 20042.618891
## final value 20041.844976
## converged
## # weights: 41
## initial value 22395.216921
## iter 10 value 20057.451515
## iter 20 value 20041.186779
## final value 20041.185540
## converged
## # weights: 9
## initial value 22361.306036
## iter 10 value 20048.887649
## iter 20 value 20037.996234
## iter 20 value 20037.996183
## final value 20037.996183
## converged
## # weights: 25
## initial value 21592.711451
## iter 10 value 20048.193935

```

```

## iter 20 value 20037.988236
## final value 20037.879994
## converged
## # weights: 41
## initial value 22578.192454
## iter 10 value 20055.682811
## iter 20 value 20038.074577
## final value 20037.878883
## converged
## # weights: 9
## initial value 22377.829957
## final value 20013.185200
## converged
## # weights: 25
## initial value 21847.306422
## final value 20013.185200
## converged
## # weights: 41
## initial value 22683.931785
## final value 20013.185200
## converged
## # weights: 9
## initial value 21630.188542
## iter 10 value 20019.513825
## final value 20018.694462
## converged
## # weights: 25
## initial value 23707.406319
## iter 10 value 20017.713773
## final value 20017.160424
## converged
## # weights: 41
## initial value 22170.533337
## iter 10 value 20022.493190
## iter 20 value 20016.501484
## final value 20016.501073
## converged
## # weights: 9
## initial value 23237.993675
## iter 10 value 20023.227821
## iter 20 value 20013.300984
## iter 20 value 20013.300937
## final value 20013.300937
## converged
## # weights: 25
## initial value 22307.979412
## iter 10 value 20028.148636
## iter 20 value 20013.357717
## final value 20013.195828
## converged
## # weights: 41
## initial value 22596.735658
## iter 10 value 20029.575820
## iter 20 value 20013.374171

```

```

## final value 20013.197086
## converged
## # weights: 9
## initial value 22809.940658
## final value 19939.738000
## converged
## # weights: 25
## initial value 22922.884780
## final value 19939.738000
## converged
## # weights: 41
## initial value 21952.663345
## final value 19939.738000
## converged
## # weights: 9
## initial value 21962.785508
## iter 10 value 19945.603544
## final value 19945.245921
## converged
## # weights: 25
## initial value 22737.307444
## iter 10 value 19944.316758
## final value 19943.712465
## converged
## # weights: 41
## initial value 22959.709091
## iter 10 value 19943.976988
## final value 19943.053279
## converged
## # weights: 9
## initial value 22899.958320
## iter 10 value 19950.616756
## iter 20 value 19939.863424
## iter 20 value 19939.863373
## final value 19939.863373
## converged
## # weights: 25
## initial value 22954.339184
## iter 10 value 19953.664917
## iter 20 value 19939.898566
## final value 19939.750729
## converged
## # weights: 41
## initial value 21398.319055
## iter 10 value 19951.676771
## iter 20 value 19939.875645
## final value 19939.747890
## converged
## # weights: 9
## initial value 22686.674824
## final value 20002.486000
## converged
## # weights: 25
## initial value 21699.916350

```

```

## final value 20002.486000
## converged
## # weights: 41
## initial value 22631.814177
## final value 20002.486000
## converged
## # weights: 9
## initial value 21789.037014
## iter 10 value 20008.407232
## final value 20007.995035
## converged
## # weights: 25
## initial value 23234.633305
## iter 10 value 20015.152122
## iter 20 value 20006.466234
## final value 20006.461180
## converged
## # weights: 41
## initial value 22162.354894
## iter 10 value 20006.350684
## final value 20005.801756
## converged
## # weights: 9
## initial value 22058.294808
## iter 10 value 20011.459517
## iter 20 value 20002.589458
## iter 20 value 20002.589416
## final value 20002.589416
## converged
## # weights: 25
## initial value 24218.176701
## iter 10 value 20011.404732
## iter 20 value 20002.588826
## final value 20002.510028
## converged
## # weights: 41
## initial value 23224.449579
## iter 10 value 20017.583969
## iter 20 value 20002.660068
## final value 20002.497766
## converged
## # weights: 9
## initial value 23421.616427
## final value 20031.021200
## converged
## # weights: 25
## initial value 22075.878395
## final value 20031.021200
## converged
## # weights: 41
## initial value 21921.294104
## final value 20031.021200
## converged
## # weights: 9

```

```

## initial value 22088.166305
## iter 10 value 20037.169310
## final value 20036.530945
## converged
## # weights: 25
## initial value 21687.577645
## iter 10 value 20036.449867
## iter 20 value 20034.996859
## iter 20 value 20034.996765
## iter 20 value 20034.996746
## final value 20034.996746
## converged
## # weights: 41
## initial value 22718.042602
## iter 10 value 20035.827995
## iter 20 value 20034.337562
## iter 20 value 20034.337400
## iter 20 value 20034.337338
## final value 20034.337338
## converged
## # weights: 9
## initial value 22416.799274
## iter 10 value 20042.301295
## iter 20 value 20031.151251
## iter 20 value 20031.151199
## final value 20031.151199
## converged
## # weights: 25
## initial value 23679.099182
## iter 10 value 20041.799160
## iter 20 value 20031.145461
## final value 20031.038206
## converged
## # weights: 41
## initial value 21759.025645
## iter 10 value 20045.089674
## iter 20 value 20031.183398
## final value 20031.031305
## converged
## # weights: 9
## initial value 23615.984922
## final value 20020.136500
## converged
## # weights: 25
## initial value 22538.784167
## final value 20020.136500
## converged
## # weights: 41
## initial value 23417.710614
## final value 20020.136500
## converged
## # weights: 9
## initial value 22937.283248
## iter 10 value 20025.874710

```

```

## final value 20025.645974
## converged
## # weights: 25
## initial value 23037.661472
## iter 10 value 20025.437338
## final value 20024.111935
## converged
## # weights: 41
## initial value 22843.695728
## iter 10 value 20024.445848
## final value 20023.452492
## converged
## # weights: 9
## initial value 22585.635014
## iter 10 value 20030.122841
## iter 20 value 20020.251635
## iter 20 value 20020.251589
## final value 20020.251589
## converged
## # weights: 25
## initial value 22596.389527
## iter 10 value 20034.732378
## iter 20 value 20020.304779
## final value 20020.151077
## converged
## # weights: 41
## initial value 24596.029049
## iter 10 value 20028.030309
## iter 20 value 20020.227509
## final value 20020.151539
## converged
## # weights: 9
## initial value 22954.292571
## final value 19912.371700
## converged
## # weights: 25
## initial value 23053.133953
## final value 19912.371700
## converged
## # weights: 41
## initial value 23099.065995
## final value 19912.371700
## converged
## # weights: 9
## initial value 21521.598082
## iter 10 value 19918.336130
## final value 19917.879106
## converged
## # weights: 25
## initial value 22161.974387
## iter 10 value 19927.507101
## iter 20 value 19916.384637
## final value 19916.345760
## converged

```



```

## # weights: 41
## initial value 22996.298754
## iter 10 value 19929.869015
## iter 20 value 19915.687472
## final value 19915.686707
## converged
## # weights: 9
## initial value 22405.688508
## iter 10 value 19922.786633
## iter 20 value 19912.491776
## iter 20 value 19912.491728
## final value 19912.491728
## converged
## # weights: 25
## initial value 21949.579207
## iter 10 value 19925.998692
## iter 20 value 19912.528809
## final value 19912.386601
## converged
## # weights: 41
## initial value 22491.630190
## iter 10 value 19929.355022
## iter 20 value 19912.567504
## final value 19912.380980
## converged
## # weights: 9
## initial value 22869.419554
## final value 20024.357200
## converged
## # weights: 25
## initial value 22594.640122
## final value 20024.357200
## converged
## # weights: 41
## initial value 24076.904578
## final value 20024.357200
## converged
## # weights: 9
## initial value 23134.357216
## iter 10 value 20030.309239
## final value 20029.866788
## converged
## # weights: 25
## initial value 22925.373830
## iter 10 value 20028.771309
## final value 20028.332743
## converged
## # weights: 41
## initial value 23592.343124
## iter 10 value 20029.511824
## iter 20 value 20027.673388
## iter 20 value 20027.673276
## iter 20 value 20027.673238
## final value 20027.673238

```

```

## converged
## # weights: 9
## initial value 23087.549194
## iter 10 value 20034.835067
## iter 20 value 20024.478002
## iter 20 value 20024.477953
## final value 20024.477953
## converged
## # weights: 25
## initial value 23407.507098
## iter 10 value 20037.872999
## iter 20 value 20024.513027
## final value 20024.375342
## converged
## # weights: 41
## initial value 23231.452266
## iter 10 value 20044.062148
## iter 20 value 20024.584383
## final value 20024.367076
## converged
## # weights: 9
## initial value 22041.949750
## final value 20052.994000
## converged
## # weights: 25
## initial value 23609.771373
## final value 20052.994000
## converged
## # weights: 41
## initial value 23936.581677
## final value 20052.994000
## converged
## # weights: 9
## initial value 22797.430008
## iter 10 value 20059.175326
## final value 20058.504755
## converged
## # weights: 25
## initial value 23294.339586
## iter 10 value 20058.845435
## final value 20056.970320
## converged
## # weights: 41
## initial value 23438.965192
## iter 10 value 20057.666863
## iter 20 value 20056.310762
## iter 20 value 20056.310677
## iter 20 value 20056.310664
## final value 20056.310664
## converged
## # weights: 9
## initial value 22244.098815
## iter 10 value 20063.776829
## iter 20 value 20053.118318

```

```

## iter 20 value 20053.118268
## final value 20053.118268
## converged
## # weights: 25
## initial value 22764.224543
## iter 10 value 20069.442841
## iter 20 value 20053.183642
## iter 30 value 20053.008883
## iter 30 value 20053.008836
## iter 30 value 20053.008830
## final value 20053.008830
## converged
## # weights: 41
## initial value 22921.204627
## iter 10 value 20073.382196
## iter 20 value 20053.229060
## final value 20053.004169
## converged
## # weights: 9
## initial value 21835.880630
## final value 20053.560100
## converged
## # weights: 25
## initial value 23358.896548
## final value 20053.560100
## converged
## # weights: 41
## initial value 23639.017587
## final value 20053.560100
## converged
## # weights: 9
## initial value 23289.980637
## iter 10 value 20061.180516
## final value 20059.070974
## converged
## # weights: 25
## initial value 22253.358483
## iter 10 value 20057.984720
## final value 20057.536517
## converged
## # weights: 41
## initial value 22589.083979
## iter 10 value 20060.307781
## iter 20 value 20056.877166
## iter 20 value 20056.877013
## iter 20 value 20056.876965
## final value 20056.876965
## converged
## # weights: 9
## initial value 21801.442350
## iter 10 value 20061.769171
## iter 20 value 20053.654744
## iter 20 value 20053.654706
## final value 20053.654706

```

```

## converged
## # weights: 25
## initial value 21798.934629
## iter 10 value 20064.617421
## iter 20 value 20053.687582
## final value 20053.571002
## converged
## # weights: 41
## initial value 23053.673285
## iter 10 value 20075.004609
## iter 20 value 20053.807338
## final value 20053.570817
## converged
## # weights: 9
## initial value 23495.804251
## final value 20060.859700
## converged
## # weights: 25
## initial value 23046.754283
## final value 20060.859700
## converged
## # weights: 41
## initial value 22635.582098
## final value 20060.859700
## converged
## # weights: 9
## initial value 23020.596792
## iter 10 value 20067.534427
## final value 20066.371280
## converged
## # weights: 25
## initial value 23307.261243
## iter 10 value 20065.529627
## final value 20064.836597
## converged
## # weights: 41
## initial value 22645.157540
## iter 10 value 20064.845468
## final value 20064.177092
## converged
## # weights: 9
## initial value 22606.746536
## iter 10 value 20071.156425
## iter 20 value 20060.978413
## iter 20 value 20060.978366
## final value 20060.978366
## converged
## # weights: 25
## initial value 24470.940523
## iter 10 value 20067.834518
## iter 20 value 20060.940114
## final value 20060.883031
## converged
## # weights: 41

```

```

## initial value 22267.066408
## iter 10 value 20080.247763
## iter 20 value 20061.083229
## final value 20060.870362
## converged
## # weights: 9
## initial value 22623.465863
## final value 20056.305700
## converged
## # weights: 25
## initial value 22455.836170
## final value 20056.305700
## converged
## # weights: 41
## initial value 22626.159371
## final value 20056.305700
## converged
## # weights: 9
## initial value 22138.844431
## iter 10 value 20062.178380
## final value 20061.816730
## converged
## # weights: 25
## initial value 22077.398017
## iter 10 value 20066.660628
## iter 20 value 20060.282237
## iter 20 value 20060.282184
## iter 20 value 20060.282177
## final value 20060.282177
## converged
## # weights: 41
## initial value 23156.280102
## iter 10 value 20061.538929
## iter 20 value 20059.622783
## iter 20 value 20059.622594
## iter 20 value 20059.622584
## final value 20059.622584
## converged
## # weights: 9
## initial value 22880.495204
## iter 10 value 20066.921458
## iter 20 value 20056.428091
## iter 20 value 20056.428042
## final value 20056.428042
## converged
## # weights: 25
## initial value 21763.386135
## iter 10 value 20065.975266
## iter 20 value 20056.417183
## final value 20056.318625
## converged
## # weights: 41
## initial value 23458.807789
## iter 10 value 20072.898704

```

```

## iter 20 value 20056.497004
## final value 20056.316848
## converged
## # weights: 9
## initial value 23951.879933
## final value 20033.793700
## converged
## # weights: 25
## initial value 23322.572975
## final value 20033.793700
## converged
## # weights: 41
## initial value 23109.978589
## final value 20033.793700
## converged
## # weights: 9
## initial value 22957.336614
## iter 10 value 20043.020551
## final value 20039.303633
## converged
## # weights: 25
## initial value 23673.638971
## iter 10 value 20038.637670
## final value 20037.769437
## converged
## # weights: 41
## initial value 23280.694901
## iter 10 value 20050.604217
## iter 20 value 20037.110342
## final value 20037.109954
## converged
## # weights: 9
## initial value 22996.080704
## iter 10 value 20044.716261
## iter 20 value 20033.919629
## iter 20 value 20033.919578
## final value 20033.919578
## converged
## # weights: 25
## initial value 22624.535311
## iter 10 value 20049.415865
## iter 20 value 20033.973811
## final value 20033.806175
## converged
## # weights: 41
## initial value 21882.021934
## iter 10 value 20047.989251
## iter 20 value 20033.957364
## final value 20033.804141
## converged
## # weights: 9
## initial value 22514.747788
## final value 20042.376500
## converged

```

```

## # weights: 25
## initial value 22988.883999
## final value 20042.376500
## converged
## # weights: 41
## initial value 23176.813489
## final value 20042.376500
## converged
## # weights: 9
## initial value 22679.966538
## iter 10 value 20049.942072
## final value 20047.886759
## converged
## # weights: 25
## initial value 21967.454461
## iter 10 value 20047.846699
## iter 20 value 20046.352665
## final value 20046.352413
## converged
## # weights: 41
## initial value 22636.068594
## iter 10 value 20046.472374
## final value 20045.692931
## converged
## # weights: 9
## initial value 23617.572959
## iter 10 value 20051.351563
## iter 20 value 20042.479975
## iter 20 value 20042.479934
## final value 20042.479934
## converged
## # weights: 25
## initial value 21735.659988
## iter 10 value 20052.910780
## iter 20 value 20042.497952
## final value 20042.387305
## converged
## # weights: 41
## initial value 23612.700134
## iter 10 value 20060.130008
## iter 20 value 20042.581184
## final value 20042.388909
## converged
## # weights: 9
## initial value 23243.573012
## final value 20038.766500
## converged
## # weights: 25
## initial value 22415.945781
## final value 20038.766500
## converged
## # weights: 41
## initial value 24291.847406
## final value 20038.766500

```

```

## converged
## # weights: 9
## initial value 22827.981589
## iter 10 value 20045.067066
## final value 20044.276604
## converged
## # weights: 25
## initial value 21898.979894
## iter 10 value 20043.598403
## final value 20042.742338
## converged
## # weights: 41
## initial value 22317.610546
## iter 10 value 20072.567341
## iter 20 value 20042.083320
## iter 20 value 20042.083175
## iter 20 value 20042.082992
## final value 20042.082992
## converged
## # weights: 9
## initial value 22157.315730
## iter 10 value 20047.719063
## iter 20 value 20038.869716
## iter 20 value 20038.869675
## final value 20038.869675
## converged
## # weights: 25
## initial value 23483.017088
## iter 10 value 20053.331033
## iter 20 value 20038.934418
## final value 20038.781177
## converged
## # weights: 41
## initial value 21757.807734
## iter 10 value 20052.231418
## iter 20 value 20038.921740
## final value 20038.776328
## converged
## # weights: 9
## initial value 22769.264007
## final value 20053.560100
## converged
## # weights: 25
## initial value 22587.328770
## final value 20053.560100
## converged
## # weights: 41
## initial value 23804.251120
## final value 20053.560100
## converged
## # weights: 9
## initial value 23076.136359
## iter 10 value 20062.439887
## iter 20 value 20059.070932

```



```

## iter 20 value 20059.070916
## final value 20059.070916
## converged
## # weights: 25
## initial value 21630.279072
## iter 10 value 20061.940007
## iter 20 value 20057.537379
## final value 20057.536495
## converged
## # weights: 41
## initial value 22536.188686
## iter 10 value 20062.186886
## iter 20 value 20056.877058
## iter 20 value 20056.876882
## iter 20 value 20056.876879
## final value 20056.876879
## converged
## # weights: 9
## initial value 23416.744751
## iter 10 value 20063.824842
## iter 20 value 20053.678444
## iter 20 value 20053.678397
## final value 20053.678397
## converged
## # weights: 25
## initial value 23150.973917
## iter 10 value 20068.243357
## iter 20 value 20053.729386
## final value 20053.575937
## converged
## # weights: 41
## initial value 23133.337348
## iter 10 value 20075.731567
## iter 20 value 20053.815720
## final value 20053.570291
## converged
## # weights: 9
## initial value 22852.176671
## final value 20062.067600
## converged
## # weights: 25
## initial value 23203.566511
## final value 20062.067600
## converged
## # weights: 41
## initial value 24009.834333
## final value 20062.067600
## converged
## # weights: 9
## initial value 23830.954842
## iter 10 value 20068.068024
## final value 20067.579248
## converged
## # weights: 25

```

```

## initial value 22475.284294
## iter 10 value 20066.966093
## iter 20 value 20066.049125
## final value 20066.044508
## converged
## # weights: 41
## initial value 23120.017118
## iter 10 value 20081.907754
## iter 20 value 20065.388269
## final value 20065.384827
## converged
## # weights: 9
## initial value 22955.584103
## iter 10 value 20072.948421
## iter 20 value 20062.193047
## iter 20 value 20062.192997
## final value 20062.192997
## converged
## # weights: 25
## initial value 22563.019718
## iter 10 value 20077.281426
## iter 20 value 20062.243003
## final value 20062.082985
## converged
## # weights: 41
## initial value 24039.141131
## iter 10 value 20076.455005
## iter 20 value 20062.233475
## final value 20062.080484
## converged
## # weights: 9
## initial value 23168.121561
## final value 20003.262500
## converged
## # weights: 25
## initial value 21545.535552
## final value 20003.262500
## converged
## # weights: 41
## initial value 21264.226857
## final value 20003.262500
## converged
## # weights: 9
## initial value 22710.694841
## iter 10 value 20009.782415
## final value 20008.771523
## converged
## # weights: 25
## initial value 22521.991234
## iter 10 value 20008.047155
## final value 20007.237618
## converged
## # weights: 41
## initial value 22661.255412

```

```

## iter 10 value 20023.595829
## iter 20 value 20006.579224
## final value 20006.578241
## converged
## # weights: 9
## initial value 23849.100354
## iter 10 value 20010.981555
## iter 20 value 20003.351495
## iter 20 value 20003.351459
## final value 20003.351459
## converged
## # weights: 25
## initial value 21608.699593
## iter 10 value 20014.007261
## iter 20 value 20003.386379
## final value 20003.273307
## converged
## # weights: 41
## initial value 24138.005789
## iter 10 value 20015.374490
## iter 20 value 20003.402142
## final value 20003.276915
## converged
## # weights: 9
## initial value 22421.499394
## final value 20041.267700
## converged
## # weights: 25
## initial value 22668.553513
## final value 20041.267700
## converged
## # weights: 41
## initial value 23520.586940
## final value 20041.267700
## converged
## # weights: 9
## initial value 22893.386305
## iter 10 value 20047.839451
## final value 20046.777897
## converged
## # weights: 25
## initial value 22782.223329
## iter 10 value 20048.639093
## iter 20 value 20045.243935
## final value 20045.243575
## converged
## # weights: 41
## initial value 23085.535126
## iter 10 value 20045.612913
## final value 20044.584086
## converged
## # weights: 9
## initial value 22605.589123
## iter 10 value 20051.118529

```

```

## iter 20 value 20041.381272
## iter 20 value 20041.381227
## final value 20041.381227
## converged
## # weights: 25
## initial value 22610.026401
## iter 10 value 20054.887841
## iter 20 value 20041.424730
## final value 20041.279872
## converged
## # weights: 41
## initial value 22350.582078
## iter 10 value 20059.904558
## iter 20 value 20041.482568
## final value 20041.278822
## converged
## # weights: 9
## initial value 23759.405858
## final value 20047.409200
## converged
## # weights: 25
## initial value 22210.449231
## final value 20047.409200
## converged
## # weights: 41
## initial value 23225.716540
## final value 20047.409200
## converged
## # weights: 9
## initial value 23331.885557
## iter 10 value 20054.792672
## final value 20052.919708
## converged
## # weights: 25
## initial value 23611.690571
## iter 10 value 20051.820317
## iter 20 value 20051.385434
## iter 20 value 20051.385341
## iter 20 value 20051.385336
## final value 20051.385336
## converged
## # weights: 41
## initial value 22139.621060
## iter 10 value 20060.026445
## iter 20 value 20050.726142
## final value 20050.725791
## converged
## # weights: 9
## initial value 21841.232350
## iter 10 value 20056.777432
## iter 20 value 20047.517208
## iter 20 value 20047.517165
## final value 20047.517165
## converged

```

```

## # weights: 25
## initial value 22859.796418
## iter 10 value 20063.279401
## iter 20 value 20047.592171
## final value 20047.422426
## converged
## # weights: 41
## initial value 23303.854267
## iter 10 value 20067.925439
## iter 20 value 20047.645736
## final value 20047.421165
## converged
## # weights: 9
## initial value 21902.152113
## final value 20011.474000
## converged
## # weights: 25
## initial value 23079.375806
## final value 20011.474000
## converged
## # weights: 41
## initial value 23069.672018
## final value 20011.474000
## converged
## # weights: 9
## initial value 22524.339031
## iter 10 value 20019.012079
## final value 20016.983244
## converged
## # weights: 25
## initial value 23500.031889
## iter 10 value 20016.789020
## final value 20015.449289
## converged
## # weights: 41
## initial value 22227.860433
## iter 10 value 20019.332853
## iter 20 value 20014.790035
## iter 20 value 20014.789916
## iter 20 value 20014.789892
## final value 20014.789892
## converged
## # weights: 9
## initial value 22950.711815
## iter 10 value 20023.312036
## iter 20 value 20011.610483
## iter 20 value 20011.610429
## final value 20011.610429
## converged
## # weights: 25
## initial value 21522.166413
## iter 10 value 20021.366851
## iter 20 value 20011.588057
## final value 20011.485598

```

```

## converged
## # weights: 41
## initial value 22937.775700
## iter 10 value 20028.553631
## iter 20 value 20011.670915
## final value 20011.485426
## converged
## # weights: 9
## initial value 23155.007443
## final value 20017.201700
## converged
## # weights: 25
## initial value 23867.853510
## final value 20017.201700
## converged
## # weights: 41
## initial value 23984.434165
## final value 20017.201700
## converged
## # weights: 9
## initial value 23044.455454
## iter 10 value 20023.178036
## final value 20022.711052
## converged
## # weights: 25
## initial value 22024.702489
## iter 10 value 20021.661342
## final value 20021.177036
## converged
## # weights: 41
## initial value 23220.064235
## iter 10 value 20021.734681
## final value 20020.517645
## converged
## # weights: 9
## initial value 22316.720656
## iter 10 value 20026.947452
## iter 20 value 20017.314061
## iter 20 value 20017.314016
## final value 20017.314016
## converged
## # weights: 25
## initial value 23468.458469
## iter 10 value 20029.373403
## iter 20 value 20017.342030
## final value 20017.215113
## converged
## # weights: 41
## initial value 22114.283499
## iter 10 value 20036.017925
## iter 20 value 20017.418636
## final value 20017.212162
## converged
## # weights: 9

```

```

## initial value 22693.336432
## final value 20059.089700
## converged
## # weights: 25
## initial value 22659.644669
## final value 20059.089700
## converged
## # weights: 41
## initial value 23427.361453
## final value 20059.089700
## converged
## # weights: 9
## initial value 22701.637683
## iter 10 value 20066.907199
## final value 20064.600842
## converged
## # weights: 25
## initial value 23244.790228
## iter 10 value 20064.006763
## iter 20 value 20063.077288
## iter 30 value 20063.066615
## final value 20063.066207
## converged
## # weights: 41
## initial value 21740.053659
## iter 10 value 20075.405443
## iter 20 value 20062.409847
## final value 20062.406556
## converged
## # weights: 9
## initial value 22508.238096
## iter 10 value 20069.068305
## iter 20 value 20059.204745
## iter 20 value 20059.204699
## final value 20059.204699
## converged
## # weights: 25
## initial value 23077.866447
## iter 10 value 20074.805459
## iter 20 value 20059.270890
## final value 20059.104588
## converged
## # weights: 41
## initial value 23211.683449
## iter 10 value 20078.838225
## iter 20 value 20059.317385
## final value 20059.099738
## converged
## # weights: 9
## initial value 22220.242131
## final value 20051.880500
## converged
## # weights: 25
## initial value 22815.670123

```

```

## final value 20051.880500
## converged
## # weights: 41
## initial value 24316.845295
## final value 20051.880500
## converged
## # weights: 9
## initial value 23179.658902
## iter 10 value 20057.728610
## final value 20057.391223
## converged
## # weights: 25
## initial value 22378.426672
## iter 10 value 20057.296074
## iter 20 value 20055.856910
## iter 20 value 20055.856738
## iter 20 value 20055.856730
## final value 20055.856730
## converged
## # weights: 41
## initial value 22460.278896
## iter 10 value 20075.651272
## iter 20 value 20055.200007
## final value 20055.197263
## converged
## # weights: 9
## initial value 21894.809510
## iter 10 value 20060.199435
## iter 20 value 20051.976411
## iter 20 value 20051.976372
## final value 20051.976372
## converged
## # weights: 25
## initial value 23667.833770
## iter 10 value 20064.701950
## iter 20 value 20052.028321
## final value 20051.896182
## converged
## # weights: 41
## initial value 22115.093310
## iter 10 value 20070.542285
## iter 20 value 20052.095656
## final value 20051.889300
## converged
## # weights: 9
## initial value 22926.170686
## final value 19992.778000
## converged
## # weights: 25
## initial value 24006.974998
## final value 19992.778000
## converged
## # weights: 41
## initial value 22161.889776

```



```

## final value 19992.778000
## converged
## # weights: 9
## initial value 21802.072351
## iter 10 value 19999.811023
## final value 19998.286825
## converged
## # weights: 25
## initial value 23339.380809
## iter 10 value 19997.674271
## final value 19996.753027
## converged
## # weights: 41
## initial value 23557.155451
## iter 10 value 20008.416173
## iter 20 value 19996.095847
## final value 19996.093667
## converged
## # weights: 9
## initial value 22390.898476
## iter 10 value 20002.285494
## iter 20 value 19992.887614
## iter 20 value 19992.887570
## final value 19992.887570
## converged
## # weights: 25
## initial value 23034.898972
## iter 10 value 20006.654778
## iter 20 value 19992.937988
## final value 19992.794408
## converged
## # weights: 41
## initial value 23948.522335
## iter 10 value 20006.056936
## iter 20 value 19992.931096
## final value 19992.791990
## converged
## # weights: 9
## initial value 21990.222842
## final value 19941.288500
## converged
## # weights: 25
## initial value 21739.165568
## final value 19941.288500
## converged
## # weights: 41
## initial value 22357.164322
## final value 19941.288500
## converged
## # weights: 9
## initial value 22098.151591
## iter 10 value 19947.217766
## final value 19946.796418
## converged

```

```

## # weights: 25
## initial value 23350.724443
## iter 10 value 19950.001309
## iter 20 value 19945.267854
## final value 19945.263019
## converged
## # weights: 41
## initial value 21949.203059
## iter 10 value 19945.293378
## final value 19944.603914
## converged
## # weights: 9
## initial value 22418.364830
## iter 10 value 19952.832405
## iter 20 value 19941.421592
## iter 20 value 19941.421539
## final value 19941.421539
## converged
## # weights: 25
## initial value 21600.757937
## iter 10 value 19951.521292
## iter 20 value 19941.406476
## final value 19941.301217
## converged
## # weights: 41
## initial value 22231.065857
## iter 10 value 19958.286667
## iter 20 value 19941.484476
## final value 19941.298871
## converged
## # weights: 9
## initial value 22897.172714
## final value 20010.897200
## converged
## # weights: 25
## initial value 23705.525483
## final value 20010.897200
## converged
## # weights: 41
## initial value 22775.787207
## final value 20010.897200
## converged
## # weights: 9
## initial value 22547.971795
## iter 10 value 20037.373790
## iter 20 value 20016.524725
## final value 20016.406432
## converged
## # weights: 25
## initial value 22657.575073
## iter 10 value 20015.097928
## final value 20014.872465
## converged
## # weights: 41

```

```

## initial value 22901.417601
## iter 10 value 20028.531115
## iter 20 value 20014.214808
## final value 20014.213181
## converged
## # weights: 9
## initial value 22845.269843
## iter 10 value 20022.637655
## iter 20 value 20011.032558
## iter 20 value 20011.032504
## final value 20011.032504
## converged
## # weights: 25
## initial value 23286.560015
## iter 10 value 20023.439162
## iter 20 value 20011.041799
## final value 20010.909900
## converged
## # weights: 41
## initial value 22983.901610
## iter 10 value 20031.581555
## iter 20 value 20011.135674
## final value 20010.910451
## converged
## # weights: 9
## initial value 23707.375980
## final value 20048.501200
## converged
## # weights: 25
## initial value 23878.026087
## final value 20048.501200
## converged
## # weights: 41
## initial value 22127.363918
## final value 20048.501200
## converged
## # weights: 9
## initial value 22568.749818
## iter 10 value 20054.382539
## final value 20054.011711
## converged
## # weights: 25
## initial value 23741.008538
## iter 10 value 20054.152593
## iter 20 value 20052.477458
## iter 20 value 20052.477364
## iter 20 value 20052.477315
## final value 20052.477315
## converged
## # weights: 41
## initial value 23002.865115
## iter 10 value 20053.079546
## iter 20 value 20051.817935
## iter 20 value 20051.817755

```

```

## iter 20 value 20051.817739
## final value 20051.817739
## converged
## # weights: 9
## initial value 23342.962391
## iter 10 value 20057.705133
## iter 20 value 20048.607314
## iter 20 value 20048.607272
## final value 20048.607272
## converged
## # weights: 25
## initial value 22199.296241
## iter 10 value 20062.449946
## iter 20 value 20048.662018
## final value 20048.515791
## converged
## # weights: 41
## initial value 22842.167863
## iter 10 value 20068.763118
## iter 20 value 20048.734804
## final value 20048.511306
## converged
## # weights: 9
## initial value 23799.665061
## final value 20061.374500
## converged
## # weights: 25
## initial value 22273.371760
## final value 20061.374500
## converged
## # weights: 41
## initial value 23592.905093
## final value 20061.374500
## converged
## # weights: 9
## initial value 22460.649360
## iter 10 value 20086.057114
## iter 20 value 20066.992336
## final value 20066.886008
## converged
## # weights: 25
## initial value 22934.795295
## iter 10 value 20066.919772
## final value 20065.351349
## converged
## # weights: 41
## initial value 21672.536095
## iter 10 value 20077.731172
## iter 20 value 20064.692250
## final value 20064.691644
## converged
## # weights: 9
## initial value 23154.258238
## iter 10 value 20072.355169

```

```

## iter 20 value 20061.501098
## iter 20 value 20061.501048
## final value 20061.501048
## converged
## # weights: 25
## initial value 23441.991170
## iter 10 value 20074.459555
## iter 20 value 20061.525360
## final value 20061.387202
## converged
## # weights: 41
## initial value 22664.618567
## iter 10 value 20078.612181
## iter 20 value 20061.573237
## final value 20061.384629
## converged
## # weights: 9
## initial value 23458.968672
## final value 20040.797200
## converged
## # weights: 25
## initial value 24018.941769
## final value 20040.797200
## converged
## # weights: 41
## initial value 21933.657747
## final value 20040.797200
## converged
## # weights: 9
## initial value 23333.184236
## iter 10 value 20048.167123
## final value 20046.307387
## converged
## # weights: 25
## initial value 22049.583231
## iter 10 value 20045.288202
## final value 20044.773063
## converged
## # weights: 41
## initial value 22174.835824
## iter 10 value 20046.143394
## final value 20044.113660
## converged
## # weights: 9
## initial value 23143.427228
## iter 10 value 20050.793543
## iter 20 value 20040.912450
## iter 20 value 20040.912404
## final value 20040.912404
## converged
## # weights: 25
## initial value 22771.949805
## iter 10 value 20057.240282
## iter 20 value 20040.986776

```

```

## final value 20040.809579
## converged
## # weights: 41
## initial value 22848.381679
## iter 10 value 20060.858577
## iter 20 value 20041.028492
## final value 20040.808271
## converged
## # weights: 9
## initial value 23626.030245
## final value 20052.014500
## converged
## # weights: 25
## initial value 23739.124048
## final value 20052.014500
## converged
## # weights: 41
## initial value 23457.169012
## final value 20052.014500
## converged
## # weights: 9
## initial value 22475.112391
## iter 10 value 20058.625712
## final value 20057.525248
## converged
## # weights: 25
## initial value 23698.297586
## iter 10 value 20064.967795
## iter 20 value 20055.991037
## final value 20055.990765
## converged
## # weights: 41
## initial value 22773.693200
## iter 10 value 20057.700340
## iter 20 value 20055.331473
## iter 20 value 20055.331277
## iter 20 value 20055.331238
## final value 20055.331238
## converged
## # weights: 9
## initial value 22913.244158
## iter 10 value 20063.529822
## iter 20 value 20052.147263
## iter 20 value 20052.147210
## final value 20052.147210
## converged
## # weights: 25
## initial value 22871.493799
## iter 10 value 20066.387358
## iter 20 value 20052.180208
## final value 20052.028030
## converged
## # weights: 41
## initial value 22386.182008

```

```

## iter 10 value 20069.538148
## iter 20 value 20052.216534
## final value 20052.024047
## converged
## # weights: 9
## initial value 23424.549409
## final value 19987.480100
## converged
## # weights: 25
## initial value 22701.940566
## final value 19987.480100
## converged
## # weights: 41
## initial value 23192.770190
## final value 19987.480100
## converged
## # weights: 9
## initial value 22597.108226
## iter 10 value 19995.201149
## iter 20 value 19992.989877
## final value 19992.988814
## converged
## # weights: 25
## initial value 22023.606042
## iter 10 value 19992.418958
## iter 20 value 19991.455085
## iter 20 value 19991.455026
## iter 20 value 19991.455014
## final value 19991.455014
## converged
## # weights: 41
## initial value 22250.346421
## iter 10 value 19991.997984
## iter 20 value 19990.795750
## iter 20 value 19990.795705
## iter 20 value 19990.795688
## final value 19990.795688
## converged
## # weights: 9
## initial value 23701.662016
## iter 10 value 19996.101013
## iter 20 value 19987.579492
## iter 20 value 19987.579453
## final value 19987.579453
## converged
## # weights: 25
## initial value 22144.254464
## iter 10 value 20001.766682
## iter 20 value 19987.644813
## final value 19987.493171
## converged
## # weights: 41
## initial value 23243.351224
## iter 10 value 20007.122819

```

```

## iter 20 value 19987.706565
## final value 19987.493220
## converged
## # weights: 9
## initial value 23548.756525
## final value 19970.625700
## converged
## # weights: 25
## initial value 22716.839891
## final value 19970.625700
## converged
## # weights: 41
## initial value 22554.502763
## final value 19970.625700
## converged
## # weights: 9
## initial value 23040.187410
## iter 10 value 19978.225722
## final value 19976.134074
## converged
## # weights: 25
## initial value 23319.893028
## iter 10 value 19975.348232
## final value 19974.600453
## converged
## # weights: 41
## initial value 21831.484652
## iter 10 value 19976.231333
## iter 20 value 19973.941385
## iter 20 value 19973.941212
## iter 20 value 19973.941183
## final value 19973.941183
## converged
## # weights: 9
## initial value 22482.570011
## iter 10 value 19980.409079
## iter 20 value 19970.738495
## iter 20 value 19970.738450
## final value 19970.738450
## converged
## # weights: 25
## initial value 22978.861836
## iter 10 value 19984.756195
## iter 20 value 19970.788614
## final value 19970.637742
## converged
## # weights: 41
## initial value 23938.927200
## iter 10 value 19983.095634
## iter 20 value 19970.769469
## final value 19970.638740
## converged
## # weights: 9
## initial value 23904.581259

```



```

## final value 19971.202000
## converged
## # weights: 25
## initial value 21503.816637
## final value 19971.202000
## converged
## # weights: 41
## initial value 23333.286107
## final value 19971.202000
## converged
## # weights: 9
## initial value 23064.771322
## iter 10 value 19976.847709
## final value 19976.710416
## converged
## # weights: 25
## initial value 23149.893788
## iter 10 value 19975.716008
## iter 20 value 19975.177934
## final value 19975.176734
## converged
## # weights: 41
## initial value 21168.089927
## iter 10 value 19985.658406
## iter 20 value 19974.517902
## final value 19974.517488
## converged
## # weights: 9
## initial value 22036.979302
## iter 10 value 19979.699339
## iter 20 value 19971.299968
## iter 20 value 19971.299928
## final value 19971.299928
## converged
## # weights: 25
## initial value 23084.839088
## iter 10 value 19986.110502
## iter 20 value 19971.373883
## final value 19971.221568
## converged
## # weights: 41
## initial value 21874.186644
## iter 10 value 19987.924763
## iter 20 value 19971.394800
## final value 19971.211797
## converged
## # weights: 9
## initial value 22894.178154
## final value 20033.685200
## converged
## # weights: 25
## initial value 22779.674842
## final value 20033.685200
## converged

```

```

## # weights: 41
## initial value 23401.870645
## final value 20033.685200
## converged
## # weights: 9
## initial value 22057.859152
## iter 10 value 20041.309715
## final value 20039.195108
## converged
## # weights: 25
## initial value 22038.980263
## iter 10 value 20038.481156
## final value 20037.660920
## converged
## # weights: 41
## initial value 22697.996856
## iter 10 value 20037.582046
## final value 20037.001436
## converged
## # weights: 9
## initial value 22617.785602
## iter 10 value 20044.592004
## iter 20 value 20033.810947
## iter 20 value 20033.810897
## final value 20033.810897
## converged
## # weights: 25
## initial value 22457.580113
## iter 10 value 20049.385031
## iter 20 value 20033.866207
## final value 20033.698528
## converged
## # weights: 41
## initial value 21896.762389
## iter 10 value 20049.355578
## iter 20 value 20033.865867
## final value 20033.694927
## converged
## # weights: 9
## initial value 22770.784148
## final value 20021.050000
## converged
## # weights: 25
## initial value 22943.104185
## final value 20021.050000
## converged
## # weights: 41
## initial value 23570.649352
## final value 20021.050000
## converged
## # weights: 9
## initial value 23862.842808
## iter 10 value 20029.156723
## final value 20026.559495

```

```

## converged
## # weights: 25
## initial value 21906.899746
## iter 10 value 20027.036697
## final value 20025.025420
## converged
## # weights: 41
## initial value 24182.597496
## iter 10 value 20036.635322
## iter 20 value 20024.370329
## final value 20024.366033
## converged
## # weights: 9
## initial value 21780.729021
## iter 10 value 20029.774600
## iter 20 value 20021.150588
## iter 20 value 20021.150548
## final value 20021.150548
## converged
## # weights: 25
## initial value 23508.442030
## iter 10 value 20034.429930
## iter 20 value 20021.204260
## final value 20021.066472
## converged
## # weights: 41
## initial value 23074.174804
## iter 10 value 20039.379937
## iter 20 value 20021.261330
## final value 20021.064232
## converged
## # weights: 9
## initial value 22687.888545
## final value 20057.167600
## converged
## # weights: 25
## initial value 23249.426460
## final value 20057.167600
## converged
## # weights: 41
## initial value 22273.043761
## final value 20057.167600
## converged
## # weights: 9
## initial value 23446.764181
## iter 10 value 20063.119780
## final value 20062.678674
## converged
## # weights: 25
## initial value 21823.531743
## iter 10 value 20062.256371
## final value 20061.144074
## converged
## # weights: 41

```

```

## initial value 21791.336633
## iter 10 value 20075.578977
## iter 20 value 20060.484630
## iter 20 value 20060.484556
## iter 20 value 20060.484526
## final value 20060.484526
## converged
## # weights: 9
## initial value 22267.339611
## iter 10 value 20068.198886
## iter 20 value 20057.294782
## iter 20 value 20057.294731
## final value 20057.294731
## converged
## # weights: 25
## initial value 22944.793850
## iter 10 value 20071.675182
## iter 20 value 20057.334861
## final value 20057.182889
## converged
## # weights: 41
## initial value 21752.449496
## iter 10 value 20071.667196
## iter 20 value 20057.334769
## final value 20057.178151
## converged
## # weights: 9
## initial value 22143.225582
## final value 20053.560100
## converged
## # weights: 25
## initial value 22618.895731
## final value 20053.560100
## converged
## # weights: 41
## initial value 22633.871321
## final value 20053.560100
## converged
## # weights: 9
## initial value 23190.551512
## iter 10 value 20059.832763
## final value 20059.070948
## converged
## # weights: 25
## initial value 22044.242494
## iter 10 value 20065.366325
## iter 20 value 20057.537490
## final value 20057.536434
## converged
## # weights: 41
## initial value 22666.611719
## iter 10 value 20058.125410
## final value 20056.877035
## converged

```

```

## # weights: 9
## initial value 21909.145334
## iter 10 value 20062.123290
## iter 20 value 20053.658827
## iter 20 value 20053.658787
## final value 20053.658787
## converged
## # weights: 25
## initial value 22410.949128
## iter 10 value 20069.304094
## iter 20 value 20053.741616
## final value 20053.574175
## converged
## # weights: 41
## initial value 21503.278568
## iter 10 value 20065.197528
## iter 20 value 20053.694270
## final value 20053.570137
## converged
## # weights: 9
## initial value 22256.410277
## final value 20030.907700
## converged
## # weights: 25
## initial value 24213.712370
## final value 20030.907700
## converged
## # weights: 41
## initial value 22351.530531
## final value 20030.907700
## converged
## # weights: 9
## initial value 23204.014467
## iter 10 value 20036.896623
## final value 20036.417476
## converged
## # weights: 25
## initial value 22478.143495
## iter 10 value 20036.284319
## final value 20034.883329
## converged
## # weights: 41
## initial value 22439.105924
## iter 10 value 20046.978769
## iter 20 value 20034.224483
## final value 20034.223815
## converged
## # weights: 9
## initial value 22101.642340
## iter 10 value 20040.000109
## iter 20 value 20031.012528
## iter 20 value 20031.012486
## final value 20031.012486
## converged

```

```

## # weights: 25
## initial value 23193.480586
## iter 10 value 20045.618055
## iter 20 value 20031.077299
## final value 20030.921036
## converged
## # weights: 41
## initial value 21436.614311
## iter 10 value 20043.350139
## iter 20 value 20031.051152
## final value 20030.917397
## converged
## # weights: 9
## initial value 23679.381851
## final value 20016.930100
## converged
## # weights: 25
## initial value 22252.101893
## final value 20016.930100
## converged
## # weights: 41
## initial value 23297.129728
## final value 20016.930100
## converged
## # weights: 9
## initial value 22819.334560
## iter 10 value 20023.792581
## final value 20022.439479
## converged
## # weights: 25
## initial value 22579.460295
## iter 10 value 20022.545690
## final value 20020.905428
## converged
## # weights: 41
## initial value 22656.234800
## iter 10 value 20037.610482
## iter 20 value 20020.250179
## final value 20020.246039
## converged
## # weights: 9
## initial value 22989.607857
## iter 10 value 20026.466336
## iter 20 value 20017.040045
## iter 20 value 20017.040001
## final value 20017.040001
## converged
## # weights: 25
## initial value 21493.361747
## iter 10 value 20026.622935
## iter 20 value 20017.041851
## final value 20016.942427
## converged
## # weights: 41

```

```

## initial value 23836.358210
## iter 10 value 20033.870967
## iter 20 value 20017.125415
## final value 20016.943801
## converged
## # weights: 9
## initial value 21903.837525
## final value 20004.034000
## converged
## # weights: 25
## initial value 22892.693757
## final value 20004.034000
## converged
## # weights: 41
## initial value 22760.979815
## final value 20004.034000
## converged
## # weights: 9
## initial value 23709.088090
## iter 10 value 20010.424947
## final value 20009.543067
## converged
## # weights: 25
## initial value 22912.892890
## iter 10 value 20008.510198
## final value 20008.009119
## converged
## # weights: 41
## initial value 21255.101955
## iter 10 value 20011.054927
## iter 20 value 20007.350602
## final value 20007.349826
## converged
## # weights: 9
## initial value 21851.203709
## iter 10 value 20012.146143
## iter 20 value 20004.127527
## iter 20 value 20004.127489
## final value 20004.127489
## converged
## # weights: 25
## initial value 21449.452192
## iter 10 value 20011.336603
## iter 20 value 20004.118193
## final value 20004.045257
## converged
## # weights: 41
## initial value 22887.485929
## iter 10 value 20022.847131
## iter 20 value 20004.250901
## final value 20004.044264
## converged
## # weights: 9
## initial value 23786.401103

```

```

## final value 20043.810100
## converged
## # weights: 25
## initial value 22590.717504
## final value 20043.810100
## converged
## # weights: 41
## initial value 22538.105671
## final value 20043.810100
## converged
## # weights: 9
## initial value 23427.616924
## iter 10 value 20050.913409
## final value 20049.320391
## converged
## # weights: 25
## initial value 21980.020836
## iter 10 value 20048.545639
## final value 20047.786022
## converged
## # weights: 41
## initial value 21705.535901
## iter 10 value 20058.183852
## iter 20 value 20047.127761
## final value 20047.126528
## converged
## # weights: 9
## initial value 23039.653355
## iter 10 value 20054.815686
## iter 20 value 20043.936986
## iter 20 value 20043.936935
## final value 20043.936935
## converged
## # weights: 25
## initial value 22954.797429
## iter 10 value 20058.735723
## iter 20 value 20043.982181
## final value 20043.824366
## converged
## # weights: 41
## initial value 22115.944254
## iter 10 value 20060.724952
## iter 20 value 20044.005115
## final value 20043.820633
## converged
## # weights: 9
## initial value 22456.497454
## final value 19959.334000
## converged
## # weights: 25
## initial value 23705.765898
## final value 19959.334000
## converged
## # weights: 41

```



```

## initial value 23197.735002
## final value 19959.334000
## converged
## # weights: 9
## initial value 22473.318167
## iter 10 value 19965.545988
## final value 19964.842206
## converged
## # weights: 25
## initial value 23330.224279
## iter 10 value 19964.221967
## final value 19963.308596
## converged
## # weights: 41
## initial value 22144.007278
## iter 10 value 19968.513707
## iter 20 value 19962.649635
## final value 19962.649354
## converged
## # weights: 9
## initial value 23214.551032
## iter 10 value 19969.501045
## iter 20 value 19959.451218
## iter 20 value 19959.451171
## final value 19959.451171
## converged
## # weights: 25
## initial value 23278.935590
## iter 10 value 19974.833755
## iter 20 value 19959.512700
## final value 19959.349427
## converged
## # weights: 41
## initial value 23271.370631
## iter 10 value 19975.685560
## iter 20 value 19959.522521
## final value 19959.346186
## converged
## # weights: 9
## initial value 21648.650846
## final value 20045.864500
## converged
## # weights: 25
## initial value 23783.564182
## final value 20045.864500
## converged
## # weights: 41
## initial value 21887.476463
## final value 20045.864500
## converged
## # weights: 9
## initial value 23310.546128
## iter 10 value 20051.763771
## final value 20051.374880

```

```

## converged
## # weights: 25
## initial value 22748.049108
## iter 10 value 20050.452665
## final value 20049.840508
## converged
## # weights: 41
## initial value 21935.084513
## iter 10 value 20062.860720
## iter 20 value 20049.181821
## final value 20049.180954
## converged
## # weights: 9
## initial value 23300.241155
## iter 10 value 20056.928839
## iter 20 value 20045.992063
## iter 20 value 20045.992012
## final value 20045.992012
## converged
## # weights: 25
## initial value 21970.517357
## iter 10 value 20057.653544
## iter 20 value 20046.000418
## final value 20045.878038
## converged
## # weights: 41
## initial value 22608.739372
## iter 10 value 20064.410016
## iter 20 value 20046.078315
## final value 20045.875256
## converged
## # weights: 9
## initial value 23042.195055
## final value 20012.902000
## converged
## # weights: 25
## initial value 22146.751450
## final value 20012.902000
## converged
## # weights: 41
## initial value 21505.441608
## final value 20012.902000
## converged
## # weights: 9
## initial value 23400.776470
## iter 10 value 20018.685009
## final value 20018.411276
## converged
## # weights: 25
## initial value 22397.175230
## iter 10 value 20017.884745
## final value 20016.877275
## converged
## # weights: 41

```

```

## initial value 23437.436443
## iter 10 value 20017.378025
## final value 20016.217907
## converged
## # weights: 9
## initial value 23206.391258
## iter 10 value 20024.409857
## iter 20 value 20013.034677
## iter 20 value 20013.034623
## final value 20013.034623
## converged
## # weights: 25
## initial value 22783.594575
## iter 10 value 20028.348257
## iter 20 value 20013.080083
## final value 20012.914976
## converged
## # weights: 41
## initial value 23463.542448
## iter 10 value 20029.597094
## iter 20 value 20013.094481
## final value 20012.914367
## converged
## # weights: 9
## initial value 21610.687113
## final value 19915.790500
## converged
## # weights: 25
## initial value 23071.379021
## final value 19915.790500
## converged
## # weights: 41
## initial value 23054.105931
## final value 19915.790500
## converged
## # weights: 9
## initial value 22985.099221
## iter 10 value 19922.031168
## final value 19921.297945
## converged
## # weights: 25
## initial value 21720.228384
## iter 10 value 19921.495004
## final value 19919.764625
## converged
## # weights: 41
## initial value 21096.698259
## iter 10 value 19920.887750
## iter 20 value 19919.105659
## iter 20 value 19919.105529
## iter 20 value 19919.105491
## final value 19919.105491
## converged
## # weights: 9

```

```

## initial value 21348.512170
## iter 10 value 19922.694643
## iter 20 value 19915.870099
## iter 20 value 19915.870068
## final value 19915.870068
## converged
## # weights: 25
## initial value 22603.639297
## iter 10 value 19928.319071
## iter 20 value 19915.934945
## final value 19915.808367
## converged
## # weights: 41
## initial value 22833.653060
## iter 10 value 19935.701406
## iter 20 value 19916.020057
## final value 19915.801397
## converged
## # weights: 9
## initial value 22676.671929
## final value 20004.647600
## converged
## # weights: 25
## initial value 21942.205471
## final value 20004.647600
## converged
## # weights: 41
## initial value 22680.381950
## final value 20004.647600
## converged
## # weights: 9
## initial value 21546.213591
## iter 10 value 20010.517587
## final value 20010.156678
## converged
## # weights: 25
## initial value 21393.088176
## iter 10 value 20009.957964
## final value 20008.622834
## converged
## # weights: 41
## initial value 22214.070606
## iter 10 value 20009.634681
## iter 20 value 20007.963494
## iter 20 value 20007.963393
## iter 20 value 20007.963388
## final value 20007.963388
## converged
## # weights: 9
## initial value 22498.596414
## iter 10 value 20014.956891
## iter 20 value 20004.766458
## iter 20 value 20004.766410
## final value 20004.766410

```

```

## converged
## # weights: 25
## initial value 22776.428473
## iter 10 value 20019.371564
## iter 20 value 20004.817356
## final value 20004.658993
## converged
## # weights: 41
## initial value 24046.357863
## iter 10 value 20016.136990
## iter 20 value 20004.780064
## final value 20004.662175
## converged
## # weights: 9
## initial value 23145.691769
## final value 19992.105200
## converged
## # weights: 25
## initial value 22565.368683
## final value 19992.105200
## converged
## # weights: 41
## initial value 23129.757211
## final value 19992.105200
## converged
## # weights: 9
## initial value 21858.275669
## iter 10 value 19998.611514
## final value 19997.613957
## converged
## # weights: 25
## initial value 22561.192557
## iter 10 value 19996.889003
## final value 19996.080255
## converged
## # weights: 41
## initial value 23212.318527
## iter 10 value 19996.174440
## final value 19995.420779
## converged
## # weights: 9
## initial value 23774.525597
## iter 10 value 19999.800676
## iter 20 value 19992.193923
## iter 20 value 19992.193887
## final value 19992.193887
## converged
## # weights: 25
## initial value 22420.481450
## iter 10 value 20006.255620
## iter 20 value 19992.268343
## final value 19992.118687
## converged
## # weights: 41

```

```

## initial value 22249.552417
## iter 10 value 20010.127151
## iter 20 value 19992.312979
## final value 19992.117129
## converged
## # weights: 9
## initial value 22207.288128
## final value 20042.649200
## converged
## # weights: 25
## initial value 23870.409094
## final value 20042.649200
## converged
## # weights: 41
## initial value 23435.493367
## final value 20042.649200
## converged
## # weights: 9
## initial value 23545.570643
## iter 10 value 20048.568367
## final value 20048.159462
## converged
## # weights: 25
## initial value 22576.312344
## iter 10 value 20048.475225
## final value 20046.625121
## converged
## # weights: 41
## initial value 21208.816451
## iter 10 value 20056.776112
## iter 20 value 20045.966567
## final value 20045.965692
## converged
## # weights: 9
## initial value 23743.993297
## iter 10 value 20051.279535
## iter 20 value 20042.748701
## iter 20 value 20042.748661
## final value 20042.748661
## converged
## # weights: 25
## initial value 23977.335568
## iter 10 value 20053.386407
## iter 20 value 20042.772992
## final value 20042.664992
## converged
## # weights: 41
## initial value 23558.908764
## iter 10 value 20058.861842
## iter 20 value 20042.836119
## final value 20042.660570
## converged
## # weights: 9
## initial value 23058.964152

```

```

## final value 19993.947700
## converged
## # weights: 25
## initial value 21906.970378
## final value 19993.947700
## converged
## # weights: 41
## initial value 22553.251943
## final value 19993.947700
## converged
## # weights: 9
## initial value 23809.375446
## iter 10 value 19999.885381
## final value 19999.456527
## converged
## # weights: 25
## initial value 22572.728257
## iter 10 value 19999.364827
## iter 20 value 19997.922744
## iter 20 value 19997.922669
## iter 20 value 19997.922657
## final value 19997.922657
## converged
## # weights: 41
## initial value 22936.292113
## iter 10 value 20002.114964
## iter 20 value 19997.263988
## final value 19997.263390
## converged
## # weights: 9
## initial value 22598.844014
## iter 10 value 20005.921127
## iter 20 value 19994.085744
## iter 20 value 19994.085689
## final value 19994.085689
## converged
## # weights: 25
## initial value 22753.381138
## iter 10 value 20007.905553
## iter 20 value 19994.108623
## final value 19993.961163
## converged
## # weights: 41
## initial value 22980.654755
## iter 10 value 20012.428425
## iter 20 value 19994.160768
## final value 19993.961396
## converged
## # weights: 9
## initial value 22093.666043
## final value 19988.865700
## converged
## # weights: 25
## initial value 23808.439455

```

```

## final value 19988.865700
## converged
## # weights: 41
## initial value 21189.557161
## final value 19988.865700
## converged
## # weights: 9
## initial value 23600.425265
## iter 10 value 19995.889672
## final value 19994.374352
## converged
## # weights: 25
## initial value 23716.221127
## iter 10 value 19994.191071
## final value 19992.840531
## converged
## # weights: 41
## initial value 22265.460651
## iter 10 value 19993.548728
## iter 20 value 19992.181499
## final value 19992.181191
## converged
## # weights: 9
## initial value 22532.673995
## iter 10 value 20000.015205
## iter 20 value 19988.994245
## iter 20 value 19988.994194
## final value 19988.994194
## converged
## # weights: 25
## initial value 22625.240575
## iter 10 value 20005.775639
## iter 20 value 19989.060658
## final value 19988.878951
## converged
## # weights: 41
## initial value 21538.853857
## iter 10 value 20003.258662
## iter 20 value 19989.031640
## final value 19988.875530
## converged
## # weights: 9
## initial value 23284.058635
## final value 20022.720500
## converged
## # weights: 25
## initial value 22194.172005
## final value 20022.720500
## converged
## # weights: 41
## initial value 24295.169574
## final value 20022.720500
## converged
## # weights: 9

```



```

## initial value 22004.990900
## iter 10 value 20029.309218
## final value 20028.229998
## converged
## # weights: 25
## initial value 21850.198222
## iter 10 value 20028.330309
## final value 20026.695922
## converged
## # weights: 41
## initial value 22446.016995
## iter 10 value 20026.924176
## final value 20026.036443
## converged
## # weights: 9
## initial value 23196.811059
## iter 10 value 20032.957587
## iter 20 value 20022.838526
## iter 20 value 20022.838478
## final value 20022.838478
## converged
## # weights: 25
## initial value 23465.937417
## iter 10 value 20038.204132
## iter 20 value 20022.899014
## final value 20022.735966
## converged
## # weights: 41
## initial value 21839.281945
## iter 10 value 20036.606354
## iter 20 value 20022.880593
## final value 20022.730565
## converged
## # weights: 9
## initial value 22100.855824
## final value 20054.818000
## converged
## # weights: 25
## initial value 23794.013656
## final value 20054.818000
## converged
## # weights: 41
## initial value 22512.613183
## final value 20054.818000
## converged
## # weights: 9
## initial value 22396.925976
## iter 10 value 20062.321818
## final value 20060.328898
## converged
## # weights: 25
## initial value 22748.880046
## iter 10 value 20059.798429
## iter 20 value 20058.794440

```

```

## iter 20 value 20058.794371
## iter 20 value 20058.794365
## final value 20058.794365
## converged
## # weights: 41
## initial value 23306.332481
## iter 10 value 20058.687047
## final value 20058.134776
## converged
## # weights: 9
## initial value 23224.550567
## iter 10 value 20065.607499
## iter 20 value 20054.942394
## iter 20 value 20054.942345
## final value 20054.942345
## converged
## # weights: 25
## initial value 21378.702650
## iter 10 value 20062.853980
## iter 20 value 20054.910649
## final value 20054.828595
## converged
## # weights: 41
## initial value 21954.909504
## iter 10 value 20071.753790
## iter 20 value 20055.013256
## final value 20054.828663
## converged
## # weights: 9
## initial value 22778.094643
## final value 19976.494000
## converged
## # weights: 25
## initial value 22593.788738
## final value 19976.494000
## converged
## # weights: 41
## initial value 21907.887699
## final value 19976.494000
## converged
## # weights: 9
## initial value 23599.514873
## iter 10 value 19985.708266
## final value 19982.002448
## converged
## # weights: 25
## initial value 22801.696169
## iter 10 value 19982.372442
## iter 20 value 19980.469071
## final value 19980.468709
## converged
## # weights: 41
## initial value 22149.962567
## iter 10 value 19980.425995

```

```

## final value 19979.809535
## converged
## # weights: 9
## initial value 22768.655097
## iter 10 value 19988.214196
## iter 20 value 19976.629125
## iter 20 value 19976.629071
## final value 19976.629071
## converged
## # weights: 25
## initial value 22947.035646
## iter 10 value 19993.155994
## iter 20 value 19976.686100
## final value 19976.509393
## converged
## # weights: 41
## initial value 21722.085215
## iter 10 value 19992.086606
## iter 20 value 19976.673771
## final value 19976.503158
## converged
## # weights: 9
## initial value 22417.012980
## final value 19941.950000
## converged
## # weights: 25
## initial value 22892.030694
## final value 19941.950000
## converged
## # weights: 41
## initial value 21936.662564
## final value 19941.950000
## converged
## # weights: 9
## initial value 23683.380748
## iter 10 value 19948.812528
## final value 19947.457874
## converged
## # weights: 25
## initial value 23653.492385
## iter 10 value 19947.613973
## final value 19945.924382
## converged
## # weights: 41
## initial value 22187.401686
## iter 10 value 19946.836681
## final value 19945.265186
## converged
## # weights: 9
## initial value 22700.883608
## iter 10 value 19952.578928
## iter 20 value 19942.072543
## iter 20 value 19942.072494
## final value 19942.072494

```

```

## converged
## # weights: 25
## initial value 22377.252844
## iter 10 value 19956.922485
## iter 20 value 19942.122621
## final value 19941.964684
## converged
## # weights: 41
## initial value 22466.321437
## iter 10 value 19962.867816
## iter 20 value 19942.191166
## final value 19941.960177
## converged
## # weights: 9
## initial value 22365.696655
## final value 20049.627700
## converged
## # weights: 25
## initial value 22108.329028
## final value 20049.627700
## converged
## # weights: 41
## initial value 23337.972398
## final value 20049.627700
## converged
## # weights: 9
## initial value 22686.914313
## iter 10 value 20055.967711
## final value 20055.138322
## converged
## # weights: 25
## initial value 22224.564534
## iter 10 value 20055.160741
## final value 20053.603877
## converged
## # weights: 41
## initial value 22111.186670
## iter 10 value 20053.532200
## final value 20052.944448
## converged
## # weights: 9
## initial value 22184.029693
## iter 10 value 20060.220397
## iter 20 value 20049.749825
## iter 20 value 20049.749777
## final value 20049.749777
## converged
## # weights: 25
## initial value 21817.156530
## iter 10 value 20060.348245
## iter 20 value 20049.751299
## final value 20049.638226
## converged
## # weights: 41

```

```

## initial value 21999.393560
## iter 10 value 20064.897632
## iter 20 value 20049.803750
## final value 20049.637828
## converged
## # weights: 9
## initial value 22846.732493
## final value 20016.657700
## converged
## # weights: 25
## initial value 22025.610603
## final value 20016.657700
## converged
## # weights: 41
## initial value 23312.864077
## final value 20016.657700
## converged
## # weights: 9
## initial value 21860.700608
## iter 10 value 20023.923490
## final value 20022.167082
## converged
## # weights: 25
## initial value 22334.699536
## iter 10 value 20021.925301
## iter 20 value 20020.633259
## final value 20020.633013
## converged
## # weights: 41
## initial value 24485.970000
## iter 10 value 20030.097288
## iter 20 value 20019.975665
## final value 20019.973676
## converged
## # weights: 9
## initial value 21968.935789
## iter 10 value 20026.149911
## iter 20 value 20016.767138
## iter 20 value 20016.767094
## final value 20016.767094
## converged
## # weights: 25
## initial value 23787.283699
## iter 10 value 20028.658538
## iter 20 value 20016.796060
## final value 20016.676086
## converged
## # weights: 41
## initial value 23351.239121
## iter 10 value 20035.976463
## iter 20 value 20016.880430
## final value 20016.668193
## converged
## # weights: 9

```

```

## initial value 22091.559188
## final value 20002.641700
## converged
## # weights: 25
## initial value 22034.575179
## final value 20002.641700
## converged
## # weights: 41
## initial value 21433.521980
## final value 20002.641700
## converged
## # weights: 9
## initial value 22879.364143
## iter 10 value 20010.191581
## final value 20008.150762
## converged
## # weights: 25
## initial value 23237.740514
## iter 10 value 20007.182196
## iter 20 value 20006.617007
## iter 20 value 20006.616860
## iter 20 value 20006.616844
## final value 20006.616844
## converged
## # weights: 41
## initial value 21817.763030
## iter 10 value 20009.985378
## iter 20 value 20005.957832
## final value 20005.957469
## converged
## # weights: 9
## initial value 23190.883593
## iter 10 value 20013.315116
## iter 20 value 20002.764756
## iter 20 value 20002.764707
## final value 20002.764707
## converged
## # weights: 25
## initial value 22647.402377
## iter 10 value 20017.419321
## iter 20 value 20002.812074
## final value 20002.660109
## converged
## # weights: 41
## initial value 23583.125965
## iter 10 value 20018.143631
## iter 20 value 20002.820425
## final value 20002.652174
## converged
## # weights: 9
## initial value 21921.047030
## final value 19982.170100
## converged
## # weights: 25

```

```

## initial value 21841.551590
## final value 19982.170100
## converged
## # weights: 41
## initial value 23063.289322
## final value 19982.170100
## converged
## # weights: 9
## initial value 23101.008625
## iter 10 value 20005.915527
## iter 20 value 19987.679227
## final value 19987.678709
## converged
## # weights: 25
## initial value 22454.159025
## iter 10 value 19987.306787
## final value 19986.144893
## converged
## # weights: 41
## initial value 23054.934984
## iter 10 value 19985.891338
## final value 19985.485653
## converged
## # weights: 9
## initial value 23120.461628
## iter 10 value 19992.787985
## iter 20 value 19982.292516
## iter 20 value 19982.292467
## final value 19982.292467
## converged
## # weights: 25
## initial value 22404.399704
## iter 10 value 19996.241410
## iter 20 value 19982.332331
## final value 19982.180995
## converged
## # weights: 41
## initial value 24187.538281
## iter 10 value 19994.299989
## iter 20 value 19982.309948
## final value 19982.182739
## converged
## # weights: 9
## initial value 23198.800592
## final value 20028.360100
## converged
## # weights: 25
## initial value 22091.959653
## final value 20028.360100
## converged
## # weights: 41
## initial value 23262.307399
## final value 20028.360100
## converged

```

```

## # weights: 9
## initial value 23279.731579
## iter 10 value 20037.953773
## final value 20033.869791
## converged
## # weights: 25
## initial value 23020.134949
## iter 10 value 20033.374375
## iter 20 value 20032.336376
## final value 20032.335599
## converged
## # weights: 41
## initial value 22487.556356
## iter 10 value 20032.752859
## final value 20031.676276
## converged
## # weights: 9
## initial value 22605.895333
## iter 10 value 20038.763384
## iter 20 value 20028.480042
## iter 20 value 20028.479994
## final value 20028.479994
## converged
## # weights: 25
## initial value 22478.545773
## iter 10 value 20044.240323
## iter 20 value 20028.543187
## final value 20028.375702
## converged
## # weights: 41
## initial value 22699.197834
## iter 10 value 20047.719180
## iter 20 value 20028.583295
## final value 20028.371823
## converged
## # weights: 9
## initial value 23770.493602
## final value 20046.848500
## converged
## # weights: 25
## initial value 23121.584147
## final value 20046.848500
## converged
## # weights: 41
## initial value 24093.529914
## final value 20046.848500
## converged
## # weights: 9
## initial value 21432.897345
## iter 10 value 20052.501320
## final value 20052.358952
## converged
## # weights: 25
## initial value 22367.678391

```



```

## iter 10 value 20051.770232
## final value 20050.824541
## converged
## # weights: 41
## initial value 24104.311137
## iter 10 value 20062.625636
## iter 20 value 20050.165400
## iter 20 value 20050.165223
## iter 20 value 20050.165163
## final value 20050.165163
## converged
## # weights: 9
## initial value 22460.687802
## iter 10 value 20057.075947
## iter 20 value 20046.966414
## iter 20 value 20046.966367
## final value 20046.966367
## converged
## # weights: 25
## initial value 23513.225662
## iter 10 value 20058.943688
## iter 20 value 20046.987948
## final value 20046.863303
## converged
## # weights: 41
## initial value 21485.780061
## iter 10 value 20058.813450
## iter 20 value 20046.986446
## final value 20046.857730
## converged
## # weights: 9
## initial value 22375.033017
## final value 20044.160500
## converged
## # weights: 25
## initial value 22393.976891
## final value 20044.160500
## converged
## # weights: 41
## initial value 21022.329013
## final value 20044.160500
## converged
## # weights: 9
## initial value 22511.037263
## iter 10 value 20051.521330
## final value 20049.670809
## converged
## # weights: 25
## initial value 22002.715846
## iter 10 value 20049.526471
## final value 20048.136473
## converged
## # weights: 41
## initial value 22472.904239

```

```

## iter 10 value 20048.151820
## final value 20047.476978
## converged
## # weights: 9
## initial value 23066.620534
## iter 10 value 20054.989862
## iter 20 value 20044.285354
## iter 20 value 20044.285304
## final value 20044.285304
## converged
## # weights: 25
## initial value 23707.996125
## iter 10 value 20055.155080
## iter 20 value 20044.287259
## final value 20044.177127
## converged
## # weights: 41
## initial value 23817.225473
## iter 10 value 20058.840460
## iter 20 value 20044.329748
## final value 20044.172613
## converged
## # weights: 9
## initial value 22603.306894
## final value 20046.767600
## converged
## # weights: 25
## initial value 21812.771082
## final value 20046.767600
## converged
## # weights: 41
## initial value 23320.458752
## final value 20046.767600
## converged
## # weights: 9
## initial value 22816.980097
## iter 10 value 20053.160978
## final value 20052.278055
## converged
## # weights: 25
## initial value 21474.759581
## iter 10 value 20051.322052
## iter 20 value 20050.744315
## final value 20050.743653
## converged
## # weights: 41
## initial value 22871.155043
## iter 10 value 20053.059235
## iter 20 value 20050.086355
## final value 20050.084171
## converged
## # weights: 9
## initial value 21910.369278
## iter 10 value 20055.904977

```

```

## iter 20 value 20046.872947
## iter 20 value 20046.872905
## final value 20046.872905
## converged
## # weights: 25
## initial value 22079.450240
## iter 10 value 20059.179670
## iter 20 value 20046.910701
## final value 20046.782961
## converged
## # weights: 41
## initial value 22027.982674
## iter 10 value 20062.660200
## iter 20 value 20046.950829
## final value 20046.778120
## converged
## # weights: 9
## initial value 22699.584901
## final value 19996.584500
## converged
## # weights: 25
## initial value 23018.297320
## final value 19996.584500
## converged
## # weights: 41
## initial value 21613.927701
## final value 19996.584500
## converged
## # weights: 9
## initial value 22829.295249
## iter 10 value 20005.780451
## iter 20 value 20002.145361
## final value 20002.093263
## converged
## # weights: 25
## initial value 23544.555537
## iter 10 value 20001.550810
## final value 20000.559342
## converged
## # weights: 41
## initial value 23357.820865
## iter 10 value 20002.537867
## iter 20 value 19999.900338
## iter 20 value 19999.900155
## iter 20 value 19999.900096
## final value 19999.900096
## converged
## # weights: 9
## initial value 22368.863576
## iter 10 value 20006.881710
## iter 20 value 19996.703219
## iter 20 value 19996.703171
## final value 19996.703171
## converged

```

```

## # weights: 25
## initial value 23029.531930
## iter 10 value 20010.513597
## iter 20 value 19996.745092
## final value 19996.597055
## converged
## # weights: 41
## initial value 23559.045364
## iter 10 value 20012.373166
## iter 20 value 19996.766531
## final value 19996.595873
## converged
## # weights: 9
## initial value 22781.942799
## final value 20055.771700
## converged
## # weights: 25
## initial value 22863.821273
## final value 20055.771700
## converged
## # weights: 41
## initial value 24191.257421
## final value 20055.771700
## converged
## # weights: 9
## initial value 22251.317221
## iter 10 value 20062.383507
## final value 20061.282674
## converged
## # weights: 25
## initial value 23176.598862
## iter 10 value 20060.390760
## final value 20059.748139
## converged
## # weights: 41
## initial value 22950.528087
## iter 10 value 20071.826495
## iter 20 value 20059.089753
## final value 20059.088521
## converged
## # weights: 9
## initial value 22315.782032
## iter 10 value 20065.062350
## iter 20 value 20055.878814
## iter 20 value 20055.878771
## final value 20055.878771
## converged
## # weights: 25
## initial value 23842.225569
## iter 10 value 20067.869029
## iter 20 value 20055.911173
## final value 20055.791347
## converged
## # weights: 41

```

```

## initial value 24006.792087
## iter 10 value 20069.197209
## iter 20 value 20055.926486
## final value 20055.783980
## converged
## # weights: 9
## initial value 22263.241245
## final value 20009.734000
## converged
## # weights: 25
## initial value 22841.767431
## final value 20009.734000
## converged
## # weights: 41
## initial value 21281.777442
## final value 20009.734000
## converged
## # weights: 9
## initial value 21388.110124
## iter 10 value 20016.367218
## final value 20015.243198
## converged
## # weights: 25
## initial value 21925.081429
## iter 10 value 20014.350521
## final value 20013.709252
## converged
## # weights: 41
## initial value 23703.106663
## iter 10 value 20025.032752
## iter 20 value 20013.052560
## final value 20013.049877
## converged
## # weights: 9
## initial value 22581.480632
## iter 10 value 20020.570053
## iter 20 value 20009.858931
## iter 20 value 20009.858881
## final value 20009.858881
## converged
## # weights: 25
## initial value 21856.981822
## iter 10 value 20020.458088
## iter 20 value 20009.857640
## final value 20009.745373
## converged
## # weights: 41
## initial value 23107.531795
## iter 10 value 20030.979770
## iter 20 value 20009.978947
## final value 20009.745702
## converged
## # weights: 9
## initial value 22711.737562

```

```

## final value 20041.640500
## converged
## # weights: 25
## initial value 23086.770947
## final value 20041.640500
## converged
## # weights: 41
## initial value 22424.811910
## final value 20041.640500
## converged
## # weights: 9
## initial value 21600.825767
## iter 10 value 20047.423708
## final value 20047.150721
## converged
## # weights: 25
## initial value 21781.778601
## iter 10 value 20046.486598
## final value 20045.616440
## converged
## # weights: 41
## initial value 21054.185295
## iter 10 value 20055.985248
## iter 20 value 20044.959064
## final value 20044.956922
## converged
## # weights: 9
## initial value 23692.995491
## iter 10 value 20051.535496
## iter 20 value 20041.754582
## iter 20 value 20041.754536
## final value 20041.754536
## converged
## # weights: 25
## initial value 22037.388609
## iter 10 value 20055.113377
## iter 20 value 20041.795832
## final value 20041.652195
## converged
## # weights: 41
## initial value 22207.404308
## iter 10 value 20060.236637
## iter 20 value 20041.854899
## final value 20041.650353
## converged
## # weights: 9
## initial value 21518.456663
## final value 19989.553700
## converged
## # weights: 25
## initial value 23010.551474
## final value 19989.553700
## converged
## # weights: 41

```

```

## initial value 22968.292380
## final value 19989.553700
## converged
## # weights: 9
## initial value 22768.603604
## iter 10 value 19996.043342
## final value 19995.062452
## converged
## # weights: 25
## initial value 21976.846211
## iter 10 value 19994.431908
## final value 19993.528623
## converged
## # weights: 41
## initial value 23516.828739
## iter 10 value 19995.265844
## iter 20 value 19992.869495
## iter 20 value 19992.869375
## iter 20 value 19992.869356
## final value 19992.869356
## converged
## # weights: 9
## initial value 23435.950748
## iter 10 value 19999.677727
## iter 20 value 19989.670422
## iter 20 value 19989.670375
## final value 19989.670375
## converged
## # weights: 25
## initial value 22451.200391
## iter 10 value 20003.652358
## iter 20 value 19989.716246
## final value 19989.566481
## converged
## # weights: 41
## initial value 22863.706660
## iter 10 value 20009.507906
## iter 20 value 19989.783756
## final value 19989.568324
## converged
## # weights: 9
## initial value 21958.064367
## final value 20018.146000
## converged
## # weights: 25
## initial value 22433.219902
## final value 20018.146000
## converged
## # weights: 41
## initial value 23041.942537
## final value 20018.146000
## converged
## # weights: 9
## initial value 23746.853459

```

```

## iter 10 value 20024.107927
## final value 20023.655411
## converged
## # weights: 25
## initial value 22074.446004
## iter 10 value 20029.241700
## iter 20 value 20022.121912
## final value 20022.121461
## converged
## # weights: 41
## initial value 24524.551251
## iter 10 value 20031.184708
## iter 20 value 20021.473044
## final value 20021.461959
## converged
## # weights: 9
## initial value 23775.728450
## iter 10 value 20027.401500
## iter 20 value 20018.252709
## iter 20 value 20018.252666
## final value 20018.252666
## converged
## # weights: 25
## initial value 23334.926764
## iter 10 value 20032.122079
## iter 20 value 20018.307133
## final value 20018.158625
## converged
## # weights: 41
## initial value 23473.350197
## iter 10 value 20034.899396
## iter 20 value 20018.339154
## final value 20018.157090
## converged
## # weights: 9
## initial value 23010.685430
## final value 20052.930100
## converged
## # weights: 25
## initial value 22701.080774
## final value 20052.930100
## converged
## # weights: 41
## initial value 22000.668712
## final value 20052.930100
## converged
## # weights: 9
## initial value 23323.906821
## iter 10 value 20060.757376
## final value 20058.440958
## converged
## # weights: 25
## initial value 23138.282068
## iter 10 value 20057.619906

```



```

## final value 20056.906573
## converged
## # weights: 41
## initial value 22953.569619
## iter 10 value 20056.792237
## final value 20056.246924
## converged
## # weights: 9
## initial value 22327.119924
## iter 10 value 20063.932018
## iter 20 value 20053.056943
## iter 20 value 20053.056893
## final value 20053.056893
## converged
## # weights: 25
## initial value 22248.728768
## iter 10 value 20064.755328
## iter 20 value 20053.066436
## final value 20052.943403
## converged
## # weights: 41
## initial value 23481.428001
## iter 10 value 20071.271949
## iter 20 value 20053.141567
## final value 20052.940350
## converged
## # weights: 9
## initial value 22312.047038
## final value 20004.341200
## converged
## # weights: 25
## initial value 22867.336792
## final value 20004.341200
## converged
## # weights: 41
## initial value 22701.777995
## final value 20004.341200
## converged
## # weights: 9
## initial value 22572.889158
## iter 10 value 20009.913703
## final value 20009.850264
## converged
## # weights: 25
## initial value 23343.990042
## iter 10 value 20009.920508
## iter 20 value 20008.316435
## iter 20 value 20008.316338
## iter 20 value 20008.316323
## final value 20008.316323
## converged
## # weights: 41
## initial value 23274.466443
## iter 10 value 20019.963645

```

```

## iter 20 value 20007.657760
## final value 20007.656959
## converged
## # weights: 9
## initial value 22668.057472
## iter 10 value 20015.141577
## iter 20 value 20004.465720
## iter 20 value 20004.465670
## final value 20004.465670
## converged
## # weights: 25
## initial value 21186.388155
## iter 10 value 20011.227250
## iter 20 value 20004.420591
## final value 20004.352088
## converged
## # weights: 41
## initial value 23090.031805
## iter 10 value 20025.995813
## iter 20 value 20004.590861
## final value 20004.352615
## converged
## # weights: 9
## initial value 23025.330615
## final value 20057.069200
## converged
## # weights: 25
## initial value 23352.054692
## final value 20057.069200
## converged
## # weights: 41
## initial value 22502.192776
## final value 20057.069200
## converged
## # weights: 9
## initial value 23384.569366
## iter 10 value 20062.678254
## final value 20062.580211
## converged
## # weights: 25
## initial value 23317.903432
## iter 10 value 20062.055589
## final value 20061.045606
## converged
## # weights: 41
## initial value 24057.653981
## iter 10 value 20071.623346
## iter 20 value 20060.386453
## final value 20060.386065
## converged
## # weights: 9
## initial value 22899.534627
## iter 10 value 20068.717069
## iter 20 value 20057.203491

```

```

## iter 20 value 20057.203437
## final value 20057.203437
## converged
## # weights: 25
## initial value 21808.935218
## iter 10 value 20067.632525
## iter 20 value 20057.190987
## final value 20057.080951
## converged
## # weights: 41
## initial value 22290.461885
## iter 10 value 20074.777445
## iter 20 value 20057.273362
## final value 20057.079795
## converged
## # weights: 9
## initial value 23152.611142
## final value 20046.195700
## converged
## # weights: 25
## initial value 22979.631757
## final value 20046.195700
## converged
## # weights: 41
## initial value 23141.311218
## final value 20046.195700
## converged
## # weights: 9
## initial value 22293.217081
## iter 10 value 20051.801655
## final value 20051.706091
## converged
## # weights: 25
## initial value 22558.532833
## iter 10 value 20051.431991
## final value 20050.171716
## converged
## # weights: 41
## initial value 22263.366046
## iter 10 value 20050.212589
## final value 20049.512214
## converged
## # weights: 9
## initial value 23836.904298
## iter 10 value 20054.023273
## iter 20 value 20046.285946
## iter 20 value 20046.285910
## final value 20046.285910
## converged
## # weights: 25
## initial value 22641.791802
## iter 10 value 20063.535169
## iter 20 value 20046.395610
## final value 20046.209383

```

```

## converged
## # weights: 41
## initial value 22080.486826
## iter 10 value 20064.162842
## iter 20 value 20046.402847
## final value 20046.204725
## converged
## # weights: 9
## initial value 23143.568792
## final value 20018.681200
## converged
## # weights: 25
## initial value 21800.845748
## final value 20018.681200
## converged
## # weights: 41
## initial value 22254.037992
## final value 20018.681200
## converged
## # weights: 9
## initial value 22143.240714
## iter 10 value 20026.177307
## final value 20024.190615
## converged
## # weights: 25
## initial value 22325.905363
## iter 10 value 20025.043717
## iter 20 value 20022.656873
## iter 20 value 20022.656722
## iter 20 value 20022.656657
## final value 20022.656657
## converged
## # weights: 41
## initial value 22670.760649
## iter 10 value 20023.031005
## iter 20 value 20021.997214
## iter 20 value 20021.997144
## iter 20 value 20021.997138
## final value 20021.997138
## converged
## # weights: 9
## initial value 22596.466538
## iter 10 value 20028.387942
## iter 20 value 20018.793111
## iter 20 value 20018.793066
## final value 20018.793066
## converged
## # weights: 25
## initial value 22851.509987
## iter 10 value 20033.353757
## iter 20 value 20018.850363
## final value 20018.694460
## converged
## # weights: 41

```

```

## initial value 24358.544793
## iter 10 value 20028.685672
## iter 20 value 20018.796544
## final value 20018.697393
## converged
## # weights: 9
## initial value 23094.556597
## final value 20040.986000
## converged
## # weights: 25
## initial value 23231.381875
## final value 20040.986000
## converged
## # weights: 41
## initial value 23925.968428
## final value 20040.986000
## converged
## # weights: 9
## initial value 23051.622203
## iter 10 value 20049.006982
## iter 20 value 20046.496286
## iter 20 value 20046.496219
## final value 20046.496219
## converged
## # weights: 25
## initial value 22664.579298
## iter 10 value 20046.102563
## iter 20 value 20044.961925
## iter 20 value 20044.961864
## iter 20 value 20044.961864
## final value 20044.961864
## converged
## # weights: 41
## initial value 21496.088524
## iter 10 value 20049.755355
## iter 20 value 20044.302671
## iter 20 value 20044.302487
## iter 20 value 20044.302438
## final value 20044.302438
## converged
## # weights: 9
## initial value 22548.252105
## iter 10 value 20051.943676
## iter 20 value 20041.112333
## iter 20 value 20041.112283
## final value 20041.112283
## converged
## # weights: 25
## initial value 22435.018124
## iter 10 value 20055.237732
## iter 20 value 20041.150311
## final value 20040.999069
## converged
## # weights: 41

```

```

## initial value 21899.564473
## iter 10 value 20056.828457
## iter 20 value 20041.168651
## final value 20040.995360
## converged
## # weights: 9
## initial value 22128.442467
## final value 20034.333200
## converged
## # weights: 25
## initial value 22553.560548
## final value 20034.333200
## converged
## # weights: 41
## initial value 23338.178770
## final value 20034.333200
## converged
## # weights: 9
## initial value 22508.702550
## iter 10 value 20045.382481
## final value 20039.843117
## converged
## # weights: 25
## initial value 22680.365432
## iter 10 value 20039.591093
## iter 20 value 20038.308927
## iter 20 value 20038.308867
## iter 20 value 20038.308865
## final value 20038.308865
## converged
## # weights: 41
## initial value 23717.988603
## iter 10 value 20039.242876
## iter 20 value 20037.649626
## iter 20 value 20037.649447
## iter 20 value 20037.649417
## final value 20037.649417
## converged
## # weights: 9
## initial value 23497.691962
## iter 10 value 20044.822785
## iter 20 value 20034.454137
## iter 20 value 20034.454088
## final value 20034.454088
## converged
## # weights: 25
## initial value 21341.186644
## iter 10 value 20041.705449
## iter 20 value 20034.418196
## final value 20034.344717
## converged
## # weights: 41
## initial value 23039.672054
## iter 10 value 20055.942309

```

```

## iter 20 value 20034.582336
## final value 20034.343311
## converged
## # weights: 9
## initial value 23175.492716
## final value 20017.337200
## converged
## # weights: 25
## initial value 23251.467553
## final value 20017.337200
## converged
## # weights: 41
## initial value 22723.894675
## final value 20017.337200
## converged
## # weights: 9
## initial value 22153.459458
## iter 10 value 20024.984799
## final value 20022.846630
## converged
## # weights: 25
## initial value 22095.380812
## iter 10 value 20023.066777
## iter 20 value 20021.312645
## iter 20 value 20021.312548
## iter 20 value 20021.312538
## final value 20021.312538
## converged
## # weights: 41
## initial value 21548.307776
## iter 10 value 20021.750407
## iter 20 value 20020.653194
## iter 20 value 20020.653138
## iter 20 value 20020.653133
## final value 20020.653133
## converged
## # weights: 9
## initial value 22602.967554
## iter 10 value 20027.460728
## iter 20 value 20017.453916
## iter 20 value 20017.453870
## final value 20017.453870
## converged
## # weights: 25
## initial value 21332.834417
## iter 10 value 20024.861896
## iter 20 value 20017.423954
## final value 20017.347754
## converged
## # weights: 41
## initial value 22302.048851
## iter 10 value 20037.261378
## iter 20 value 20017.566910
## final value 20017.349320

```

```

## converged
## # weights: 9
## initial value 22520.457876
## final value 20027.767600
## converged
## # weights: 25
## initial value 21809.832038
## final value 20027.767600
## converged
## # weights: 41
## initial value 21486.032744
## final value 20027.767600
## converged
## # weights: 9
## initial value 22219.901240
## iter 10 value 20048.218919
## iter 20 value 20033.280756
## iter 20 value 20033.280650
## final value 20033.280650
## converged
## # weights: 25
## initial value 23216.044214
## iter 10 value 20032.584810
## iter 20 value 20031.743145
## iter 20 value 20031.743098
## iter 20 value 20031.743093
## final value 20031.743093
## converged
## # weights: 41
## initial value 20727.711440
## iter 10 value 20046.266620
## iter 20 value 20031.250377
## iter 30 value 20031.088213
## final value 20031.083681
## converged
## # weights: 9
## initial value 23101.584945
## iter 10 value 20038.870092
## iter 20 value 20027.895603
## iter 20 value 20027.895552
## final value 20027.895552
## converged
## # weights: 25
## initial value 21648.963049
## iter 10 value 20038.382008
## iter 20 value 20027.889976
## final value 20027.779535
## converged
## # weights: 41
## initial value 22438.126471
## iter 10 value 20046.325238
## iter 20 value 20027.981555
## final value 20027.777556
## converged

```



```

## # weights: 9
## initial value 23153.315000
## final value 20044.594000
## converged
## # weights: 25
## initial value 23616.525988
## final value 20044.594000
## converged
## # weights: 41
## initial value 22855.855336
## final value 20044.594000
## converged
## # weights: 9
## initial value 22581.127883
## iter 10 value 20050.357632
## final value 20050.104327
## converged
## # weights: 25
## initial value 22692.904366
## iter 10 value 20049.610459
## final value 20048.570056
## converged
## # weights: 41
## initial value 24164.525170
## iter 10 value 20048.641798
## final value 20047.910446
## converged
## # weights: 9
## initial value 23002.642723
## iter 10 value 20054.407419
## iter 20 value 20044.707141
## iter 20 value 20044.707096
## final value 20044.707096
## converged
## # weights: 25
## initial value 23518.797780
## iter 10 value 20058.130325
## iter 20 value 20044.750063
## final value 20044.608145
## converged
## # weights: 41
## initial value 21359.986898
## iter 10 value 20054.825251
## iter 20 value 20044.711958
## final value 20044.603680
## converged
## # weights: 9
## initial value 22064.633663
## final value 19997.560100
## converged
## # weights: 25
## initial value 22114.553361
## final value 19997.560100
## converged

```

```

## # weights: 41
## initial value 22196.585416
## final value 19997.560100
## converged
## # weights: 9
## initial value 21632.354236
## iter 10 value 20014.557560
## iter 20 value 20003.069356
## final value 20003.069010
## converged
## # weights: 25
## initial value 21942.716350
## iter 10 value 20002.206163
## final value 20001.535150
## converged
## # weights: 41
## initial value 21549.132170
## iter 10 value 20002.123018
## iter 20 value 20000.875948
## iter 20 value 20000.875816
## iter 20 value 20000.875789
## final value 20000.875789
## converged
## # weights: 9
## initial value 22199.805219
## iter 10 value 20006.510104
## iter 20 value 19997.663287
## iter 20 value 19997.663245
## final value 19997.663245
## converged
## # weights: 25
## initial value 22688.053128
## iter 10 value 20013.625881
## iter 20 value 19997.745326
## final value 19997.575896
## converged
## # weights: 41
## initial value 22009.179661
## iter 10 value 20013.209158
## iter 20 value 19997.740521
## final value 19997.571115
## converged
## # weights: 9
## initial value 21873.041451
## final value 20039.841200
## converged
## # weights: 25
## initial value 23277.457118
## final value 20039.841200
## converged
## # weights: 41
## initial value 21854.310819
## final value 20039.841200
## converged

```

```

## # weights: 9
## initial value 22817.013473
## iter 10 value 20045.985277
## final value 20045.351314
## converged
## # weights: 25
## initial value 21632.346129
## iter 10 value 20044.488409
## final value 20043.817031
## converged
## # weights: 41
## initial value 21925.895393
## iter 10 value 20049.468434
## iter 20 value 20043.157820
## final value 20043.157532
## converged
## # weights: 9
## initial value 22085.867937
## iter 10 value 20049.747808
## iter 20 value 20039.955415
## iter 20 value 20039.955370
## final value 20039.955370
## converged
## # weights: 25
## initial value 22573.049613
## iter 10 value 20054.717941
## iter 20 value 20040.012717
## final value 20039.860946
## converged
## # weights: 41
## initial value 23012.217244
## iter 10 value 20062.117492
## iter 20 value 20040.098028
## final value 20039.851104
## converged
## # weights: 9
## initial value 21537.170933
## final value 20032.589200
## converged
## # weights: 25
## initial value 22862.832545
## final value 20032.589200
## converged
## # weights: 41
## initial value 23193.607162
## final value 20032.589200
## converged
## # weights: 9
## initial value 22942.275712
## iter 10 value 20040.757006
## final value 20038.099054
## converged
## # weights: 25
## initial value 21660.822855

```

```

## iter 10 value 20037.200566
## final value 20036.564902
## converged
## # weights: 41
## initial value 24221.968918
## iter 10 value 20045.713623
## iter 20 value 20035.905648
## iter 20 value 20035.905480
## iter 20 value 20035.905445
## final value 20035.905445
## converged
## # weights: 9
## initial value 21815.889529
## iter 10 value 20040.481078
## iter 20 value 20032.680187
## iter 20 value 20032.680151
## final value 20032.680151
## converged
## # weights: 25
## initial value 21964.127145
## iter 10 value 20043.621070
## iter 20 value 20032.716389
## final value 20032.602680
## converged
## # weights: 41
## initial value 22971.072779
## iter 10 value 20051.282311
## iter 20 value 20032.804717
## final value 20032.600228
## converged
## # weights: 9
## initial value 22886.826346
## final value 20047.090000
## converged
## # weights: 25
## initial value 21619.154439
## final value 20047.090000
## converged
## # weights: 41
## initial value 22390.791211
## final value 20047.090000
## converged
## # weights: 9
## initial value 23272.698828
## iter 10 value 20052.706763
## final value 20052.600488
## converged
## # weights: 25
## initial value 23526.393348
## iter 10 value 20051.364401
## final value 20051.066110
## converged
## # weights: 41
## initial value 22486.645139

```

```

## iter 10 value 20064.815274
## iter 20 value 20050.410104
## final value 20050.406595
## converged
## # weights: 9
## initial value 22150.950149
## iter 10 value 20057.712964
## iter 20 value 20047.212474
## iter 20 value 20047.212425
## final value 20047.212425
## converged
## # weights: 25
## initial value 23124.050312
## iter 10 value 20060.664909
## iter 20 value 20047.246508
## final value 20047.102387
## converged
## # weights: 41
## initial value 24041.683694
## iter 10 value 20060.661950
## iter 20 value 20047.246474
## final value 20047.102591
## converged
## # weights: 9
## initial value 22691.352921
## final value 19942.390000
## converged
## # weights: 25
## initial value 23698.633613
## final value 19942.390000
## converged
## # weights: 41
## initial value 21929.046079
## final value 19942.390000
## converged
## # weights: 9
## initial value 23109.939082
## iter 10 value 19948.789440
## final value 19947.897897
## converged
## # weights: 25
## initial value 23456.818099
## iter 10 value 19954.678064
## iter 20 value 19946.365722
## final value 19946.364435
## converged
## # weights: 41
## initial value 24136.863240
## iter 10 value 19956.901582
## iter 20 value 19945.705565
## final value 19945.705210
## converged
## # weights: 9
## initial value 21803.097875

```

```

## iter 10 value 19951.161760
## iter 20 value 19942.491132
## iter 20 value 19942.491091
## final value 19942.491091
## converged
## # weights: 25
## initial value 23020.945883
## iter 10 value 19959.756808
## iter 20 value 19942.590226
## final value 19942.403456
## converged
## # weights: 41
## initial value 22918.478812
## iter 10 value 19960.986901
## iter 20 value 19942.604408
## final value 19942.400951
## converged
## # weights: 9
## initial value 23202.018592
## final value 20050.567600
## converged
## # weights: 25
## initial value 23763.878074
## final value 20050.567600
## converged
## # weights: 41
## initial value 23191.304186
## final value 20050.567600
## converged
## # weights: 9
## initial value 22791.713402
## iter 10 value 20056.145910
## final value 20056.078250
## converged
## # weights: 25
## initial value 21814.277683
## iter 10 value 20055.291140
## final value 20054.543949
## converged
## # weights: 41
## initial value 22205.712858
## iter 10 value 20054.485206
## iter 20 value 20053.884297
## iter 20 value 20053.884240
## iter 20 value 20053.884232
## final value 20053.884232
## converged
## # weights: 9
## initial value 22110.818588
## iter 10 value 20060.612916
## iter 20 value 20050.683415
## iter 20 value 20050.683368
## final value 20050.683368
## converged

```

```

## # weights: 25
## initial value 21867.869565
## iter 10 value 20062.172359
## iter 20 value 20050.701394
## final value 20050.581792
## converged
## # weights: 41
## initial value 22460.900375
## iter 10 value 20067.342398
## iter 20 value 20050.761000
## final value 20050.577397
## converged
## # weights: 9
## initial value 22897.348115
## final value 19919.649700
## converged
## # weights: 25
## initial value 22957.060498
## final value 19919.649700
## converged
## # weights: 41
## initial value 22825.935745
## final value 19919.649700
## converged
## # weights: 9
## initial value 22550.701497
## iter 10 value 19925.782464
## final value 19925.157288
## converged
## # weights: 25
## initial value 22947.760081
## iter 10 value 19924.441398
## final value 19923.623957
## converged
## # weights: 41
## initial value 23428.984427
## iter 10 value 19933.566048
## iter 20 value 19922.964900
## iter 20 value 19922.964805
## iter 20 value 19922.964780
## final value 19922.964780
## converged
## # weights: 9
## initial value 22606.529873
## iter 10 value 19931.186635
## iter 20 value 19919.782712
## iter 20 value 19919.782659
## final value 19919.782659
## converged
## # weights: 25
## initial value 21629.474809
## iter 10 value 19931.992548
## iter 20 value 19919.792003
## final value 19919.661227

```

```

## converged
## # weights: 41
## initial value 22049.125806
## iter 10 value 19935.838886
## iter 20 value 19919.836349
## final value 19919.661328
## converged
## # weights: 9
## initial value 23257.239694
## final value 19981.448500
## converged
## # weights: 25
## initial value 23294.757687
## final value 19981.448500
## converged
## # weights: 41
## initial value 21829.988136
## final value 19981.448500
## converged
## # weights: 9
## initial value 22119.500874
## iter 10 value 19987.128794
## final value 19986.957097
## converged
## # weights: 25
## initial value 22621.583862
## iter 10 value 19987.332622
## final value 19985.423337
## converged
## # weights: 41
## initial value 23776.107787
## iter 10 value 19985.707477
## final value 19984.764055
## converged
## # weights: 9
## initial value 22343.814823
## iter 10 value 19991.114308
## iter 20 value 19981.559939
## iter 20 value 19981.559895
## final value 19981.559895
## converged
## # weights: 25
## initial value 23111.180131
## iter 10 value 19994.935288
## iter 20 value 19981.603992
## final value 19981.465831
## converged
## # weights: 41
## initial value 22314.958807
## iter 10 value 19998.552431
## iter 20 value 19981.645695
## final value 19981.459050
## converged
## # weights: 9

```



```

## initial value 23408.916689
## final value 20024.481700
## converged
## # weights: 25
## initial value 22158.794544
## final value 20024.481700
## converged
## # weights: 41
## initial value 22558.381963
## final value 20024.481700
## converged
## # weights: 9
## initial value 23287.264138
## iter 10 value 20030.375157
## final value 20029.991300
## converged
## # weights: 25
## initial value 23609.204294
## iter 10 value 20029.260246
## final value 20028.457163
## converged
## # weights: 41
## initial value 23684.422271
## iter 10 value 20029.268656
## iter 20 value 20027.797836
## iter 20 value 20027.797749
## iter 20 value 20027.797745
## final value 20027.797745
## converged
## # weights: 9
## initial value 23338.879240
## iter 10 value 20034.075489
## iter 20 value 20024.592309
## iter 20 value 20024.592265
## final value 20024.592265
## converged
## # weights: 25
## initial value 22590.897295
## iter 10 value 20039.856081
## iter 20 value 20024.658955
## final value 20024.496430
## converged
## # weights: 41
## initial value 22805.250246
## iter 10 value 20042.888600
## iter 20 value 20024.693917
## final value 20024.493889
## converged
## # weights: 9
## initial value 21664.780658
## final value 20031.021200
## converged
## # weights: 25
## initial value 22041.799006

```

```

## final value 20031.021200
## converged
## # weights: 41
## initial value 23526.043697
## final value 20031.021200
## converged
## # weights: 9
## initial value 22461.359758
## iter 10 value 20037.362161
## final value 20036.531005
## converged
## # weights: 25
## initial value 23605.971367
## iter 10 value 20039.864684
## iter 20 value 20035.000425
## final value 20034.996792
## converged
## # weights: 41
## initial value 22481.167259
## iter 10 value 20034.875697
## final value 20034.337350
## converged
## # weights: 9
## initial value 23771.085883
## iter 10 value 20039.633811
## iter 20 value 20031.120497
## iter 20 value 20031.120457
## final value 20031.120457
## converged
## # weights: 25
## initial value 22839.270236
## iter 10 value 20044.731298
## iter 20 value 20031.179267
## final value 20031.033420
## converged
## # weights: 41
## initial value 23334.299432
## iter 10 value 20048.001221
## iter 20 value 20031.216966
## final value 20031.031425
## converged
## # weights: 9
## initial value 22727.887413
## final value 20028.005200
## converged
## # weights: 25
## initial value 21663.861769
## final value 20028.005200
## converged
## # weights: 41
## initial value 22635.923493
## final value 20028.005200
## converged
## # weights: 9

```

```

## initial value 22783.054758
## iter 10 value 20034.171887
## final value 20033.514920
## converged
## # weights: 25
## initial value 23808.231433
## iter 10 value 20032.642011
## final value 20031.980747
## converged
## # weights: 41
## initial value 23006.250794
## iter 10 value 20032.285491
## final value 20031.321294
## converged
## # weights: 9
## initial value 22330.453601
## iter 10 value 20037.555785
## iter 20 value 20028.115311
## iter 20 value 20028.115267
## final value 20028.115267
## converged
## # weights: 25
## initial value 22356.146354
## iter 10 value 20040.404238
## iter 20 value 20028.148151
## final value 20028.018559
## converged
## # weights: 41
## initial value 22713.524229
## iter 10 value 20050.938904
## iter 20 value 20028.269608
## iter 30 value 20028.014493
## iter 30 value 20028.014490
## iter 30 value 20028.014489
## final value 20028.014489
## converged
## # weights: 9
## initial value 23370.011911
## final value 20016.930100
## converged
## # weights: 25
## initial value 22855.726118
## final value 20016.930100
## converged
## # weights: 41
## initial value 22458.194007
## final value 20016.930100
## converged
## # weights: 9
## initial value 23885.264868
## iter 10 value 20024.482269
## final value 20022.439487
## converged
## # weights: 25

```

```

## initial value 22990.126634
## iter 10 value 20022.046408
## final value 20020.905442
## converged
## # weights: 41
## initial value 21928.081337
## iter 10 value 20023.563646
## iter 20 value 20020.246279
## iter 20 value 20020.246108
## iter 20 value 20020.246062
## final value 20020.246062
## converged
## # weights: 9
## initial value 22548.858902
## iter 10 value 20027.971361
## iter 20 value 20017.057397
## iter 20 value 20017.057346
## final value 20017.057346
## converged
## # weights: 25
## initial value 23707.390185
## iter 10 value 20031.534690
## iter 20 value 20017.098479
## final value 20016.952238
## converged
## # weights: 41
## initial value 22384.387163
## iter 10 value 20036.159134
## iter 20 value 20017.151796
## final value 20016.939700
## converged
## # weights: 9
## initial value 21976.887815
## final value 20024.481700
## converged
## # weights: 25
## initial value 23302.842587
## final value 20024.481700
## converged
## # weights: 41
## initial value 23336.558074
## final value 20024.481700
## converged
## # weights: 9
## initial value 23092.839235
## iter 10 value 20030.465765
## final value 20029.991288
## converged
## # weights: 25
## initial value 23553.503566
## iter 10 value 20029.004396
## iter 20 value 20028.457268
## iter 20 value 20028.457203
## iter 20 value 20028.457178

```

```

## final value 20028.457178
## converged
## # weights: 41
## initial value 22534.418454
## iter 10 value 20032.043450
## iter 20 value 20027.798031
## iter 20 value 20027.797835
## iter 20 value 20027.797829
## final value 20027.797829
## converged
## # weights: 9
## initial value 23168.212798
## iter 10 value 20035.644764
## iter 20 value 20024.610401
## iter 20 value 20024.610350
## final value 20024.610350
## converged
## # weights: 25
## initial value 22198.852384
## iter 10 value 20037.732687
## iter 20 value 20024.634473
## final value 20024.494055
## converged
## # weights: 41
## initial value 23364.122957
## iter 10 value 20040.794541
## iter 20 value 20024.669774
## final value 20024.494623
## converged
## # weights: 9
## initial value 23029.800421
## final value 20057.313700
## converged
## # weights: 25
## initial value 24043.549115
## final value 20057.313700
## converged
## # weights: 41
## initial value 22457.421338
## final value 20057.313700
## converged
## # weights: 9
## initial value 23328.350470
## iter 10 value 20063.122900
## final value 20062.824845
## converged
## # weights: 25
## initial value 23003.438315
## iter 10 value 20063.367204
## final value 20061.290347
## converged
## # weights: 41
## initial value 21905.679398
## iter 10 value 20072.433338

```

```

## iter 20 value 20060.630851
## iter 20 value 20060.630740
## iter 20 value 20060.630701
## final value 20060.630701
## converged
## # weights: 9
## initial value 22725.624930
## iter 10 value 20067.774717
## iter 20 value 20057.434307
## iter 20 value 20057.434259
## final value 20057.434259
## converged
## # weights: 25
## initial value 22421.328714
## iter 10 value 20071.008740
## iter 20 value 20057.471593
## final value 20057.325848
## converged
## # weights: 41
## initial value 21546.228874
## iter 10 value 20070.735935
## iter 20 value 20057.468448
## final value 20057.323401
## converged
## # weights: 9
## initial value 22262.004566
## final value 20059.710500
## converged
## # weights: 25
## initial value 22477.043828
## final value 20059.710500
## converged
## # weights: 41
## initial value 22756.140217
## final value 20059.710500
## converged
## # weights: 9
## initial value 23260.802950
## iter 10 value 20066.966117
## final value 20065.221787
## converged
## # weights: 25
## initial value 23353.784742
## iter 10 value 20066.059234
## iter 20 value 20063.687223
## iter 20 value 20063.687117
## iter 20 value 20063.687111
## final value 20063.687111
## converged
## # weights: 41
## initial value 24169.373958
## iter 10 value 20074.631680
## iter 20 value 20063.027843
## final value 20063.027504

```

```

## converged
## # weights: 9
## initial value 23571.507643
## iter 10 value 20068.880887
## iter 20 value 20059.816227
## iter 20 value 20059.816185
## final value 20059.816185
## converged
## # weights: 25
## initial value 22531.096208
## iter 10 value 20073.460430
## iter 20 value 20059.869026
## final value 20059.722221
## converged
## # weights: 41
## initial value 24256.487151
## iter 10 value 20071.688509
## iter 20 value 20059.848597
## final value 20059.724557
## converged
## # weights: 9
## initial value 22906.269671
## final value 19959.334000
## converged
## # weights: 25
## initial value 23470.122011
## final value 19959.334000
## converged
## # weights: 41
## initial value 22116.797892
## final value 19959.334000
## converged
## # weights: 9
## initial value 22680.868037
## iter 10 value 19965.763154
## final value 19964.842163
## converged
## # weights: 25
## initial value 21804.434118
## iter 10 value 19963.569354
## final value 19963.308555
## converged
## # weights: 41
## initial value 23300.489478
## iter 10 value 19976.421153
## iter 20 value 19962.651725
## final value 19962.649321
## converged
## # weights: 9
## initial value 22209.639914
## iter 10 value 19970.017116
## iter 20 value 19959.457168
## iter 20 value 19959.457119
## final value 19959.457119

```

```

## converged
## # weights: 25
## initial value 21986.946916
## iter 10 value 19972.018544
## iter 20 value 19959.480243
## final value 19959.345201
## converged
## # weights: 41
## initial value 22717.968951
## iter 10 value 19978.756936
## iter 20 value 19959.557931
## final value 19959.344025
## converged
## # weights: 9
## initial value 22518.552632
## final value 20017.742500
## converged
## # weights: 25
## initial value 22359.568627
## final value 20017.742500
## converged
## # weights: 41
## initial value 23441.026222
## final value 20017.742500
## converged
## # weights: 9
## initial value 22535.493363
## iter 10 value 20108.144432
## iter 20 value 20023.556358
## final value 20023.251828
## converged
## # weights: 25
## initial value 22462.774383
## iter 10 value 20022.520357
## final value 20021.717732
## converged
## # weights: 41
## initial value 23523.433305
## iter 10 value 20028.490587
## iter 20 value 20021.061230
## final value 20021.058406
## converged
## # weights: 9
## initial value 21497.620186
## iter 10 value 20024.069746
## iter 20 value 20017.815448
## iter 20 value 20017.815419
## final value 20017.815419
## converged
## # weights: 25
## initial value 23020.353921
## iter 10 value 20035.324518
## iter 20 value 20017.945207
## final value 20017.754421

```



```

## converged
## # weights: 41
## initial value 22926.316962
## iter 10 value 20038.347651
## iter 20 value 20017.980061
## final value 20017.752907
## converged
## # weights: 9
## initial value 21886.230728
## final value 20044.160500
## converged
## # weights: 25
## initial value 22570.342120
## final value 20044.160500
## converged
## # weights: 41
## initial value 21807.876809
## final value 20044.160500
## converged
## # weights: 9
## initial value 23071.310036
## iter 10 value 20073.794549
## iter 20 value 20049.671450
## final value 20049.670840
## converged
## # weights: 25
## initial value 21991.173535
## iter 10 value 20051.156436
## final value 20048.136604
## converged
## # weights: 41
## initial value 23149.553061
## iter 10 value 20061.320063
## iter 20 value 20047.477312
## iter 20 value 20047.477140
## iter 20 value 20047.477056
## final value 20047.477056
## converged
## # weights: 9
## initial value 23478.409206
## iter 10 value 20054.093216
## iter 20 value 20044.275016
## iter 20 value 20044.274971
## final value 20044.274971
## converged
## # weights: 25
## initial value 22966.513074
## iter 10 value 20060.666783
## iter 20 value 20044.350804
## final value 20044.173883
## converged
## # weights: 41
## initial value 24083.886370
## iter 10 value 20057.424461

```

```

## iter 20 value 20044.313423
## final value 20044.175565
## converged
## # weights: 9
## initial value 21940.225045
## final value 20027.529200
## converged
## # weights: 25
## initial value 21881.802149
## final value 20027.529200
## converged
## # weights: 41
## initial value 23761.171851
## final value 20027.529200
## converged
## # weights: 9
## initial value 23022.767036
## iter 10 value 20036.567689
## final value 20033.038892
## converged
## # weights: 25
## initial value 22954.043549
## iter 10 value 20032.780296
## final value 20031.504740
## converged
## # weights: 41
## initial value 21615.725505
## iter 10 value 20032.270832
## iter 20 value 20030.845470
## iter 20 value 20030.845348
## iter 20 value 20030.845313
## final value 20030.845313
## converged
## # weights: 9
## initial value 23235.665904
## iter 10 value 20038.190940
## iter 20 value 20027.652121
## iter 20 value 20027.652072
## final value 20027.652072
## converged
## # weights: 25
## initial value 22349.038243
## iter 10 value 20040.531804
## iter 20 value 20027.679110
## final value 20027.542274
## converged
## # weights: 41
## initial value 22190.537564
## iter 10 value 20045.803700
## iter 20 value 20027.739891
## final value 20027.539208
## converged
## # weights: 9
## initial value 22805.403714

```

```

## final value 20019.610100
## converged
## # weights: 25
## initial value 22196.816650
## final value 20019.610100
## converged
## # weights: 41
## initial value 22430.875024
## final value 20019.610100
## converged
## # weights: 9
## initial value 22522.712955
## iter 10 value 20027.534981
## final value 20025.119565
## converged
## # weights: 25
## initial value 22391.296205
## iter 10 value 20029.480850
## iter 20 value 20023.585708
## iter 20 value 20023.585510
## iter 20 value 20023.585497
## final value 20023.585497
## converged
## # weights: 41
## initial value 21640.559691
## iter 10 value 20023.358959
## final value 20022.926173
## converged
## # weights: 9
## initial value 23217.486619
## iter 10 value 20028.934165
## iter 20 value 20019.717599
## iter 20 value 20019.717556
## final value 20019.717556
## converged
## # weights: 25
## initial value 22778.734435
## iter 10 value 20033.843844
## iter 20 value 20019.774204
## final value 20019.622889
## converged
## # weights: 41
## initial value 22087.671605
## iter 10 value 20037.576138
## iter 20 value 20019.817234
## final value 20019.620409
## converged
## # weights: 9
## initial value 22408.802853
## final value 20020.529200
## converged
## # weights: 25
## initial value 21666.645687
## final value 20020.529200

```

```

## converged
## # weights: 41
## initial value 24087.200185
## final value 20020.529200
## converged
## # weights: 9
## initial value 22848.836546
## iter 10 value 20028.206430
## final value 20026.038687
## converged
## # weights: 25
## initial value 22759.022538
## iter 10 value 20025.536904
## final value 20024.504599
## converged
## # weights: 41
## initial value 23420.040403
## iter 10 value 20024.675158
## final value 20023.845184
## converged
## # weights: 9
## initial value 23068.747471
## iter 10 value 20031.596066
## iter 20 value 20020.656792
## iter 20 value 20020.656741
## final value 20020.656741
## converged
## # weights: 25
## initial value 23817.604189
## iter 10 value 20032.227497
## iter 20 value 20020.664072
## final value 20020.543749
## converged
## # weights: 41
## initial value 21678.192540
## iter 10 value 20033.684585
## iter 20 value 20020.680871
## final value 20020.538661
## converged
## # weights: 9
## initial value 22134.165093
## final value 20028.595700
## converged
## # weights: 25
## initial value 21769.085869
## final value 20028.595700
## converged
## # weights: 41
## initial value 22721.630349
## final value 20028.595700
## converged
## # weights: 9
## initial value 21787.199070
## iter 10 value 20034.267446

```

```

## final value 20034.105383
## converged
## # weights: 25
## initial value 22411.938336
## iter 10 value 20033.353605
## final value 20032.571189
## converged
## # weights: 41
## initial value 23285.222967
## iter 10 value 20033.020241
## iter 20 value 20031.911813
## iter 20 value 20031.911753
## iter 20 value 20031.911750
## final value 20031.911750
## converged
## # weights: 9
## initial value 23222.631242
## iter 10 value 20038.100609
## iter 20 value 20028.705284
## iter 20 value 20028.705240
## final value 20028.705240
## converged
## # weights: 25
## initial value 21588.858022
## iter 10 value 20037.789698
## iter 20 value 20028.701700
## final value 20028.607687
## converged
## # weights: 41
## initial value 22908.418994
## iter 10 value 20050.538813
## iter 20 value 20028.848687
## final value 20028.605142
## converged
## # weights: 9
## initial value 21648.490541
## final value 20027.409700
## converged
## # weights: 25
## initial value 21682.479472
## final value 20027.409700
## converged
## # weights: 41
## initial value 22436.252993
## final value 20027.409700
## converged
## # weights: 9
## initial value 22957.584210
## iter 10 value 20033.395182
## final value 20032.919393
## converged
## # weights: 25
## initial value 22047.146314
## iter 10 value 20032.454563

```

```

## final value 20031.385275
## converged
## # weights: 41
## initial value 22515.781561
## iter 10 value 20033.513218
## iter 20 value 20030.726336
## final value 20030.725824
## converged
## # weights: 9
## initial value 22184.537991
## iter 10 value 20036.651796
## iter 20 value 20027.516254
## iter 20 value 20027.516211
## final value 20027.516211
## converged
## # weights: 25
## initial value 23197.336423
## iter 10 value 20044.019547
## iter 20 value 20027.601198
## final value 20027.425182
## converged
## # weights: 41
## initial value 24050.936000
## iter 10 value 20040.498873
## iter 20 value 20027.560608
## final value 20027.423061
## converged
## # weights: 9
## initial value 22571.066032
## final value 20003.107600
## converged
## # weights: 25
## initial value 21703.849755
## final value 20003.107600
## converged
## # weights: 41
## initial value 22548.710351
## final value 20003.107600
## converged
## # weights: 9
## initial value 21792.956413
## iter 10 value 20009.782135
## final value 20008.616616
## converged
## # weights: 25
## initial value 22230.917013
## iter 10 value 20008.557144
## final value 20007.082734
## converged
## # weights: 41
## initial value 23329.809826
## iter 10 value 20007.734698
## iter 20 value 20006.423548
## iter 20 value 20006.423383

```

```

## iter 20 value 20006.423359
## final value 20006.423359
## converged
## # weights: 9
## initial value 22137.193941
## iter 10 value 20013.163114
## iter 20 value 20003.223532
## iter 20 value 20003.223486
## final value 20003.223486
## converged
## # weights: 25
## initial value 22319.739567
## iter 10 value 20017.795845
## iter 20 value 20003.276944
## final value 20003.121192
## converged
## # weights: 41
## initial value 23294.226780
## iter 10 value 20022.820826
## iter 20 value 20003.334878
## final value 20003.117785
## converged
## # weights: 9
## initial value 23613.469609
## final value 19991.090000
## converged
## # weights: 25
## initial value 21524.958749
## final value 19991.090000
## converged
## # weights: 41
## initial value 22550.950491
## final value 19991.090000
## converged
## # weights: 9
## initial value 22555.496681
## iter 10 value 19997.209562
## final value 19996.598792
## converged
## # weights: 25
## initial value 21830.646191
## iter 10 value 19997.653036
## iter 20 value 19995.065370
## iter 20 value 19995.065172
## iter 20 value 19995.065114
## final value 19995.065114
## converged
## # weights: 41
## initial value 21333.569659
## iter 10 value 20005.871460
## iter 20 value 19994.406589
## final value 19994.405647
## converged
## # weights: 9

```

```

## initial value 22162.800494
## iter 10 value 20001.364644
## iter 20 value 19991.208459
## iter 20 value 19991.208411
## final value 19991.208411
## converged
## # weights: 25
## initial value 22822.391410
## iter 10 value 20007.422734
## iter 20 value 19991.278304
## final value 19991.101446
## converged
## # weights: 41
## initial value 23032.450999
## iter 10 value 20009.980886
## iter 20 value 19991.307797
## final value 19991.100498
## converged
## # weights: 9
## initial value 22956.001281
## final value 20031.360500
## converged
## # weights: 25
## initial value 22997.589625
## final value 20031.360500
## converged
## # weights: 41
## initial value 22059.230425
## final value 20031.360500
## converged
## # weights: 9
## initial value 22685.130703
## iter 10 value 20038.908551
## final value 20036.870365
## converged
## # weights: 25
## initial value 24034.195218
## iter 10 value 20036.638813
## final value 20035.336084
## converged
## # weights: 41
## initial value 22255.277870
## iter 10 value 20035.439095
## final value 20034.676729
## converged
## # weights: 9
## initial value 22541.081600
## iter 10 value 20041.885310
## iter 20 value 20031.481843
## iter 20 value 20031.481794
## final value 20031.481794
## converged
## # weights: 25
## initial value 23872.419175

```



```

## iter 10 value 20042.596521
## iter 20 value 20031.490043
## final value 20031.383498
## converged
## # weights: 41
## initial value 23236.139577
## iter 10 value 20048.097426
## iter 20 value 20031.553464
## final value 20031.372168
## converged
## # weights: 9
## initial value 21793.441349
## final value 19946.097700
## converged
## # weights: 25
## initial value 22337.740487
## final value 19946.097700
## converged
## # weights: 41
## initial value 21246.468348
## final value 19946.097700
## converged
## # weights: 9
## initial value 21847.997843
## iter 10 value 19951.804074
## final value 19951.605679
## converged
## # weights: 25
## initial value 22792.553497
## iter 10 value 19951.532507
## final value 19950.072210
## converged
## # weights: 41
## initial value 22866.606103
## iter 10 value 19956.236224
## iter 20 value 19949.421602
## final value 19949.412998
## converged
## # weights: 9
## initial value 23945.608659
## iter 10 value 19953.723840
## iter 20 value 19946.185623
## iter 20 value 19946.185588
## final value 19946.185588
## converged
## # weights: 25
## initial value 21933.056510
## iter 10 value 19958.721001
## iter 20 value 19946.243237
## final value 19946.110372
## converged
## # weights: 41
## initial value 22832.045765
## iter 10 value 19964.456577

```

```

## iter 20 value 19946.309363
## final value 19946.110915
## converged
## # weights: 9
## initial value 22993.338658
## final value 19957.491700
## converged
## # weights: 25
## initial value 23448.720150
## final value 19957.491700
## converged
## # weights: 41
## initial value 22428.492814
## final value 19957.491700
## converged
## # weights: 9
## initial value 21727.954655
## iter 10 value 19965.851262
## final value 19962.999827
## converged
## # weights: 25
## initial value 22682.313576
## iter 10 value 19966.467878
## iter 20 value 19961.468719
## final value 19961.466225
## converged
## # weights: 41
## initial value 23783.166625
## iter 10 value 19964.511470
## final value 19960.807052
## converged
## # weights: 9
## initial value 23011.992311
## iter 10 value 19968.673512
## iter 20 value 19957.620618
## iter 20 value 19957.620566
## final value 19957.620566
## converged
## # weights: 25
## initial value 22798.712661
## iter 10 value 19975.112367
## iter 20 value 19957.694852
## final value 19957.509756
## converged
## # weights: 41
## initial value 23259.815495
## iter 10 value 19975.125871
## iter 20 value 19957.695008
## final value 19957.504799
## converged
## # weights: 9
## initial value 22929.701461
## final value 19927.214500
## converged

```

```

## # weights: 25
## initial value 22005.485035
## final value 19927.214500
## converged
## # weights: 41
## initial value 23979.733840
## final value 19927.214500
## converged
## # weights: 9
## initial value 22230.170138
## iter 10 value 19933.302878
## final value 19932.722092
## converged
## # weights: 25
## initial value 21466.512750
## iter 10 value 19932.114606
## final value 19931.188649
## converged
## # weights: 41
## initial value 22492.944465
## iter 10 value 19939.964664
## iter 20 value 19930.530481
## final value 19930.529541
## converged
## # weights: 9
## initial value 23473.303066
## iter 10 value 19936.776990
## iter 20 value 19927.324748
## iter 20 value 19927.324704
## final value 19927.324704
## converged
## # weights: 25
## initial value 22620.834893
## iter 10 value 19940.613012
## iter 20 value 19927.368974
## final value 19927.226272
## converged
## # weights: 41
## initial value 23587.280482
## iter 10 value 19944.179386
## iter 20 value 19927.410092
## final value 19927.228869
## converged
## # weights: 9
## initial value 21878.781243
## final value 20052.866000
## converged
## # weights: 25
## initial value 22110.162787
## final value 20052.866000
## converged
## # weights: 41
## initial value 23844.030392
## final value 20052.866000

```

```

## converged
## # weights: 9
## initial value 21596.218347
## iter 10 value 20059.749473
## final value 20058.376801
## converged
## # weights: 25
## initial value 22296.035756
## iter 10 value 20058.357278
## iter 20 value 20057.032606
## final value 20056.842318
## converged
## # weights: 41
## initial value 21124.083712
## iter 10 value 20062.741868
## iter 20 value 20056.183334
## final value 20056.182767
## converged
## # weights: 9
## initial value 22510.668794
## iter 10 value 20063.867148
## iter 20 value 20052.992835
## iter 20 value 20052.992784
## final value 20052.992784
## converged
## # weights: 25
## initial value 22416.344747
## iter 10 value 20069.059105
## iter 20 value 20053.052694
## final value 20052.877643
## converged
## # weights: 41
## initial value 23068.345302
## iter 10 value 20071.144763
## iter 20 value 20053.076740
## final value 20052.878401
## converged
## # weights: 9
## initial value 22906.658896
## final value 20011.186000
## converged
## # weights: 25
## initial value 23319.178535
## final value 20011.186000
## converged
## # weights: 41
## initial value 22393.350483
## final value 20011.186000
## converged
## # weights: 9
## initial value 23474.205926
## iter 10 value 20018.362324
## final value 20016.695238
## converged

```

```

## # weights: 25
## initial value 22913.169194
## iter 10 value 20016.222123
## iter 20 value 20015.161326
## iter 20 value 20015.161228
## iter 20 value 20015.161209
## final value 20015.161209
## converged
## # weights: 41
## initial value 22305.716793
## iter 10 value 20015.470828
## final value 20014.501870
## converged
## # weights: 9
## initial value 24034.373504
## iter 10 value 20018.937118
## iter 20 value 20011.275364
## iter 20 value 20011.275329
## final value 20011.275329
## converged
## # weights: 25
## initial value 22797.869895
## iter 10 value 20026.137758
## iter 20 value 20011.358382
## final value 20011.200029
## converged
## # weights: 41
## initial value 22560.953703
## iter 10 value 20031.304390
## iter 20 value 20011.417949
## final value 20011.199530
## converged
## # weights: 9
## initial value 22531.399066
## final value 20058.885200
## converged
## # weights: 25
## initial value 23072.589241
## final value 20058.885200
## converged
## # weights: 41
## initial value 22603.605034
## final value 20058.885200
## converged
## # weights: 9
## initial value 23691.101637
## iter 10 value 20065.376128
## final value 20064.396309
## converged
## # weights: 25
## initial value 22081.280583
## iter 10 value 20065.202605
## iter 20 value 20062.861757
## iter 20 value 20062.861639

```

```

## iter 20 value 20062.861634
## final value 20062.861634
## converged
## # weights: 41
## initial value 22686.938234
## iter 10 value 20063.339095
## iter 20 value 20062.202117
## iter 20 value 20062.202033
## iter 20 value 20062.202028
## final value 20062.202028
## converged
## # weights: 9
## initial value 22733.312499
## iter 10 value 20070.433892
## iter 20 value 20059.018347
## iter 20 value 20059.018294
## final value 20059.018294
## converged
## # weights: 25
## initial value 23198.981218
## iter 10 value 20075.611959
## iter 20 value 20059.078046
## final value 20058.898836
## converged
## # weights: 41
## initial value 23604.216464
## iter 10 value 20077.596209
## iter 20 value 20059.100923
## final value 20058.896595
## converged
## # weights: 9
## initial value 21871.162404
## final value 19963.569700
## converged
## # weights: 25
## initial value 23197.414881
## final value 19963.569700
## converged
## # weights: 41
## initial value 21913.691876
## final value 19963.569700
## converged
## # weights: 9
## initial value 21855.568353
## iter 10 value 19969.169121
## final value 19969.077724
## converged
## # weights: 25
## initial value 22966.823153
## iter 10 value 19968.203886
## final value 19967.544102
## converged
## # weights: 41
## initial value 22117.805534

```

```

## iter 10 value 19981.663980
## iter 20 value 19966.885357
## final value 19966.884834
## converged
## # weights: 9
## initial value 23623.590220
## iter 10 value 19971.493793
## iter 20 value 19963.661059
## iter 20 value 19963.661022
## final value 19963.661022
## converged
## # weights: 25
## initial value 21375.178348
## iter 10 value 19970.809349
## iter 20 value 19963.653167
## final value 19963.581149
## converged
## # weights: 41
## initial value 21131.339476
## iter 10 value 19972.747142
## iter 20 value 19963.675509
## final value 19963.578945
## converged
## # weights: 9
## initial value 21870.740166
## final value 19992.610100
## converged
## # weights: 25
## initial value 23480.457914
## final value 19992.610100
## converged
## # weights: 41
## initial value 22121.956221
## final value 19992.610100
## converged
## # weights: 9
## initial value 22835.338915
## iter 10 value 19998.203372
## final value 19998.118919
## converged
## # weights: 25
## initial value 22949.250028
## iter 10 value 19997.857880
## final value 19996.585116
## converged
## # weights: 41
## initial value 22377.467961
## iter 10 value 19997.072464
## iter 20 value 19995.925895
## iter 20 value 19995.925784
## iter 20 value 19995.925755
## final value 19995.925755
## converged
## # weights: 9

```

```

## initial value 22260.248330
## iter 10 value 20002.014200
## iter 20 value 19992.718522
## iter 20 value 19992.718479
## final value 19992.718479
## converged
## # weights: 25
## initial value 22216.586455
## iter 10 value 20006.468308
## iter 20 value 19992.769874
## final value 19992.622457
## converged
## # weights: 41
## initial value 22395.286877
## iter 10 value 20010.178282
## iter 20 value 19992.812647
## final value 19992.619939
## converged
## # weights: 9
## initial value 22310.139911
## final value 20005.865200
## converged
## # weights: 25
## initial value 22132.410166
## final value 20005.865200
## converged
## # weights: 41
## initial value 23290.396223
## final value 20005.865200
## converged
## # weights: 9
## initial value 21887.372296
## iter 10 value 20014.462164
## final value 20011.374314
## converged
## # weights: 25
## initial value 22734.181203
## iter 10 value 20010.759848
## final value 20009.840357
## converged
## # weights: 41
## initial value 21594.762288
## iter 10 value 20010.083310
## final value 20009.180994
## converged
## # weights: 9
## initial value 22368.873648
## iter 10 value 20014.948211
## iter 20 value 20005.969920
## iter 20 value 20005.969878
## final value 20005.969878
## converged
## # weights: 25
## initial value 22556.784619

```



```

## iter 10 value 20020.341887
## iter 20 value 20006.032105
## final value 20005.877387
## converged
## # weights: 41
## initial value 23450.601772
## iter 10 value 20022.331499
## iter 20 value 20006.055044
## final value 20005.877835
## converged
## # weights: 9
## initial value 22219.287400
## final value 20022.082000
## converged
## # weights: 25
## initial value 23731.843285
## final value 20022.082000
## converged
## # weights: 41
## initial value 22410.210678
## final value 20022.082000
## converged
## # weights: 9
## initial value 24118.733208
## iter 10 value 20029.856727
## final value 20027.591536
## converged
## # weights: 25
## initial value 22822.949222
## iter 10 value 20030.381469
## iter 20 value 20026.057538
## iter 20 value 20026.057427
## iter 20 value 20026.057426
## final value 20026.057426
## converged
## # weights: 41
## initial value 22443.347011
## iter 10 value 20027.928085
## iter 20 value 20025.398228
## iter 20 value 20025.398089
## iter 20 value 20025.398053
## final value 20025.398053
## converged
## # weights: 9
## initial value 22073.562668
## iter 10 value 20030.608732
## iter 20 value 20022.180307
## iter 20 value 20022.180267
## final value 20022.180267
## converged
## # weights: 25
## initial value 23156.509552
## iter 10 value 20038.484734
## iter 20 value 20022.271111

```

```

## final value 20022.100290
## converged
## # weights: 41
## initial value 23117.502940
## iter 10 value 20038.364142
## iter 20 value 20022.269720
## final value 20022.092778
## converged
## # weights: 9
## initial value 23321.120737
## final value 20044.851700
## converged
## # weights: 25
## initial value 21988.837111
## final value 20044.851700
## converged
## # weights: 41
## initial value 21504.333869
## final value 20044.851700
## converged
## # weights: 9
## initial value 22792.675208
## iter 10 value 20070.482200
## iter 20 value 20050.362830
## final value 20050.362142
## converged
## # weights: 25
## initial value 23873.300998
## iter 10 value 20050.410340
## iter 20 value 20048.827706
## iter 20 value 20048.827655
## iter 20 value 20048.827651
## final value 20048.827651
## converged
## # weights: 41
## initial value 22561.553909
## iter 10 value 20061.859007
## iter 20 value 20048.179540
## final value 20048.168182
## converged
## # weights: 9
## initial value 22975.142709
## iter 10 value 20056.403638
## iter 20 value 20044.984885
## iter 20 value 20044.984832
## final value 20044.984832
## converged
## # weights: 25
## initial value 22012.969305
## iter 10 value 20057.023529
## iter 20 value 20044.992032
## final value 20044.864888
## converged
## # weights: 41

```

```

## initial value 23034.921010
## iter 10 value 20065.715246
## iter 20 value 20045.092240
## final value 20044.863391
## converged
## # weights: 9
## initial value 22245.496410
## final value 19981.990000
## converged
## # weights: 25
## initial value 22398.607660
## final value 19981.990000
## converged
## # weights: 41
## initial value 23648.431912
## final value 19981.990000
## converged
## # weights: 9
## initial value 22220.421480
## iter 10 value 19990.254272
## final value 19987.498615
## converged
## # weights: 25
## initial value 23678.453996
## iter 10 value 19987.066986
## final value 19985.964845
## converged
## # weights: 41
## initial value 22149.889330
## iter 10 value 19988.096498
## iter 20 value 19985.305847
## final value 19985.305573
## converged
## # weights: 9
## initial value 23471.922436
## iter 10 value 19991.722775
## iter 20 value 19982.102211
## iter 20 value 19982.102166
## final value 19982.102166
## converged
## # weights: 25
## initial value 22682.751287
## iter 10 value 19997.613333
## iter 20 value 19982.170125
## final value 19982.002846
## converged
## # weights: 41
## initial value 21907.177679
## iter 10 value 19997.905111
## iter 20 value 19982.173489
## final value 19982.000606
## converged
## # weights: 9
## initial value 23588.508243

```

```

## final value 19943.705200
## converged
## # weights: 25
## initial value 22907.468960
## final value 19943.705200
## converged
## # weights: 41
## initial value 20964.087317
## final value 19943.705200
## converged
## # weights: 9
## initial value 22843.642030
## iter 10 value 19949.416419
## final value 19949.213101
## converged
## # weights: 25
## initial value 21726.206712
## iter 10 value 19949.667365
## iter 20 value 19947.680440
## final value 19947.679644
## converged
## # weights: 41
## initial value 22166.878043
## iter 10 value 19947.601142
## final value 19947.020369
## converged
## # weights: 9
## initial value 22711.040571
## iter 10 value 19955.316434
## iter 20 value 19943.839068
## iter 20 value 19943.839015
## final value 19943.839015
## converged
## # weights: 25
## initial value 22257.168273
## iter 10 value 19957.057997
## iter 20 value 19943.859147
## final value 19943.719832
## converged
## # weights: 41
## initial value 21872.794753
## iter 10 value 19960.314127
## iter 20 value 19943.896688
## final value 19943.715237
## converged
## # weights: 9
## initial value 22620.699026
## final value 20013.749200
## converged
## # weights: 25
## initial value 22274.434833
## final value 20013.749200
## converged
## # weights: 41

```

```

## initial value 21365.638581
## final value 20013.749200
## converged
## # weights: 9
## initial value 22698.407011
## iter 10 value 20021.404431
## final value 20019.258487
## converged
## # weights: 25
## initial value 22574.962098
## iter 10 value 20018.227258
## final value 20017.724445
## converged
## # weights: 41
## initial value 23993.472646
## iter 10 value 20027.836646
## iter 20 value 20017.065497
## final value 20017.065074
## converged
## # weights: 9
## initial value 21635.761413
## iter 10 value 20020.525729
## iter 20 value 20013.827328
## iter 20 value 20013.827297
## final value 20013.827297
## converged
## # weights: 25
## initial value 22282.665384
## iter 10 value 20025.230203
## iter 20 value 20013.881567
## final value 20013.763502
## converged
## # weights: 41
## initial value 23199.962865
## iter 10 value 20032.810743
## iter 20 value 20013.968965
## final value 20013.759364
## converged
## # weights: 9
## initial value 22477.764889
## final value 20048.881700
## converged
## # weights: 25
## initial value 22697.735930
## final value 20048.881700
## converged
## # weights: 41
## initial value 23931.153122
## final value 20048.881700
## converged
## # weights: 9
## initial value 21680.601927
## iter 10 value 20054.945652
## final value 20054.392272

```

```

## converged
## # weights: 25
## initial value 21985.900434
## iter 10 value 20053.671247
## final value 20052.857850
## converged
## # weights: 41
## initial value 22070.820523
## iter 10 value 20064.674203
## iter 20 value 20052.204377
## final value 20052.198329
## converged
## # weights: 9
## initial value 23615.027943
## iter 10 value 20058.693732
## iter 20 value 20048.994825
## iter 20 value 20048.994780
## final value 20048.994780
## converged
## # weights: 25
## initial value 22835.609659
## iter 10 value 20063.320483
## iter 20 value 20049.048168
## final value 20048.894578
## converged
## # weights: 41
## initial value 23615.336856
## iter 10 value 20067.767347
## iter 20 value 20049.099437
## final value 20048.893448
## converged
## # weights: 9
## initial value 23508.188038
## final value 20039.160100
## converged
## # weights: 25
## initial value 23070.743233
## final value 20039.160100
## converged
## # weights: 41
## initial value 23835.665630
## final value 20039.160100
## converged
## # weights: 9
## initial value 22012.640730
## iter 10 value 20044.949107
## final value 20044.670218
## converged
## # weights: 25
## initial value 21911.153793
## iter 10 value 20051.630191
## iter 20 value 20043.136569
## final value 20043.135935
## converged

```

```

## # weights: 41
## initial value 24064.686364
## iter 10 value 20055.076296
## iter 20 value 20042.483152
## final value 20042.476464
## converged
## # weights: 9
## initial value 23502.108714
## iter 10 value 20047.989992
## iter 20 value 20039.261902
## iter 20 value 20039.261861
## final value 20039.261861
## converged
## # weights: 25
## initial value 22047.314035
## iter 10 value 20051.070169
## iter 20 value 20039.297414
## final value 20039.171950
## converged
## # weights: 41
## initial value 22674.391083
## iter 10 value 20059.058779
## iter 20 value 20039.389516
## final value 20039.170238
## converged
## # weights: 9
## initial value 23128.382903
## final value 19995.272500
## converged
## # weights: 25
## initial value 22571.568689
## final value 19995.272500
## converged
## # weights: 41
## initial value 22863.411959
## final value 19995.272500
## converged
## # weights: 9
## initial value 22165.507418
## iter 10 value 20002.471620
## final value 20000.781367
## converged
## # weights: 25
## initial value 23638.108076
## iter 10 value 19999.741044
## final value 19999.247549
## converged
## # weights: 41
## initial value 22048.868282
## iter 10 value 20013.902887
## iter 20 value 19998.588674
## final value 19998.588237
## converged
## # weights: 9

```

```

## initial value 22511.605930
## iter 10 value 20005.007286
## iter 20 value 19995.384734
## iter 20 value 19995.384690
## final value 19995.384690
## converged
## # weights: 25
## initial value 22266.984076
## iter 10 value 20008.984064
## iter 20 value 19995.430584
## final value 19995.284090
## converged
## # weights: 41
## initial value 22956.623374
## iter 10 value 20013.886219
## iter 20 value 19995.487102
## final value 19995.286814
## converged
## # weights: 9
## initial value 23273.648757
## final value 19959.537700
## converged
## # weights: 25
## initial value 22572.555496
## final value 19959.537700
## converged
## # weights: 41
## initial value 22312.532715
## final value 19959.537700
## converged
## # weights: 9
## initial value 22642.499971
## iter 10 value 19966.791942
## final value 19965.045905
## converged
## # weights: 25
## initial value 23830.727309
## iter 10 value 19984.926246
## iter 20 value 19963.518142
## final value 19963.512346
## converged
## # weights: 41
## initial value 22621.233790
## iter 10 value 19975.900502
## iter 20 value 19962.859897
## final value 19962.853069
## converged
## # weights: 9
## initial value 23872.028053
## iter 10 value 19967.429391
## iter 20 value 19959.628685
## iter 20 value 19959.628649
## final value 19959.628649
## converged

```



```

## # weights: 25
## initial value 23287.829676
## iter 10 value 19975.621111
## iter 20 value 19959.723129
## final value 19959.553687
## converged
## # weights: 41
## initial value 22160.758837
## iter 10 value 19977.149458
## iter 20 value 19959.740750
## final value 19959.546754
## converged
## # weights: 9
## initial value 22375.651869
## final value 19990.409200
## converged
## # weights: 25
## initial value 22902.692086
## final value 19990.409200
## converged
## # weights: 41
## initial value 22945.803745
## final value 19990.409200
## converged
## # weights: 9
## initial value 23483.133578
## iter 10 value 19997.599903
## final value 19995.917898
## converged
## # weights: 25
## initial value 23364.166211
## iter 10 value 19995.297932
## final value 19994.384044
## converged
## # weights: 41
## initial value 22618.433841
## iter 10 value 19994.894557
## iter 20 value 19993.725004
## iter 20 value 19993.724815
## iter 20 value 19993.724763
## final value 19993.724763
## converged
## # weights: 9
## initial value 22006.947087
## iter 10 value 19999.578290
## iter 20 value 19990.514912
## iter 20 value 19990.514870
## final value 19990.514870
## converged
## # weights: 25
## initial value 23278.728073
## iter 10 value 20005.155406
## iter 20 value 19990.579212
## final value 19990.425369

```

```

## converged
## # weights: 41
## initial value 24129.068470
## iter 10 value 20002.396006
## iter 20 value 19990.547398
## final value 19990.422026
## converged
## # weights: 9
## initial value 23664.174949
## final value 20036.647600
## converged
## # weights: 25
## initial value 23403.233563
## final value 20036.647600
## converged
## # weights: 41
## initial value 23709.205129
## final value 20036.647600
## converged
## # weights: 9
## initial value 21409.688328
## iter 10 value 20042.352011
## final value 20042.157607
## converged
## # weights: 25
## initial value 22280.456651
## iter 10 value 20041.898614
## final value 20040.623338
## converged
## # weights: 41
## initial value 22141.367591
## iter 10 value 20056.320933
## iter 20 value 20039.964395
## final value 20039.963880
## converged
## # weights: 9
## initial value 21487.189684
## iter 10 value 20042.964671
## iter 20 value 20036.720431
## iter 20 value 20036.720402
## final value 20036.720402
## converged
## # weights: 25
## initial value 23800.107819
## iter 10 value 20046.865828
## iter 20 value 20036.765408
## final value 20036.661975
## converged
## # weights: 41
## initial value 22117.603007
## iter 10 value 20053.566844
## iter 20 value 20036.842666
## final value 20036.659179
## converged

```

```

## # weights: 9
## initial value 22283.379737
## final value 20029.530100
## converged
## # weights: 25
## initial value 22290.114795
## final value 20029.530100
## converged
## # weights: 41
## initial value 22571.278812
## final value 20029.530100
## converged
## # weights: 9
## initial value 22343.091640
## iter 10 value 20035.284231
## final value 20035.039857
## converged
## # weights: 25
## initial value 21894.851468
## iter 10 value 20035.145995
## final value 20033.505709
## converged
## # weights: 41
## initial value 23969.866494
## iter 10 value 20040.439753
## iter 20 value 20032.846379
## iter 20 value 20032.846229
## iter 20 value 20032.846229
## final value 20032.846229
## converged
## # weights: 9
## initial value 22945.432766
## iter 10 value 20040.910802
## iter 20 value 20029.661311
## iter 20 value 20029.661258
## final value 20029.661258
## converged
## # weights: 25
## initial value 22743.536689
## iter 10 value 20045.468655
## iter 20 value 20029.713859
## final value 20029.543010
## converged
## # weights: 41
## initial value 21973.290868
## iter 10 value 20043.717280
## iter 20 value 20029.693667
## final value 20029.539389
## converged
## # weights: 9
## initial value 23732.757645
## final value 19993.781200
## converged
## # weights: 25

```

```

## initial value 22524.076638
## final value 19993.781200
## converged
## # weights: 41
## initial value 22276.127809
## final value 19993.781200
## converged
## # weights: 9
## initial value 22746.559848
## iter 10 value 19999.700766
## final value 19999.290025
## converged
## # weights: 25
## initial value 22270.963727
## iter 10 value 19998.472623
## final value 19997.756216
## converged
## # weights: 41
## initial value 22590.821481
## iter 10 value 19997.684649
## final value 19997.096856
## converged
## # weights: 9
## initial value 21622.428859
## iter 10 value 20001.831848
## iter 20 value 19993.874018
## iter 20 value 19993.873981
## final value 19993.873981
## converged
## # weights: 25
## initial value 23833.916882
## iter 10 value 20007.370612
## iter 20 value 19993.937875
## final value 19993.799195
## converged
## # weights: 41
## initial value 21246.419063
## iter 10 value 20003.916390
## iter 20 value 19993.898051
## final value 19993.790689
## converged
## # weights: 9
## initial value 22749.186347
## final value 20018.011700
## converged
## # weights: 25
## initial value 22778.416496
## final value 20018.011700
## converged
## # weights: 41
## initial value 22819.860541
## final value 20018.011700
## converged
## # weights: 9

```

```

## initial value 23101.086528
## iter 10 value 20025.174715
## final value 20023.521117
## converged
## # weights: 25
## initial value 21635.860641
## iter 10 value 20022.385144
## final value 20021.987036
## converged
## # weights: 41
## initial value 23517.035557
## iter 10 value 20032.523747
## iter 20 value 20021.327981
## final value 20021.327634
## converged
## # weights: 9
## initial value 22288.969321
## iter 10 value 20028.600867
## iter 20 value 20018.133785
## iter 20 value 20018.133736
## final value 20018.133736
## converged
## # weights: 25
## initial value 23084.820585
## iter 10 value 20033.418734
## iter 20 value 20018.189331
## final value 20018.023803
## converged
## # weights: 41
## initial value 23857.183809
## iter 10 value 20031.510925
## iter 20 value 20018.167335
## final value 20018.024338
## converged
## # weights: 9
## initial value 22690.256249
## final value 20034.118000
## converged
## # weights: 25
## initial value 22602.481020
## final value 20034.118000
## converged
## # weights: 41
## initial value 23222.470626
## final value 20034.118000
## converged
## # weights: 9
## initial value 22542.088807
## iter 10 value 20039.775864
## final value 20039.627912
## converged
## # weights: 25
## initial value 22468.351593
## iter 10 value 20045.243078

```

```

## iter 20 value 20038.093934
## iter 20 value 20038.093756
## iter 20 value 20038.093738
## final value 20038.093738
## converged
## # weights: 41
## initial value 21697.161220
## iter 10 value 20049.234470
## iter 20 value 20037.434756
## final value 20037.434233
## converged
## # weights: 9
## initial value 23933.036622
## iter 10 value 20042.747453
## iter 20 value 20034.217491
## iter 20 value 20034.217451
## final value 20034.217451
## converged
## # weights: 25
## initial value 22503.114188
## iter 10 value 20049.478458
## iter 20 value 20034.295094
## final value 20034.132626
## converged
## # weights: 41
## initial value 23558.775513
## iter 10 value 20052.390229
## iter 20 value 20034.328664
## final value 20034.130268
## converged
## # weights: 9
## initial value 22147.378055
## final value 19849.133200
## converged
## # weights: 25
## initial value 22789.993970
## final value 19849.133200
## converged
## # weights: 41
## initial value 24125.040976
## final value 19849.133200
## converged
## # weights: 9
## initial value 22092.120482
## iter 10 value 19855.803249
## final value 19854.639896
## converged
## # weights: 25
## initial value 22312.561778
## iter 10 value 19854.288564
## final value 19853.106897
## converged
## # weights: 41
## initial value 23220.426670

```

```

## iter 10 value 19854.259087
## iter 20 value 19852.447980
## iter 20 value 19852.447887
## iter 20 value 19852.447859
## final value 19852.447859
## converged
## # weights: 9
## initial value 21658.459861
## iter 10 value 19856.742526
## iter 20 value 19849.220930
## iter 20 value 19849.220894
## final value 19849.220894
## converged
## # weights: 25
## initial value 22801.830797
## iter 10 value 19865.469665
## iter 20 value 19849.321547
## final value 19849.150410
## converged
## # weights: 41
## initial value 22689.711882
## iter 10 value 19869.014537
## iter 20 value 19849.362416
## final value 19849.144601
## converged
## # weights: 9
## initial value 22524.500051
## final value 20033.902000
## converged
## # weights: 25
## initial value 23306.288631
## final value 20033.902000
## converged
## # weights: 41
## initial value 21383.845803
## final value 20033.902000
## converged
## # weights: 9
## initial value 22740.248443
## iter 10 value 20040.712385
## final value 20039.411875
## converged
## # weights: 25
## initial value 22851.322534
## iter 10 value 20041.404205
## iter 20 value 20037.877824
## iter 20 value 20037.877694
## iter 20 value 20037.877686
## final value 20037.877686
## converged
## # weights: 41
## initial value 22968.107972
## iter 10 value 20052.053010
## iter 20 value 20037.220419

```

```

## final value 20037.218183
## converged
## # weights: 9
## initial value 22773.269110
## iter 10 value 20044.848711
## iter 20 value 20034.028207
## iter 20 value 20034.028157
## final value 20034.028157
## converged
## # weights: 25
## initial value 22525.711666
## iter 10 value 20046.893783
## iter 20 value 20034.051785
## final value 20033.914924
## converged
## # weights: 41
## initial value 22753.806946
## iter 10 value 20053.021366
## iter 20 value 20034.122431
## final value 20033.916598
## converged
## # weights: 9
## initial value 22861.090348
## final value 19980.723700
## converged
## # weights: 25
## initial value 23345.073373
## final value 19980.723700
## converged
## # weights: 41
## initial value 22649.524683
## final value 19980.723700
## converged
## # weights: 9
## initial value 22710.693227
## iter 10 value 19989.384039
## iter 20 value 19986.232327
## iter 20 value 19986.232266
## final value 19986.232266
## converged
## # weights: 25
## initial value 22511.207316
## iter 10 value 19985.355943
## final value 19984.698479
## converged
## # weights: 41
## initial value 21298.264386
## iter 10 value 19985.802726
## iter 20 value 19984.039348
## iter 20 value 19984.039209
## iter 20 value 19984.039203
## final value 19984.039203
## converged
## # weights: 9

```



```

## initial value 22202.372200
## iter 10 value 19991.207719
## iter 20 value 19980.844573
## iter 20 value 19980.844524
## final value 19980.844524
## converged
## # weights: 25
## initial value 21687.113913
## iter 10 value 19990.749629
## iter 20 value 19980.839291
## final value 19980.734916
## converged
## # weights: 41
## initial value 22311.735005
## iter 10 value 19999.441993
## iter 20 value 19980.939507
## final value 19980.734608
## converged
## # weights: 9
## initial value 22343.800408
## final value 20027.529200
## converged
## # weights: 25
## initial value 23315.115815
## final value 20027.529200
## converged
## # weights: 41
## initial value 23745.136904
## final value 20027.529200
## converged
## # weights: 9
## initial value 22176.091801
## iter 10 value 20036.842950
## final value 20033.038903
## converged
## # weights: 25
## initial value 23218.265410
## iter 10 value 20035.140215
## iter 20 value 20031.504856
## iter 20 value 20031.504777
## iter 20 value 20031.504757
## final value 20031.504757
## converged
## # weights: 41
## initial value 22512.182443
## iter 10 value 20031.450034
## final value 20030.845317
## converged
## # weights: 9
## initial value 23023.533631
## iter 10 value 20039.123996
## iter 20 value 20027.662879
## iter 20 value 20027.662825
## final value 20027.662825

```

```

## converged
## # weights: 25
## initial value 22663.352993
## iter 10 value 20043.370515
## iter 20 value 20027.711838
## final value 20027.540182
## converged
## # weights: 41
## initial value 23168.428816
## iter 10 value 20045.737543
## iter 20 value 20027.739128
## final value 20027.544313
## converged
## # weights: 9
## initial value 23483.784649
## final value 20039.550500
## converged
## # weights: 25
## initial value 22425.240669
## final value 20039.550500
## converged
## # weights: 41
## initial value 23946.302850
## final value 20039.550500
## converged
## # weights: 9
## initial value 22748.998105
## iter 10 value 20045.323393
## final value 20045.060625
## converged
## # weights: 25
## initial value 22482.515704
## iter 10 value 20044.215204
## final value 20043.526339
## converged
## # weights: 41
## initial value 22639.004636
## iter 10 value 20047.016536
## iter 20 value 20042.873646
## final value 20042.866874
## converged
## # weights: 9
## initial value 23527.229359
## iter 10 value 20048.162116
## iter 20 value 20039.649785
## iter 20 value 20039.649745
## final value 20039.649745
## converged
## # weights: 25
## initial value 22662.674467
## iter 10 value 20057.064101
## iter 20 value 20039.752418
## final value 20039.565170
## converged

```

```

## # weights: 41
## initial value 22915.744711
## iter 10 value 20058.072345
## iter 20 value 20039.764042
## final value 20039.560101
## converged
## # weights: 9
## initial value 22213.305319
## final value 20020.659700
## converged
## # weights: 25
## initial value 22503.777083
## final value 20020.659700
## converged
## # weights: 41
## initial value 22144.062460
## final value 20020.659700
## converged
## # weights: 9
## initial value 23141.816498
## iter 10 value 20026.255430
## final value 20026.169188
## converged
## # weights: 25
## initial value 22350.455133
## iter 10 value 20026.107442
## iter 20 value 20024.635229
## iter 20 value 20024.635098
## iter 20 value 20024.635087
## final value 20024.635087
## converged
## # weights: 41
## initial value 22597.437310
## iter 10 value 20025.206040
## iter 20 value 20023.978299
## final value 20023.975702
## converged
## # weights: 9
## initial value 23321.687306
## iter 10 value 20030.433441
## iter 20 value 20020.772384
## iter 20 value 20020.772338
## final value 20020.772338
## converged
## # weights: 25
## initial value 23852.082762
## iter 10 value 20030.339645
## iter 20 value 20020.771302
## final value 20020.678376
## converged
## # weights: 41
## initial value 21856.082899
## iter 10 value 20034.537252
## iter 20 value 20020.819697

```

```

## final value 20020.668760
## converged
## # weights: 9
## initial value 22699.544078
## final value 19996.584500
## converged
## # weights: 25
## initial value 21924.311304
## final value 19996.584500
## converged
## # weights: 41
## initial value 23098.314310
## final value 19996.584500
## converged
## # weights: 9
## initial value 23538.038531
## iter 10 value 20002.287338
## final value 20002.093321
## converged
## # weights: 25
## initial value 23097.570665
## iter 10 value 20002.418645
## final value 20000.559516
## converged
## # weights: 41
## initial value 24046.359579
## iter 10 value 20013.064421
## iter 20 value 19999.900876
## final value 19999.900165
## converged
## # weights: 9
## initial value 22248.284749
## iter 10 value 20006.517439
## iter 20 value 19996.699019
## iter 20 value 19996.698973
## final value 19996.698973
## converged
## # weights: 25
## initial value 23184.451957
## iter 10 value 20009.624154
## iter 20 value 19996.734837
## final value 19996.599505
## converged
## # weights: 41
## initial value 22041.683807
## iter 10 value 20013.482661
## iter 20 value 19996.779323
## final value 19996.594714
## converged
## # weights: 9
## initial value 22947.382149
## final value 19975.560500
## converged
## # weights: 25

```

```

## initial value 22947.082143
## final value 19975.560500
## converged
## # weights: 41
## initial value 24017.568648
## final value 19975.560500
## converged
## # weights: 9
## initial value 22235.943845
## iter 10 value 19982.449474
## final value 19981.068997
## converged
## # weights: 25
## initial value 23880.312508
## iter 10 value 19980.570772
## final value 19979.535335
## converged
## # weights: 41
## initial value 21998.999402
## iter 10 value 19994.488287
## iter 20 value 19978.878632
## final value 19978.876008
## converged
## # weights: 9
## initial value 23198.718967
## iter 10 value 19985.256049
## iter 20 value 19975.672282
## iter 20 value 19975.672237
## final value 19975.672237
## converged
## # weights: 25
## initial value 23591.373024
## iter 10 value 19989.291368
## iter 20 value 19975.718806
## final value 19975.575358
## converged
## # weights: 41
## initial value 23047.873755
## iter 10 value 19994.349629
## iter 20 value 19975.777124
## final value 19975.571592
## converged
## # weights: 9
## initial value 22354.631020
## final value 20060.414500
## converged
## # weights: 25
## initial value 24071.457853
## final value 20060.414500
## converged
## # weights: 41
## initial value 21424.875285
## final value 20060.414500
## converged

```

```

## # weights: 9
## initial value 23951.964196
## iter 10 value 20067.532025
## final value 20065.925953
## converged
## # weights: 25
## initial value 22192.572772
## iter 10 value 20065.340176
## final value 20064.391317
## converged
## # weights: 41
## initial value 21958.860339
## iter 10 value 20068.563570
## iter 20 value 20063.732424
## final value 20063.731681
## converged
## # weights: 9
## initial value 22696.010115
## iter 10 value 20070.735489
## iter 20 value 20060.533493
## iter 20 value 20060.533445
## final value 20060.533445
## converged
## # weights: 25
## initial value 21825.026265
## iter 10 value 20071.672568
## iter 20 value 20060.544297
## final value 20060.426968
## converged
## # weights: 41
## initial value 23882.555607
## iter 10 value 20074.596000
## iter 20 value 20060.578002
## final value 20060.426436
## converged
## # weights: 9
## initial value 22142.575442
## final value 19948.680100
## converged
## # weights: 25
## initial value 22542.785797
## final value 19948.680100
## converged
## # weights: 41
## initial value 23139.474113
## final value 19948.680100
## converged
## # weights: 9
## initial value 23185.421605
## iter 10 value 19954.574239
## final value 19954.188108
## converged
## # weights: 25
## initial value 22200.518032

```

```

## iter 10 value 19954.971348
## iter 20 value 19952.654942
## final value 19952.654572
## converged
## # weights: 41
## initial value 22774.345168
## iter 10 value 19966.339531
## iter 20 value 19951.997183
## final value 19951.995370
## converged
## # weights: 9
## initial value 21800.247525
## iter 10 value 19957.496571
## iter 20 value 19948.781747
## iter 20 value 19948.781706
## final value 19948.781706
## converged
## # weights: 25
## initial value 23224.317715
## iter 10 value 19962.490735
## iter 20 value 19948.839326
## final value 19948.692817
## converged
## # weights: 41
## initial value 23879.875318
## iter 10 value 19960.878683
## iter 20 value 19948.820740
## final value 19948.693373
## converged
## # weights: 9
## initial value 22600.782131
## final value 20049.554000
## converged
## # weights: 25
## initial value 23033.509944
## final value 20049.554000
## converged
## # weights: 41
## initial value 23905.026771
## final value 20049.554000
## converged
## # weights: 9
## initial value 22801.837725
## iter 10 value 20056.261560
## final value 20055.064609
## converged
## # weights: 25
## initial value 23564.339568
## iter 10 value 20054.219486
## final value 20053.530231
## converged
## # weights: 41
## initial value 22015.881710
## iter 10 value 20066.561906

```

```

## iter 20 value 20052.871019
## final value 20052.870666
## converged
## # weights: 9
## initial value 23352.394734
## iter 10 value 20059.312558
## iter 20 value 20049.666509
## iter 20 value 20049.666464
## final value 20049.666464
## converged
## # weights: 25
## initial value 22592.364616
## iter 10 value 20063.502470
## iter 20 value 20049.714815
## final value 20049.568833
## converged
## # weights: 41
## initial value 23280.167058
## iter 10 value 20067.929598
## iter 20 value 20049.765856
## final value 20049.567046
## converged
## # weights: 9
## initial value 22899.717491
## final value 20035.817200
## converged
## # weights: 25
## initial value 23463.114958
## final value 20035.817200
## converged
## # weights: 41
## initial value 23353.012164
## final value 20035.817200
## converged
## # weights: 9
## initial value 22926.258505
## iter 10 value 20043.151433
## final value 20041.327173
## converged
## # weights: 25
## initial value 23454.597261
## iter 10 value 20041.077413
## final value 20039.792900
## converged
## # weights: 41
## initial value 22501.783292
## iter 10 value 20039.923779
## final value 20039.133514
## converged
## # weights: 9
## initial value 23241.777912
## iter 10 value 20047.251525
## iter 20 value 20035.949029
## iter 20 value 20035.948976

```



```

## final value 20035.948976
## converged
## # weights: 25
## initial value 23632.889763
## iter 10 value 20049.692713
## iter 20 value 20035.977174
## final value 20035.832975
## converged
## # weights: 41
## initial value 22229.780129
## iter 10 value 20055.161307
## iter 20 value 20036.040222
## final value 20035.828339
## converged
## # weights: 9
## initial value 22160.209609
## final value 20058.547600
## converged
## # weights: 25
## initial value 22854.992644
## final value 20058.547600
## converged
## # weights: 41
## initial value 22527.730736
## final value 20058.547600
## converged
## # weights: 9
## initial value 23548.800895
## iter 10 value 20064.531192
## final value 20064.058752
## converged
## # weights: 25
## initial value 24084.103820
## iter 10 value 20063.362434
## final value 20062.524104
## converged
## # weights: 41
## initial value 23231.831846
## iter 10 value 20085.572399
## iter 20 value 20061.871835
## final value 20061.864529
## converged
## # weights: 9
## initial value 22492.618489
## iter 10 value 20069.349024
## iter 20 value 20058.672132
## iter 20 value 20058.672082
## final value 20058.672082
## converged
## # weights: 25
## initial value 21232.246786
## iter 10 value 20065.004674
## iter 20 value 20058.622045
## final value 20058.558728

```

```

## converged
## # weights: 41
## initial value 22987.266688
## iter 10 value 20076.875392
## iter 20 value 20058.758905
## final value 20058.557454
## converged
## # weights: 9
## initial value 23795.088786
## final value 19957.697200
## converged
## # weights: 25
## initial value 22318.394518
## final value 19957.697200
## converged
## # weights: 41
## initial value 23081.541633
## final value 19957.697200
## converged
## # weights: 9
## initial value 22597.355516
## iter 10 value 19963.662770
## final value 19963.205368
## converged
## # weights: 25
## initial value 21161.260881
## iter 10 value 19962.318864
## final value 19961.671823
## converged
## # weights: 41
## initial value 22126.501241
## iter 10 value 19964.171914
## iter 20 value 19961.012714
## iter 20 value 19961.012575
## iter 20 value 19961.012542
## final value 19961.012542
## converged
## # weights: 9
## initial value 22817.191547
## iter 10 value 19967.677439
## iter 20 value 19957.812264
## iter 20 value 19957.812218
## final value 19957.812218
## converged
## # weights: 25
## initial value 22370.217359
## iter 10 value 19971.004724
## iter 20 value 19957.850625
## final value 19957.714109
## converged
## # weights: 41
## initial value 23498.429319
## iter 10 value 19973.795288
## iter 20 value 19957.882798

```

```

## final value 19957.713661
## converged
## # weights: 9
## initial value 22731.382655
## final value 20047.250000
## converged
## # weights: 25
## initial value 23053.683188
## final value 20047.250000
## converged
## # weights: 41
## initial value 22444.655005
## final value 20047.250000
## converged
## # weights: 9
## initial value 22941.348079
## iter 10 value 20052.913936
## final value 20052.760431
## converged
## # weights: 25
## initial value 22548.333412
## iter 10 value 20051.960594
## iter 20 value 20051.226423
## final value 20051.226029
## converged
## # weights: 41
## initial value 24134.587785
## iter 10 value 20052.257422
## iter 20 value 20050.566659
## iter 20 value 20050.566549
## iter 20 value 20050.566542
## final value 20050.566542
## converged
## # weights: 9
## initial value 22779.151264
## iter 10 value 20057.942923
## iter 20 value 20047.373281
## iter 20 value 20047.373232
## final value 20047.373232
## converged
## # weights: 25
## initial value 22558.616159
## iter 10 value 20061.749330
## iter 20 value 20047.417166
## final value 20047.266577
## converged
## # weights: 41
## initial value 22254.963961
## iter 10 value 20063.844706
## iter 20 value 20047.441324
## final value 20047.260169
## converged
## # weights: 9
## initial value 22286.362647

```

```

## final value 19980.360100
## converged
## # weights: 25
## initial value 21928.545751
## final value 19980.360100
## converged
## # weights: 41
## initial value 24075.795021
## final value 19980.360100
## converged
## # weights: 9
## initial value 23094.724139
## iter 10 value 19986.045350
## final value 19985.868665
## converged
## # weights: 25
## initial value 23999.511052
## iter 10 value 19987.218751
## iter 20 value 19984.335103
## iter 20 value 19984.334965
## iter 20 value 19984.334950
## final value 19984.334950
## converged
## # weights: 41
## initial value 24551.507128
## iter 10 value 19992.432638
## iter 20 value 19983.676243
## final value 19983.675598
## converged
## # weights: 9
## initial value 23127.446454
## iter 10 value 19989.845334
## iter 20 value 19980.469457
## iter 20 value 19980.469414
## final value 19980.469414
## converged
## # weights: 25
## initial value 22437.206650
## iter 10 value 19992.012759
## iter 20 value 19980.494446
## final value 19980.373093
## converged
## # weights: 41
## initial value 23932.808526
## iter 10 value 19992.873410
## iter 20 value 19980.504369
## final value 19980.372124
## converged
## # weights: 9
## initial value 21866.342648
## final value 20040.702500
## converged
## # weights: 25
## initial value 22557.910707

```

```

## final value 20040.702500
## converged
## # weights: 41
## initial value 22137.689215
## final value 20040.702500
## converged
## # weights: 9
## initial value 22831.630862
## iter 10 value 20048.300601
## final value 20046.212609
## converged
## # weights: 25
## initial value 22774.412809
## iter 10 value 20047.004644
## iter 20 value 20044.678458
## iter 20 value 20044.678334
## iter 20 value 20044.678308
## final value 20044.678308
## converged
## # weights: 41
## initial value 21499.345053
## iter 10 value 20047.140009
## iter 20 value 20044.019309
## final value 20044.018838
## converged
## # weights: 9
## initial value 22059.686369
## iter 10 value 20049.277884
## iter 20 value 20040.801367
## iter 20 value 20040.801328
## final value 20040.801328
## converged
## # weights: 25
## initial value 22025.181015
## iter 10 value 20053.632650
## iter 20 value 20040.851574
## final value 20040.714025
## converged
## # weights: 41
## initial value 21403.521436
## iter 10 value 20050.732868
## iter 20 value 20040.818142
## final value 20040.711687
## converged
## # weights: 9
## initial value 22798.219260
## final value 20039.453200
## converged
## # weights: 25
## initial value 23347.378679
## final value 20039.453200
## converged
## # weights: 41
## initial value 22805.744135

```

```

## final value 20039.453200
## converged
## # weights: 9
## initial value 22537.471626
## iter 10 value 20047.478503
## final value 20044.963326
## converged
## # weights: 25
## initial value 23074.514496
## iter 10 value 20043.942419
## final value 20043.429016
## converged
## # weights: 41
## initial value 22426.763146
## iter 10 value 20044.210083
## final value 20042.769578
## converged
## # weights: 9
## initial value 22485.675441
## iter 10 value 20049.316350
## iter 20 value 20039.566914
## iter 20 value 20039.566869
## final value 20039.566869
## converged
## # weights: 25
## initial value 23350.215843
## iter 10 value 20056.807282
## iter 20 value 20039.653279
## final value 20039.471134
## converged
## # weights: 41
## initial value 22790.513813
## iter 10 value 20058.840422
## iter 20 value 20039.676719
## final value 20039.467256
## converged
## # weights: 9
## initial value 22652.323294
## final value 20019.213200
## converged
## # weights: 25
## initial value 22497.304874
## final value 20019.213200
## converged
## # weights: 41
## initial value 23180.640399
## final value 20019.213200
## converged
## # weights: 9
## initial value 23366.124312
## iter 10 value 20025.000165
## final value 20024.722607
## converged
## # weights: 25

```

```

## initial value 21771.818087
## iter 10 value 20024.653230
## iter 20 value 20023.188528
## iter 20 value 20023.188506
## iter 20 value 20023.188505
## final value 20023.188505
## converged
## # weights: 41
## initial value 23508.215697
## iter 10 value 20035.117428
## iter 20 value 20022.530411
## final value 20022.529160
## converged
## # weights: 9
## initial value 23303.634439
## iter 10 value 20029.523100
## iter 20 value 20019.332065
## iter 20 value 20019.332018
## final value 20019.332018
## converged
## # weights: 25
## initial value 22989.673975
## iter 10 value 20033.810796
## iter 20 value 20019.381499
## final value 20019.225589
## converged
## # weights: 41
## initial value 23066.232180
## iter 10 value 20038.183909
## iter 20 value 20019.431917
## final value 20019.226969
## converged
## # weights: 9
## initial value 23227.084054
## final value 20036.337700
## converged
## # weights: 25
## initial value 23126.020720
## final value 20036.337700
## converged
## # weights: 41
## initial value 21881.797021
## final value 20036.337700
## converged
## # weights: 9
## initial value 21992.661960
## iter 10 value 20043.579702
## final value 20041.847686
## converged
## # weights: 25
## initial value 21424.566822
## iter 10 value 20041.130418
## final value 20040.313464
## converged

```

```

## # weights: 41
## initial value 21642.841480
## iter 10 value 20044.436692
## iter 20 value 20039.654447
## final value 20039.653985
## converged
## # weights: 9
## initial value 23700.428871
## iter 10 value 20044.635964
## iter 20 value 20036.433372
## iter 20 value 20036.433334
## final value 20036.433334
## converged
## # weights: 25
## initial value 23274.683768
## iter 10 value 20051.350824
## iter 20 value 20036.510790
## final value 20036.352288
## converged
## # weights: 41
## initial value 22413.088835
## iter 10 value 20053.719466
## iter 20 value 20036.538098
## final value 20036.349407
## converged
## # weights: 9
## initial value 23202.921590
## final value 20045.781200
## converged
## # weights: 25
## initial value 22006.594084
## final value 20045.781200
## converged
## # weights: 41
## initial value 22024.629275
## final value 20045.781200
## converged
## # weights: 9
## initial value 22578.461000
## iter 10 value 20069.049934
## iter 20 value 20051.301021
## final value 20051.291604
## converged
## # weights: 25
## initial value 22755.181108
## iter 10 value 20052.134405
## iter 20 value 20049.757385
## iter 20 value 20049.757300
## iter 20 value 20049.757253
## final value 20049.757253
## converged
## # weights: 41
## initial value 23095.350050
## iter 10 value 20056.762776

```



```

## iter 20 value 20049.099042
## final value 20049.097693
## converged
## # weights: 9
## initial value 22487.314750
## iter 10 value 20056.560969
## iter 20 value 20045.905482
## iter 20 value 20045.905433
## final value 20045.905433
## converged
## # weights: 25
## initial value 21928.511191
## iter 10 value 20057.765111
## iter 20 value 20045.919365
## final value 20045.794166
## converged
## # weights: 41
## initial value 21231.882196
## iter 10 value 20053.981660
## iter 20 value 20045.875745
## final value 20045.790403
## converged
## # weights: 9
## initial value 22844.787919
## final value 20005.258000
## converged
## # weights: 25
## initial value 21389.384617
## final value 20005.258000
## converged
## # weights: 41
## initial value 21620.412923
## final value 20005.258000
## converged
## # weights: 9
## initial value 23233.967160
## iter 10 value 20010.900937
## final value 20010.767028
## converged
## # weights: 25
## initial value 22952.857476
## iter 10 value 20009.658803
## final value 20009.233042
## converged
## # weights: 41
## initial value 23069.091075
## iter 10 value 20010.193939
## final value 20008.573815
## converged
## # weights: 9
## initial value 22088.647229
## iter 10 value 20014.513273
## iter 20 value 20005.364706
## iter 20 value 20005.364663

```

```

## final value 20005.364663
## converged
## # weights: 25
## initial value 21775.687466
## iter 10 value 20016.861135
## iter 20 value 20005.391775
## final value 20005.271386
## converged
## # weights: 41
## initial value 22712.065925
## iter 10 value 20022.117205
## iter 20 value 20005.452373
## final value 20005.270608
## converged
## # weights: 9
## initial value 22615.181528
## final value 20038.469200
## converged
## # weights: 25
## initial value 22722.666967
## final value 20038.469200
## converged
## # weights: 41
## initial value 22137.430259
## final value 20038.469200
## converged
## # weights: 9
## initial value 22478.679065
## iter 10 value 20047.520782
## final value 20043.979270
## converged
## # weights: 25
## initial value 22737.121123
## iter 10 value 20043.229128
## iter 20 value 20042.445264
## iter 20 value 20042.445109
## iter 20 value 20042.445058
## final value 20042.445058
## converged
## # weights: 41
## initial value 21435.215740
## iter 10 value 20050.102370
## iter 20 value 20041.786243
## final value 20041.785583
## converged
## # weights: 9
## initial value 22598.798574
## iter 10 value 20048.892093
## iter 20 value 20038.589368
## iter 20 value 20038.589320
## final value 20038.589320
## converged
## # weights: 25
## initial value 21682.073852

```

```

## iter 10 value 20049.399873
## iter 20 value 20038.595222
## final value 20038.481756
## converged
## # weights: 41
## initial value 22071.473178
## iter 10 value 20055.314114
## iter 20 value 20038.663409
## final value 20038.479653
## converged
## # weights: 9
## initial value 23276.572763
## final value 19952.078500
## converged
## # weights: 25
## initial value 22953.901386
## final value 19952.078500
## converged
## # weights: 41
## initial value 24144.322234
## final value 19952.078500
## converged
## # weights: 9
## initial value 22394.252724
## iter 10 value 19957.782807
## final value 19957.586427
## converged
## # weights: 25
## initial value 21441.286436
## iter 10 value 19957.921679
## final value 19956.052858
## converged
## # weights: 41
## initial value 23838.648095
## iter 10 value 19966.143599
## iter 20 value 19955.394038
## final value 19955.393611
## converged
## # weights: 9
## initial value 22223.882987
## iter 10 value 19962.475798
## iter 20 value 19952.198373
## iter 20 value 19952.198325
## final value 19952.198325
## converged
## # weights: 25
## initial value 23018.846697
## iter 10 value 19966.979549
## iter 20 value 19952.250297
## final value 19952.094635
## converged
## # weights: 41
## initial value 21776.937587
## iter 10 value 19967.336298

```

```

## iter 20 value 19952.254410
## final value 19952.088456
## converged
## # weights: 9
## initial value 22331.374411
## final value 20020.920100
## converged
## # weights: 25
## initial value 22159.405186
## final value 20020.920100
## converged
## # weights: 41
## initial value 22541.577157
## final value 20020.920100
## converged
## # weights: 9
## initial value 23189.835587
## iter 10 value 20026.578167
## final value 20026.429598
## converged
## # weights: 25
## initial value 23046.064949
## iter 10 value 20025.253820
## final value 20024.895514
## converged
## # weights: 41
## initial value 22650.917262
## iter 10 value 20038.134512
## iter 20 value 20024.237711
## final value 20024.236091
## converged
## # weights: 9
## initial value 23126.832132
## iter 10 value 20030.472910
## iter 20 value 20021.030236
## iter 20 value 20021.030192
## final value 20021.030192
## converged
## # weights: 25
## initial value 22197.733684
## iter 10 value 20036.915684
## iter 20 value 20021.104517
## final value 20020.936316
## converged
## # weights: 41
## initial value 22635.114977
## iter 10 value 20042.513456
## iter 20 value 20021.169054
## final value 20020.933371
## converged
## # weights: 9
## initial value 23674.271202
## final value 20022.465700
## converged

```

```

## # weights: 25
## initial value 23157.525886
## final value 20022.465700
## converged
## # weights: 41
## initial value 23306.004255
## final value 20022.465700
## converged
## # weights: 9
## initial value 23048.202745
## iter 10 value 20031.486858
## final value 20027.975265
## converged
## # weights: 25
## initial value 22501.588208
## iter 10 value 20031.519662
## iter 20 value 20026.570619
## final value 20026.441211
## converged
## # weights: 41
## initial value 23475.863143
## iter 10 value 20042.017681
## iter 20 value 20025.783247
## final value 20025.781738
## converged
## # weights: 9
## initial value 22867.112377
## iter 10 value 20032.852874
## iter 20 value 20022.585456
## iter 20 value 20022.585408
## final value 20022.585408
## converged
## # weights: 25
## initial value 23508.028336
## iter 10 value 20034.782077
## iter 20 value 20022.607698
## final value 20022.480142
## converged
## # weights: 41
## initial value 23791.805409
## iter 10 value 20038.085093
## iter 20 value 20022.645779
## final value 20022.482261
## converged
## # weights: 9
## initial value 22738.100711
## final value 20016.794000
## converged
## # weights: 25
## initial value 23192.656454
## final value 20016.794000
## converged
## # weights: 41
## initial value 23510.297226

```

```

## final value 20016.794000
## converged
## # weights: 9
## initial value 23252.028867
## iter 10 value 20022.536451
## final value 20022.303384
## converged
## # weights: 25
## initial value 23351.695256
## iter 10 value 20021.696637
## final value 20020.769352
## converged
## # weights: 41
## initial value 23628.126493
## iter 10 value 20020.738978
## final value 20020.109960
## converged
## # weights: 9
## initial value 23041.783198
## iter 10 value 20026.410022
## iter 20 value 20016.904865
## iter 20 value 20016.904821
## final value 20016.904821
## converged
## # weights: 25
## initial value 24373.738139
## iter 10 value 20024.307988
## iter 20 value 20016.880630
## final value 20016.816073
## converged
## # weights: 41
## initial value 21908.892678
## iter 10 value 20032.778174
## iter 20 value 20016.978285
## final value 20016.804580
## converged
## # weights: 9
## initial value 22673.726538
## final value 20038.270000
## converged
## # weights: 25
## initial value 24186.496556
## final value 20038.270000
## converged
## # weights: 41
## initial value 22635.322444
## final value 20038.270000
## converged
## # weights: 9
## initial value 22444.980667
## iter 10 value 20046.468286
## final value 20043.780039
## converged
## # weights: 25

```

```

## initial value 22426.220478
## iter 10 value 20043.049226
## final value 20042.245776
## converged
## # weights: 41
## initial value 22786.970809
## iter 10 value 20057.625616
## iter 20 value 20041.623203
## final value 20041.586275
## converged
## # weights: 9
## initial value 22756.135565
## iter 10 value 20048.608542
## iter 20 value 20038.389195
## iter 20 value 20038.389148
## final value 20038.389148
## converged
## # weights: 25
## initial value 22197.927447
## iter 10 value 20053.479980
## iter 20 value 20038.445359
## final value 20038.282876
## converged
## # weights: 41
## initial value 22200.053120
## iter 10 value 20055.259353
## iter 20 value 20038.465874
## final value 20038.280546
## converged
## # weights: 9
## initial value 22231.948678
## final value 20007.965200
## converged
## # weights: 25
## initial value 22431.802970
## final value 20007.965200
## converged
## # weights: 41
## initial value 23254.507012
## final value 20007.965200
## converged
## # weights: 9
## initial value 21995.264107
## iter 10 value 20023.978675
## iter 20 value 20013.475082
## final value 20013.474292
## converged
## # weights: 25
## initial value 22116.675057
## iter 10 value 20012.681144
## final value 20011.940294
## converged
## # weights: 41
## initial value 22844.221520

```

```

## iter 10 value 20011.952924
## final value 20011.280926
## converged
## # weights: 9
## initial value 22758.100197
## iter 10 value 20019.022322
## iter 20 value 20008.092680
## iter 20 value 20008.092629
## final value 20008.092629
## converged
## # weights: 25
## initial value 22292.925949
## iter 10 value 20021.658534
## iter 20 value 20008.123073
## final value 20007.977382
## converged
## # weights: 41
## initial value 21642.740847
## iter 10 value 20022.227877
## iter 20 value 20008.129637
## final value 20007.974720
## converged
## # weights: 9
## initial value 23371.326830
## final value 20048.654000
## converged
## # weights: 25
## initial value 22741.926804
## final value 20048.654000
## converged
## # weights: 41
## initial value 23764.546980
## final value 20048.654000
## converged
## # weights: 9
## initial value 21925.239083
## iter 10 value 20054.555994
## final value 20054.164586
## converged
## # weights: 25
## initial value 23356.118084
## iter 10 value 20057.035458
## iter 20 value 20052.630888
## final value 20052.630224
## converged
## # weights: 41
## initial value 21855.120400
## iter 10 value 20052.726810
## final value 20051.970662
## converged
## # weights: 9
## initial value 22587.160973
## iter 10 value 20060.111215
## iter 20 value 20048.786093

```



```

## iter 20 value 20048.786040
## final value 20048.786040
## converged
## # weights: 25
## initial value 23302.324938
## iter 10 value 20064.430652
## iter 20 value 20048.835892
## final value 20048.668070
## converged
## # weights: 41
## initial value 22201.528099
## iter 10 value 20064.325050
## iter 20 value 20048.834675
## final value 20048.664642
## converged
## # weights: 9
## initial value 23330.541752
## final value 19999.649200
## converged
## # weights: 25
## initial value 22564.185400
## final value 19999.649200
## converged
## # weights: 41
## initial value 23280.058028
## final value 19999.649200
## converged
## # weights: 9
## initial value 22232.530976
## iter 10 value 20005.677854
## final value 20005.158148
## converged
## # weights: 25
## initial value 21865.402281
## iter 10 value 20004.788043
## final value 20003.624293
## converged
## # weights: 41
## initial value 23749.383295
## iter 10 value 20007.424531
## iter 20 value 20002.965179
## iter 20 value 20002.964995
## iter 20 value 20002.964962
## final value 20002.964962
## converged
## # weights: 9
## initial value 23787.239594
## iter 10 value 20008.025659
## iter 20 value 19999.745774
## iter 20 value 19999.745735
## final value 19999.745735
## converged
## # weights: 25
## initial value 21474.217153

```

```

## iter 10 value 20008.255481
## iter 20 value 19999.748424
## final value 19999.661139
## converged
## # weights: 41
## initial value 23421.006192
## iter 10 value 20018.413870
## iter 20 value 19999.865542
## final value 19999.659397
## converged
## # weights: 9
## initial value 22008.246512
## final value 20028.595700
## converged
## # weights: 25
## initial value 21290.948672
## final value 20028.595700
## converged
## # weights: 41
## initial value 21846.264626
## final value 20028.595700
## converged
## # weights: 9
## initial value 22046.487016
## iter 10 value 20037.235298
## final value 20034.105426
## converged
## # weights: 25
## initial value 21861.371760
## iter 10 value 20033.216884
## final value 20032.571287
## converged
## # weights: 41
## initial value 23071.222756
## iter 10 value 20032.727013
## final value 20031.911823
## converged
## # weights: 9
## initial value 21891.282799
## iter 10 value 20037.876851
## iter 20 value 20028.702704
## iter 20 value 20028.702662
## final value 20028.702662
## converged
## # weights: 25
## initial value 23348.219715
## iter 10 value 20041.948677
## iter 20 value 20028.749649
## final value 20028.610824
## converged
## # weights: 41
## initial value 23271.092746
## iter 10 value 20050.278021
## iter 20 value 20028.845680

```

```

## final value 20028.605669
## converged
## # weights: 9
## initial value 21956.944462
## final value 19929.305200
## converged
## # weights: 25
## initial value 22241.673680
## final value 19929.305200
## converged
## # weights: 41
## initial value 24078.314488
## final value 19929.305200
## converged
## # weights: 9
## initial value 22436.749225
## iter 10 value 19939.346334
## final value 19934.812943
## converged
## # weights: 25
## initial value 22838.704790
## iter 10 value 19934.020256
## final value 19933.279539
## converged
## # weights: 41
## initial value 22351.191034
## iter 10 value 19933.707489
## final value 19932.620390
## converged
## # weights: 9
## initial value 22150.952514
## iter 10 value 19938.643389
## iter 20 value 19929.412862
## iter 20 value 19929.412819
## final value 19929.412819
## converged
## # weights: 25
## initial value 22673.536197
## iter 10 value 19941.931870
## iter 20 value 19929.450776
## final value 19929.316444
## converged
## # weights: 41
## initial value 21320.277128
## iter 10 value 19939.149433
## iter 20 value 19929.418696
## final value 19929.317384
## converged
## # weights: 9
## initial value 22436.767631
## final value 19993.947700
## converged
## # weights: 25
## initial value 23348.716056

```

```

## final value 19993.947700
## converged
## # weights: 41
## initial value 23851.300543
## final value 19993.947700
## converged
## # weights: 9
## initial value 23483.593810
## iter 10 value 19999.800444
## final value 19999.456545
## converged
## # weights: 25
## initial value 23717.589427
## iter 10 value 19998.616242
## final value 19997.922703
## converged
## # weights: 41
## initial value 22547.787782
## iter 10 value 20010.675423
## final value 19997.263396
## converged
## # weights: 9
## initial value 22589.894066
## iter 10 value 20005.437351
## iter 20 value 19994.080167
## iter 20 value 19994.080114
## final value 19994.080114
## converged
## # weights: 25
## initial value 21592.591272
## iter 10 value 20004.562811
## iter 20 value 19994.070084
## final value 19993.960616
## converged
## # weights: 41
## initial value 21560.901842
## iter 10 value 20007.504995
## iter 20 value 19994.104005
## final value 19993.957174
## converged
## # weights: 9
## initial value 22259.881258
## final value 20004.800500
## converged
## # weights: 25
## initial value 23043.872725
## final value 20004.800500
## converged
## # weights: 41
## initial value 24129.963294
## final value 20004.800500
## converged
## # weights: 9
## initial value 22303.650843

```

```

## iter 10 value 20011.332119
## final value 20010.309579
## converged
## # weights: 25
## initial value 22633.058303
## iter 10 value 20010.390421
## final value 20008.775700
## converged
## # weights: 41
## initial value 21653.182419
## iter 10 value 20009.610030
## iter 20 value 20008.116358
## iter 20 value 20008.116280
## iter 20 value 20008.116267
## final value 20008.116267
## converged
## # weights: 9
## initial value 23434.620391
## iter 10 value 20015.129369
## iter 20 value 20004.919584
## iter 20 value 20004.919536
## final value 20004.919536
## converged
## # weights: 25
## initial value 23357.525420
## iter 10 value 20018.644491
## iter 20 value 20004.960110
## final value 20004.817941
## converged
## # weights: 41
## initial value 21416.181237
## iter 10 value 20017.203895
## iter 20 value 20004.943501
## final value 20004.810415
## converged
## # weights: 9
## initial value 22508.851663
## final value 19974.056500
## converged
## # weights: 25
## initial value 22682.580747
## final value 19974.056500
## converged
## # weights: 41
## initial value 23438.702072
## final value 19974.056500
## converged
## # weights: 9
## initial value 21599.869137
## iter 10 value 19980.251014
## final value 19979.564953
## converged
## # weights: 25
## initial value 21599.433850

```

```

## iter 10 value 19980.311048
## final value 19978.031275
## converged
## # weights: 41
## initial value 23152.846227
## iter 10 value 19978.212448
## final value 19977.372006
## converged
## # weights: 9
## initial value 22757.082295
## iter 10 value 19985.751470
## iter 20 value 19974.191334
## iter 20 value 19974.191280
## final value 19974.191280
## converged
## # weights: 25
## initial value 22739.044975
## iter 10 value 19988.233501
## iter 20 value 19974.219950
## final value 19974.078443
## converged
## # weights: 41
## initial value 22922.237730
## iter 10 value 19992.561568
## iter 20 value 19974.269849
## final value 19974.072233
## converged
## # weights: 9
## initial value 23695.060030
## final value 19908.416500
## converged
## # weights: 25
## initial value 22700.905668
## final value 19908.416500
## converged
## # weights: 41
## initial value 22758.351032
## final value 19908.416500
## converged
## # weights: 9
## initial value 23700.057710
## iter 10 value 19915.448834
## final value 19913.923805
## converged
## # weights: 25
## initial value 22770.402367
## iter 10 value 19916.126302
## iter 20 value 19912.391331
## final value 19912.390483
## converged
## # weights: 41
## initial value 24282.958183
## iter 10 value 19921.994522
## iter 20 value 19911.733931

```

```

## final value 19911.731381
## converged
## # weights: 9
## initial value 22215.101148
## iter 10 value 19917.822823
## iter 20 value 19908.524948
## iter 20 value 19908.524904
## final value 19908.524904
## converged
## # weights: 25
## initial value 22866.227373
## iter 10 value 19922.968651
## iter 20 value 19908.584275
## final value 19908.432563
## converged
## # weights: 41
## initial value 22259.170578
## iter 10 value 19925.503967
## iter 20 value 19908.613505
## final value 19908.427083
## converged
## # weights: 9
## initial value 22149.583667
## final value 19991.767600
## converged
## # weights: 25
## initial value 22527.422125
## final value 19991.767600
## converged
## # weights: 41
## initial value 24002.588191
## final value 19991.767600
## converged
## # weights: 9
## initial value 22815.876778
## iter 10 value 19999.355432
## final value 19997.276406
## converged
## # weights: 25
## initial value 23734.341486
## iter 10 value 20002.474704
## iter 20 value 19995.743298
## final value 19995.742638
## converged
## # weights: 41
## initial value 22036.338010
## iter 10 value 19995.965661
## final value 19995.083240
## converged
## # weights: 9
## initial value 23052.691716
## iter 10 value 20002.430134
## iter 20 value 19991.890531
## iter 20 value 19991.890481

```

```

## final value 19991.890481
## converged
## # weights: 25
## initial value 22324.343466
## iter 10 value 20007.160230
## iter 20 value 19991.945065
## final value 19991.779615
## converged
## # weights: 41
## initial value 22736.266342
## iter 10 value 20009.935340
## iter 20 value 19991.977060
## final value 19991.778731
## converged
## # weights: 9
## initial value 23738.323817
## final value 20044.680100
## converged
## # weights: 25
## initial value 24138.542809
## final value 20044.680100
## converged
## # weights: 41
## initial value 22295.550779
## final value 20044.680100
## converged
## # weights: 9
## initial value 21593.031486
## iter 10 value 20050.421922
## final value 20050.190476
## converged
## # weights: 25
## initial value 22841.611645
## iter 10 value 20049.441383
## final value 20048.656098
## converged
## # weights: 41
## initial value 23468.539446
## iter 10 value 20051.479904
## iter 20 value 20047.997142
## final value 20047.996583
## converged
## # weights: 9
## initial value 23180.156318
## iter 10 value 20055.003353
## iter 20 value 20044.799119
## iter 20 value 20044.799071
## final value 20044.799071
## converged
## # weights: 25
## initial value 23264.869157
## iter 10 value 20058.887987
## iter 20 value 20044.843906
## final value 20044.692960

```



```

## converged
## # weights: 41
## initial value 22533.657317
## iter 10 value 20061.104689
## iter 20 value 20044.869463
## iter 30 value 20044.689950
## iter 30 value 20044.689950
## iter 30 value 20044.689947
## final value 20044.689947
## converged
## # weights: 9
## initial value 22852.620532
## final value 20026.929700
## converged
## # weights: 25
## initial value 24191.222484
## final value 20026.929700
## converged
## # weights: 41
## initial value 22332.804195
## final value 20026.929700
## converged
## # weights: 9
## initial value 22748.091284
## iter 10 value 20033.602926
## final value 20032.439367
## converged
## # weights: 25
## initial value 23765.209733
## iter 10 value 20033.244808
## iter 20 value 20030.905361
## iter 20 value 20030.905255
## iter 20 value 20030.905222
## final value 20030.905222
## converged
## # weights: 41
## initial value 22451.951106
## iter 10 value 20030.855349
## final value 20030.245794
## converged
## # weights: 9
## initial value 22770.649590
## iter 10 value 20038.678419
## iter 20 value 20027.065154
## iter 20 value 20027.065099
## final value 20027.065099
## converged
## # weights: 25
## initial value 23127.096165
## iter 10 value 20043.038821
## iter 20 value 20027.115426
## final value 20026.948207
## converged
## # weights: 41

```

```

## initial value 22307.148721
## iter 10 value 20043.461466
## iter 20 value 20027.120298
## final value 20026.941747
## converged
## # weights: 9
## initial value 21809.270399
## final value 20056.513700
## converged
## # weights: 25
## initial value 22215.757208
## final value 20056.513700
## converged
## # weights: 41
## initial value 23669.564704
## final value 20056.513700
## converged
## # weights: 9
## initial value 23242.922805
## iter 10 value 20063.894852
## final value 20062.024825
## converged
## # weights: 25
## initial value 21602.276493
## iter 10 value 20062.524129
## final value 20060.490365
## converged
## # weights: 41
## initial value 21752.097565
## iter 10 value 20076.104728
## iter 20 value 20059.831711
## final value 20059.830725
## converged
## # weights: 9
## initial value 23190.862592
## iter 10 value 20067.401450
## iter 20 value 20056.639227
## iter 20 value 20056.639177
## final value 20056.639177
## converged
## # weights: 25
## initial value 23222.448441
## iter 10 value 20070.718597
## iter 20 value 20056.677471
## final value 20056.527050
## converged
## # weights: 41
## initial value 21576.155956
## iter 10 value 20068.993764
## iter 20 value 20056.657585
## final value 20056.523574
## converged
## # weights: 9
## initial value 22361.746864

```

```

## final value 19910.400500
## converged
## # weights: 25
## initial value 22830.833633
## final value 19910.400500
## converged
## # weights: 41
## initial value 23143.315969
## final value 19910.400500
## converged
## # weights: 9
## initial value 22219.387473
## iter 10 value 19916.988355
## final value 19915.907976
## converged
## # weights: 25
## initial value 22527.824206
## iter 10 value 19915.938622
## final value 19914.374680
## converged
## # weights: 41
## initial value 22342.727418
## iter 10 value 19914.217786
## final value 19913.715622
## converged
## # weights: 9
## initial value 21618.583927
## iter 10 value 19918.631187
## iter 20 value 19910.495393
## iter 20 value 19910.495355
## final value 19910.495355
## converged
## # weights: 25
## initial value 22974.743300
## iter 10 value 19925.807056
## iter 20 value 19910.578125
## final value 19910.418297
## converged
## # weights: 41
## initial value 22518.569562
## iter 10 value 19930.008861
## iter 20 value 19910.626569
## final value 19910.410327
## converged
## # weights: 9
## initial value 22815.855424
## final value 20053.121200
## converged
## # weights: 25
## initial value 23145.524029
## final value 20053.121200
## converged
## # weights: 41
## initial value 23246.308180

```

```

## final value 20053.121200
## converged
## # weights: 9
## initial value 22639.000231
## iter 10 value 20062.724591
## final value 20058.631943
## converged
## # weights: 25
## initial value 22828.919124
## iter 10 value 20062.198567
## iter 20 value 20057.103989
## final value 20057.097412
## converged
## # weights: 41
## initial value 22166.496295
## iter 10 value 20058.087257
## iter 20 value 20056.438074
## iter 20 value 20056.437910
## iter 20 value 20056.437882
## final value 20056.437882
## converged
## # weights: 9
## initial value 21763.149845
## iter 10 value 20060.597817
## iter 20 value 20053.207400
## iter 20 value 20053.207365
## final value 20053.207365
## converged
## # weights: 25
## initial value 22254.469786
## iter 10 value 20066.688148
## iter 20 value 20053.277616
## iter 30 value 20053.134794
## iter 30 value 20053.134619
## iter 30 value 20053.134613
## final value 20053.134613
## converged
## # weights: 41
## initial value 22731.361153
## iter 10 value 20071.119761
## iter 20 value 20053.328709
## final value 20053.131609
## converged
## # weights: 9
## initial value 23285.677473
## final value 20058.633200
## converged
## # weights: 25
## initial value 23583.470388
## final value 20058.633200
## converged
## # weights: 41
## initial value 21281.393982
## final value 20058.633200

```

```

## converged
## # weights: 9
## initial value 22120.110995
## iter 10 value 20066.539006
## final value 20064.144478
## converged
## # weights: 25
## initial value 22610.293548
## iter 10 value 20064.896918
## iter 20 value 20062.609817
## iter 20 value 20062.609765
## iter 20 value 20062.609765
## final value 20062.609765
## converged
## # weights: 41
## initial value 22442.592339
## iter 10 value 20062.622551
## iter 20 value 20061.950390
## iter 20 value 20061.950218
## iter 20 value 20061.950189
## final value 20061.950189
## converged
## # weights: 9
## initial value 23538.507359
## iter 10 value 20068.663659
## iter 20 value 20058.748843
## iter 20 value 20058.748797
## final value 20058.748797
## converged
## # weights: 25
## initial value 22659.370060
## iter 10 value 20075.103977
## iter 20 value 20058.823095
## final value 20058.648530
## converged
## # weights: 41
## initial value 23067.561029
## iter 10 value 20076.760481
## iter 20 value 20058.842193
## final value 20058.646263
## converged
## # weights: 9
## initial value 23436.385337
## final value 20002.797200
## converged
## # weights: 25
## initial value 22744.008841
## final value 20002.797200
## converged
## # weights: 41
## initial value 22861.794733
## final value 20002.797200
## converged
## # weights: 9

```

```

## initial value 22819.187872
## iter 10 value 20009.493383
## final value 20008.306231
## converged
## # weights: 25
## initial value 22546.216405
## iter 10 value 20014.649775
## iter 20 value 20006.773999
## final value 20006.772364
## converged
## # weights: 41
## initial value 23638.375321
## iter 10 value 20015.251433
## iter 20 value 20006.114358
## final value 20006.112995
## converged
## # weights: 9
## initial value 23236.271427
## iter 10 value 20012.614474
## iter 20 value 20002.910385
## iter 20 value 20002.910340
## final value 20002.910340
## converged
## # weights: 25
## initial value 21546.756305
## iter 10 value 20013.020894
## iter 20 value 20002.915071
## final value 20002.809738
## converged
## # weights: 41
## initial value 22700.439721
## iter 10 value 20023.116052
## iter 20 value 20003.031460
## final value 20002.806864
## converged
## # weights: 9
## initial value 23431.095844
## final value 20004.187700
## converged
## # weights: 25
## initial value 22049.745946
## final value 20004.187700
## converged
## # weights: 41
## initial value 23397.501356
## final value 20004.187700
## converged
## # weights: 9
## initial value 22704.991903
## iter 10 value 20012.126082
## final value 20009.696765
## converged
## # weights: 25
## initial value 21776.223088

```

```

## iter 10 value 20010.040798
## iter 20 value 20008.163020
## iter 20 value 20008.162903
## iter 20 value 20008.162891
## final value 20008.162891
## converged
## # weights: 41
## initial value 22862.415275
## iter 10 value 20014.427747
## iter 20 value 20007.503787
## final value 20007.503457
## converged
## # weights: 9
## initial value 23063.569273
## iter 10 value 20014.955274
## iter 20 value 20004.311842
## iter 20 value 20004.311792
## final value 20004.311792
## converged
## # weights: 25
## initial value 22221.854242
## iter 10 value 20017.245086
## iter 20 value 20004.338241
## final value 20004.201392
## converged
## # weights: 41
## initial value 22451.274052
## iter 10 value 20025.744635
## iter 20 value 20004.436235
## final value 20004.197625
## converged
## # weights: 9
## initial value 22233.293698
## final value 20045.107600
## converged
## # weights: 25
## initial value 21710.168460
## final value 20045.107600
## converged
## # weights: 41
## initial value 23060.655251
## final value 20045.107600
## converged
## # weights: 9
## initial value 21818.278594
## iter 10 value 20051.117288
## final value 20050.617981
## converged
## # weights: 25
## initial value 23513.053863
## iter 10 value 20050.272298
## final value 20049.083650
## converged
## # weights: 41

```

```

## initial value 23706.513967
## iter 10 value 20050.527530
## iter 20 value 20048.424401
## iter 20 value 20048.424206
## iter 20 value 20048.424180
## final value 20048.424180
## converged
## # weights: 9
## initial value 22253.078458
## iter 10 value 20054.439856
## iter 20 value 20045.215194
## iter 20 value 20045.215151
## final value 20045.215151
## converged
## # weights: 25
## initial value 21726.249247
## iter 10 value 20055.713858
## iter 20 value 20045.229882
## final value 20045.120012
## converged
## # weights: 41
## initial value 23172.919553
## iter 10 value 20062.474908
## iter 20 value 20045.307831
## final value 20045.120841
## converged
## # weights: 9
## initial value 22244.571836
## final value 19977.422500
## converged
## # weights: 25
## initial value 22613.915525
## final value 19977.422500
## converged
## # weights: 41
## initial value 21270.656929
## final value 19977.422500
## converged
## # weights: 9
## initial value 22503.284949
## iter 10 value 19983.415504
## final value 19982.931041
## converged
## # weights: 25
## initial value 21275.353386
## iter 10 value 19982.267294
## final value 19981.397290
## converged
## # weights: 41
## initial value 23694.751702
## iter 10 value 19984.739481
## iter 20 value 19980.739133
## final value 19980.738065
## converged

```



```

## # weights: 9
## initial value 22339.827285
## iter 10 value 19987.605786
## iter 20 value 19977.539905
## iter 20 value 19977.539858
## final value 19977.539858
## converged
## # weights: 25
## initial value 22139.600811
## iter 10 value 19990.857273
## iter 20 value 19977.577392
## final value 19977.437261
## converged
## # weights: 41
## initial value 23721.672290
## iter 10 value 19993.255927
## iter 20 value 19977.605047
## final value 19977.440097
## converged
## # weights: 9
## initial value 21954.220904
## final value 19972.920100
## converged
## # weights: 25
## initial value 21848.208122
## final value 19972.920100
## converged
## # weights: 41
## initial value 24074.735494
## final value 19972.920100
## converged
## # weights: 9
## initial value 21930.060149
## iter 10 value 19980.547239
## final value 19978.428495
## converged
## # weights: 25
## initial value 22252.318812
## iter 10 value 19977.199064
## final value 19976.894780
## converged
## # weights: 41
## initial value 23561.242384
## iter 10 value 19977.825842
## iter 20 value 19976.235611
## iter 20 value 19976.235534
## iter 20 value 19976.235519
## final value 19976.235519
## converged
## # weights: 9
## initial value 21726.155947
## iter 10 value 19980.536701
## iter 20 value 19973.007913
## iter 20 value 19973.007878

```

```

## final value 19973.007878
## converged
## # weights: 25
## initial value 22108.273215
## iter 10 value 19987.019683
## iter 20 value 19973.082657
## final value 19972.932730
## converged
## # weights: 41
## initial value 22924.630048
## iter 10 value 19993.411597
## iter 20 value 19973.156351
## final value 19972.929720
## converged
## # weights: 9
## initial value 22587.372497
## final value 20032.589200
## converged
## # weights: 25
## initial value 23098.046172
## final value 20032.589200
## converged
## # weights: 41
## initial value 23788.627066
## final value 20032.589200
## converged
## # weights: 9
## initial value 22947.516534
## iter 10 value 20043.162127
## iter 20 value 20038.099243
## iter 20 value 20038.099089
## final value 20038.099089
## converged
## # weights: 25
## initial value 22832.788210
## iter 10 value 20037.386634
## final value 20036.564800
## converged
## # weights: 41
## initial value 22133.115814
## iter 10 value 20054.539545
## iter 20 value 20035.909640
## final value 20035.905436
## converged
## # weights: 9
## initial value 22246.629165
## iter 10 value 20042.042463
## iter 20 value 20032.698189
## iter 20 value 20032.698145
## final value 20032.698145
## converged
## # weights: 25
## initial value 22310.028656
## iter 10 value 20047.442375

```

```

## iter 20 value 20032.760445
## final value 20032.603593
## converged
## # weights: 41
## initial value 22971.062301
## iter 10 value 20050.870842
## iter 20 value 20032.799973
## final value 20032.599392
## converged
## # weights: 9
## initial value 22968.158192
## final value 20038.369700
## converged
## # weights: 25
## initial value 22111.698496
## final value 20038.369700
## converged
## # weights: 41
## initial value 24301.230251
## final value 20038.369700
## converged
## # weights: 9
## initial value 22670.978242
## iter 10 value 20044.285345
## final value 20043.879780
## converged
## # weights: 25
## initial value 23404.543254
## iter 10 value 20043.348572
## final value 20042.345490
## converged
## # weights: 41
## initial value 22381.068495
## iter 10 value 20054.789636
## iter 20 value 20041.687183
## final value 20041.686043
## converged
## # weights: 9
## initial value 21871.500777
## iter 10 value 20047.034848
## iter 20 value 20038.469602
## iter 20 value 20038.469562
## final value 20038.469562
## converged
## # weights: 25
## initial value 22712.535835
## iter 10 value 20053.207701
## iter 20 value 20038.540771
## final value 20038.381975
## converged
## # weights: 41
## initial value 22998.862506
## iter 10 value 20054.003708
## iter 20 value 20038.549948

```

```

## final value 20038.379313
## converged
## # weights: 9
## initial value 23721.139490
## final value 19884.413200
## converged
## # weights: 25
## initial value 22716.620936
## final value 19884.413200
## converged
## # weights: 41
## initial value 22970.559770
## final value 19884.413200
## converged
## # weights: 9
## initial value 21614.820637
## iter 10 value 19890.313678
## final value 19889.920329
## converged
## # weights: 25
## initial value 23812.994973
## iter 10 value 19890.527357
## iter 20 value 19888.387503
## final value 19888.387152
## converged
## # weights: 41
## initial value 22555.372671
## iter 10 value 19892.808699
## iter 20 value 19887.728275
## iter 20 value 19887.728140
## iter 20 value 19887.728098
## final value 19887.728098
## converged
## # weights: 9
## initial value 21800.449322
## iter 10 value 19892.392993
## iter 20 value 19884.505201
## iter 20 value 19884.505164
## final value 19884.505164
## converged
## # weights: 25
## initial value 22602.683601
## iter 10 value 19898.421839
## iter 20 value 19884.574709
## final value 19884.425408
## converged
## # weights: 41
## initial value 22358.733185
## iter 10 value 19905.718606
## iter 20 value 19884.658835
## final value 19884.424798
## converged
## # weights: 9
## initial value 23180.741512

```

```

## final value 19968.886000
## converged
## # weights: 25
## initial value 21209.272441
## final value 19968.886000
## converged
## # weights: 41
## initial value 22588.238220
## final value 19968.886000
## converged
## # weights: 9
## initial value 22628.179293
## iter 10 value 19975.178686
## final value 19974.394323
## converged
## # weights: 25
## initial value 23253.257242
## iter 10 value 19973.135641
## final value 19972.860654
## converged
## # weights: 41
## initial value 21432.061087
## iter 10 value 19984.560751
## iter 20 value 19972.201691
## final value 19972.201366
## converged
## # weights: 9
## initial value 22552.400106
## iter 10 value 19980.494370
## iter 20 value 19969.019835
## iter 20 value 19969.019782
## final value 19969.019782
## converged
## # weights: 25
## initial value 23313.749417
## iter 10 value 19983.681990
## iter 20 value 19969.056586
## final value 19968.899438
## converged
## # weights: 41
## initial value 22992.532697
## iter 10 value 19988.379850
## iter 20 value 19969.110749
## final value 19968.897040
## converged
## # weights: 9
## initial value 23747.290862
## final value 19977.422500
## converged
## # weights: 25
## initial value 23270.553440
## final value 19977.422500
## converged
## # weights: 41

```

```

## initial value 23038.979333
## final value 19977.422500
## converged
## # weights: 9
## initial value 22784.643136
## iter 10 value 19984.243029
## final value 19982.931027
## converged
## # weights: 25
## initial value 22003.256606
## iter 10 value 19982.233572
## final value 19981.397279
## converged
## # weights: 41
## initial value 22234.935845
## iter 10 value 19993.087535
## iter 20 value 19980.738717
## final value 19980.738075
## converged
## # weights: 9
## initial value 21940.637755
## iter 10 value 19985.716909
## iter 20 value 19977.518128
## iter 20 value 19977.518090
## final value 19977.518090
## converged
## # weights: 25
## initial value 21790.174143
## iter 10 value 19988.626369
## iter 20 value 19977.551672
## final value 19977.433286
## converged
## # weights: 41
## initial value 22650.113590
## iter 10 value 19996.346892
## iter 20 value 19977.640683
## final value 19977.432151
## converged
## # weights: 9
## initial value 23060.141287
## final value 20018.547700
## converged
## # weights: 25
## initial value 22425.532717
## final value 20018.547700
## converged
## # weights: 41
## initial value 22369.549614
## final value 20018.547700
## converged
## # weights: 9
## initial value 23329.933704
## iter 10 value 20025.014352
## final value 20024.057117

```

```

## converged
## # weights: 25
## initial value 21133.582259
## iter 10 value 20023.343061
## final value 20022.523153
## converged
## # weights: 41
## initial value 21692.360567
## iter 10 value 20023.183077
## final value 20021.863780
## converged
## # weights: 9
## initial value 23680.261476
## iter 10 value 20028.177164
## iter 20 value 20018.658720
## iter 20 value 20018.658676
## final value 20018.658676
## converged
## # weights: 25
## initial value 21967.375221
## iter 10 value 20029.032865
## iter 20 value 20018.668586
## final value 20018.562404
## converged
## # weights: 41
## initial value 22229.263191
## iter 10 value 20034.828871
## iter 20 value 20018.735409
## final value 20018.557120
## converged
## # weights: 9
## initial value 23390.671859
## final value 19997.883700
## converged
## # weights: 25
## initial value 22146.925826
## final value 19997.883700
## converged
## # weights: 41
## initial value 22065.429298
## final value 19997.883700
## converged
## # weights: 9
## initial value 22842.057808
## iter 10 value 20009.866999
## final value 20003.392560
## converged
## # weights: 25
## initial value 23328.446165
## iter 10 value 20003.175220
## final value 20001.858681
## converged
## # weights: 41
## initial value 21569.062204

```

```

## iter 10 value 20002.158993
## iter 20 value 20001.199932
## final value 20001.199333
## converged
## # weights: 9
## initial value 23728.300749
## iter 10 value 20005.624841
## iter 20 value 19997.972949
## iter 20 value 19997.972914
## final value 19997.972914
## converged
## # weights: 25
## initial value 21952.048376
## iter 10 value 20011.285774
## iter 20 value 19998.038215
## final value 19997.896001
## converged
## # weights: 41
## initial value 23514.196615
## iter 10 value 20015.214479
## iter 20 value 19998.083510
## final value 19997.895168
## converged
## # weights: 9
## initial value 22239.858154
## final value 20016.930100
## converged
## # weights: 25
## initial value 23530.038138
## final value 20016.930100
## converged
## # weights: 41
## initial value 20992.583071
## final value 20016.930100
## converged
## # weights: 9
## initial value 23017.283777
## iter 10 value 20025.366955
## final value 20022.439477
## converged
## # weights: 25
## initial value 22786.393516
## iter 10 value 20021.411500
## final value 20020.905514
## converged
## # weights: 41
## initial value 21660.911072
## iter 10 value 20036.882054
## iter 20 value 20020.251420
## final value 20020.246042
## converged
## # weights: 9
## initial value 22007.145114
## iter 10 value 20026.740986

```



```

## iter 20 value 20017.043212
## iter 20 value 20017.043167
## final value 20017.043167
## converged
## # weights: 25
## initial value 22114.717545
## iter 10 value 20030.507062
## iter 20 value 20017.086632
## final value 20016.944803
## converged
## # weights: 41
## initial value 21588.325985
## iter 10 value 20029.668971
## iter 20 value 20017.076969
## final value 20016.940045
## converged
## # weights: 9
## initial value 22055.176047
## final value 20042.193700
## converged
## # weights: 25
## initial value 23562.450647
## final value 20042.193700
## converged
## # weights: 41
## initial value 23825.282312
## final value 20042.193700
## converged
## # weights: 9
## initial value 23818.859284
## iter 10 value 20048.399259
## final value 20047.703964
## converged
## # weights: 25
## initial value 23071.552463
## iter 10 value 20047.232510
## final value 20046.169644
## converged
## # weights: 41
## initial value 23449.617167
## iter 10 value 20053.376304
## iter 20 value 20045.511386
## final value 20045.510118
## converged
## # weights: 9
## initial value 21923.162810
## iter 10 value 20051.050605
## iter 20 value 20042.295813
## iter 20 value 20042.295772
## final value 20042.295772
## converged
## # weights: 25
## initial value 21247.329150
## iter 10 value 20048.170556

```

```

## iter 20 value 20042.262608
## final value 20042.204859
## converged
## # weights: 41
## initial value 21933.178207
## iter 10 value 20060.212888
## iter 20 value 20042.401447
## final value 20042.203107
## converged
## # weights: 9
## initial value 23276.833440
## final value 19991.936500
## converged
## # weights: 25
## initial value 22768.632493
## final value 19991.936500
## converged
## # weights: 41
## initial value 23585.967589
## final value 19991.936500
## converged
## # weights: 9
## initial value 22304.562633
## iter 10 value 19997.576237
## final value 19997.445342
## converged
## # weights: 25
## initial value 22679.765927
## iter 10 value 19996.772804
## final value 19995.911415
## converged
## # weights: 41
## initial value 21760.528885
## iter 10 value 19997.370795
## iter 20 value 19995.252196
## iter 20 value 19995.252128
## iter 20 value 19995.252116
## final value 19995.252116
## converged
## # weights: 9
## initial value 23368.618035
## iter 10 value 20002.982206
## iter 20 value 19992.063848
## iter 20 value 19992.063797
## final value 19992.063797
## converged
## # weights: 25
## initial value 22711.078281
## iter 10 value 20008.707624
## iter 20 value 19992.129858
## final value 19991.957901
## converged
## # weights: 41
## initial value 23284.927659

```

```

## iter 10 value 20009.725234
## iter 20 value 19992.141590
## final value 19991.946980
## converged
## # weights: 9
## initial value 22903.354412
## final value 20015.560100
## converged
## # weights: 25
## initial value 23372.749024
## final value 20015.560100
## converged
## # weights: 41
## initial value 22327.284907
## final value 20015.560100
## converged
## # weights: 9
## initial value 22306.128233
## iter 10 value 20021.937896
## final value 20021.069444
## converged
## # weights: 25
## initial value 21449.515288
## iter 10 value 20022.391292
## final value 20019.535418
## converged
## # weights: 41
## initial value 22150.786472
## iter 10 value 20037.290998
## iter 20 value 20018.876371
## iter 20 value 20018.876185
## iter 20 value 20018.876089
## final value 20018.876089
## converged
## # weights: 9
## initial value 23416.758961
## iter 10 value 20025.033257
## iter 20 value 20015.669318
## iter 20 value 20015.669274
## final value 20015.669274
## converged
## # weights: 25
## initial value 23360.856629
## iter 10 value 20027.042665
## iter 20 value 20015.692485
## final value 20015.574010
## converged
## # weights: 41
## initial value 23640.169487
## iter 10 value 20035.422190
## iter 20 value 20015.789094
## final value 20015.570584
## converged
## # weights: 9

```

```

## initial value 22084.639068
## final value 19829.997200
## converged
## # weights: 25
## initial value 23938.382705
## final value 19829.997200
## converged
## # weights: 41
## initial value 21441.983582
## final value 19829.997200
## converged
## # weights: 9
## initial value 21694.838616
## iter 10 value 19836.124670
## final value 19835.503719
## converged
## # weights: 25
## initial value 22591.757787
## iter 10 value 19834.487845
## final value 19833.970808
## converged
## # weights: 41
## initial value 22124.469145
## iter 10 value 19838.757080
## iter 20 value 19833.312471
## final value 19833.311815
## converged
## # weights: 9
## initial value 22750.685527
## iter 10 value 19840.343848
## iter 20 value 19830.116489
## iter 20 value 19830.116441
## final value 19830.116441
## converged
## # weights: 25
## initial value 21564.188446
## iter 10 value 19841.023525
## iter 20 value 19830.124325
## final value 19830.010046
## converged
## # weights: 41
## initial value 21400.587292
## iter 10 value 19844.304513
## iter 20 value 19830.162152
## final value 19830.007476
## converged
## # weights: 9
## initial value 21898.597992
## final value 20029.414000
## converged
## # weights: 25
## initial value 23289.502929
## final value 20029.414000
## converged

```

```

## # weights: 41
## initial value 22473.531659
## final value 20029.414000
## converged
## # weights: 9
## initial value 22453.927544
## iter 10 value 20035.643196
## final value 20034.923760
## converged
## # weights: 25
## initial value 22407.448506
## iter 10 value 20036.160999
## iter 20 value 20033.389657
## iter 20 value 20033.389580
## iter 20 value 20033.389573
## final value 20033.389573
## converged
## # weights: 41
## initial value 23116.909629
## iter 10 value 20043.577062
## iter 20 value 20032.731062
## final value 20032.730131
## converged
## # weights: 9
## initial value 23129.734850
## iter 10 value 20038.980806
## iter 20 value 20029.524298
## iter 20 value 20029.524254
## final value 20029.524254
## converged
## # weights: 25
## initial value 22239.657884
## iter 10 value 20041.886911
## iter 20 value 20029.557803
## final value 20029.426397
## converged
## # weights: 41
## initial value 24404.454194
## iter 10 value 20038.345634
## iter 20 value 20029.516975
## final value 20029.429066
## converged
## # weights: 9
## initial value 22413.754563
## final value 20037.058000
## converged
## # weights: 25
## initial value 23354.011498
## final value 20037.058000
## converged
## # weights: 41
## initial value 21502.769235
## final value 20037.058000
## converged

```

```

## # weights: 9
## initial value 22400.107365
## iter 10 value 20046.436491
## final value 20042.568042
## converged
## # weights: 25
## initial value 21755.054473
## iter 10 value 20041.687564
## final value 20041.033772
## converged
## # weights: 41
## initial value 22654.460684
## iter 10 value 20045.666273
## final value 20040.374327
## converged
## # weights: 9
## initial value 21672.414492
## iter 10 value 20043.864401
## iter 20 value 20037.136472
## iter 20 value 20037.136441
## final value 20037.136441
## converged
## # weights: 25
## initial value 22725.093990
## iter 10 value 20051.112990
## iter 20 value 20037.220043
## final value 20037.072702
## converged
## # weights: 41
## initial value 22750.947357
## iter 10 value 20053.946951
## iter 20 value 20037.252716
## final value 20037.068090
## converged
## # weights: 9
## initial value 23518.225651
## final value 20040.034000
## converged
## # weights: 25
## initial value 23361.105114
## final value 20040.034000
## converged
## # weights: 41
## initial value 23024.409963
## final value 20040.034000
## converged
## # weights: 9
## initial value 22873.466034
## iter 10 value 20046.600571
## final value 20045.544129
## converged
## # weights: 25
## initial value 23753.519279
## iter 10 value 20044.878607

```

```

## final value 20044.009812
## converged
## # weights: 41
## initial value 24262.284940
## iter 10 value 20044.837840
## iter 20 value 20043.350580
## iter 20 value 20043.350417
## iter 20 value 20043.350358
## final value 20043.350358
## converged
## # weights: 9
## initial value 21858.105920
## iter 10 value 20048.873065
## iter 20 value 20040.135907
## iter 20 value 20040.135867
## final value 20040.135867
## converged
## # weights: 25
## initial value 22359.832142
## iter 10 value 20052.777401
## iter 20 value 20040.180921
## final value 20040.045601
## converged
## # weights: 41
## initial value 22978.889721
## iter 10 value 20061.130844
## iter 20 value 20040.277230
## final value 20040.043723
## converged
## # weights: 9
## initial value 23090.996845
## final value 19988.520500
## converged
## # weights: 25
## initial value 22737.034924
## final value 19988.520500
## converged
## # weights: 41
## initial value 22382.376059
## final value 19988.520500
## converged
## # weights: 9
## initial value 22095.858318
## iter 10 value 19995.637948
## final value 19994.029224
## converged
## # weights: 25
## initial value 23099.121527
## iter 10 value 19993.809170
## final value 19992.495405
## converged
## # weights: 41
## initial value 23955.806204
## iter 10 value 19999.934812

```

```

## iter 20 value 19991.838971
## final value 19991.836148
## converged
## # weights: 9
## initial value 22112.512177
## iter 10 value 19998.655360
## iter 20 value 19988.637347
## iter 20 value 19988.637300
## final value 19988.637300
## converged
## # weights: 25
## initial value 23035.437572
## iter 10 value 20001.222607
## iter 20 value 19988.666945
## final value 19988.537146
## converged
## # weights: 41
## initial value 23525.684101
## iter 10 value 20004.433837
## iter 20 value 19988.703968
## final value 19988.531034
## converged
## # weights: 9
## initial value 23552.052299
## final value 20054.760100
## converged
## # weights: 25
## initial value 23300.668471
## final value 20054.760100
## converged
## # weights: 41
## initial value 21321.328908
## final value 20054.760100
## converged
## # weights: 9
## initial value 22466.589543
## iter 10 value 20061.385457
## final value 20060.271004
## converged
## # weights: 25
## initial value 23372.993944
## iter 10 value 20059.880193
## final value 20058.736541
## converged
## # weights: 41
## initial value 23456.060702
## iter 10 value 20058.747530
## final value 20058.076924
## converged
## # weights: 9
## initial value 21735.144224
## iter 10 value 20062.200232
## iter 20 value 20054.845879
## iter 20 value 20054.845845

```



```

## final value 20054.845845
## converged
## # weights: 25
## initial value 23582.854897
## iter 10 value 20069.636209
## iter 20 value 20054.931610
## final value 20054.774321
## converged
## # weights: 41
## initial value 22249.980775
## iter 10 value 20073.284424
## iter 20 value 20054.973671
## final value 20054.769082
## converged
## # weights: 9
## initial value 23624.579094
## final value 20047.567600
## converged
## # weights: 25
## initial value 22831.301301
## final value 20047.567600
## converged
## # weights: 41
## initial value 23782.152838
## final value 20047.567600
## converged
## # weights: 9
## initial value 21609.455773
## iter 10 value 20056.649863
## final value 20053.078046
## converged
## # weights: 25
## initial value 21773.252484
## iter 10 value 20052.938597
## final value 20051.543734
## converged
## # weights: 41
## initial value 24645.946322
## iter 10 value 20059.904377
## iter 20 value 20050.887659
## final value 20050.884089
## converged
## # weights: 9
## initial value 22249.999863
## iter 10 value 20056.607506
## iter 20 value 20047.671823
## iter 20 value 20047.671781
## final value 20047.671781
## converged
## # weights: 25
## initial value 22006.666162
## iter 10 value 20060.761823
## iter 20 value 20047.719719
## final value 20047.581785

```

```

## converged
## # weights: 41
## initial value 23937.897491
## iter 10 value 20060.729819
## iter 20 value 20047.719350
## final value 20047.579485
## converged
## # weights: 9
## initial value 23200.781163
## final value 19993.447600
## converged
## # weights: 25
## initial value 22658.900302
## final value 19993.447600
## converged
## # weights: 41
## initial value 23199.504424
## final value 19993.447600
## converged
## # weights: 9
## initial value 22379.896341
## iter 10 value 20000.795197
## final value 19998.956432
## converged
## # weights: 25
## initial value 22549.479902
## iter 10 value 19997.727112
## final value 19997.422607
## converged
## # weights: 41
## initial value 24226.920711
## iter 10 value 19999.967067
## iter 20 value 19996.764202
## final value 19996.763309
## converged
## # weights: 9
## initial value 21556.295773
## iter 10 value 20000.055240
## iter 20 value 19993.523781
## iter 20 value 19993.523750
## final value 19993.523750
## converged
## # weights: 25
## initial value 22672.377014
## iter 10 value 20008.295282
## iter 20 value 19993.618782
## final value 19993.460569
## converged
## # weights: 41
## initial value 23298.164317
## iter 10 value 20012.076984
## iter 20 value 19993.662382
## final value 19993.457730
## converged

```

```

## # weights: 9
## initial value 22789.852400
## final value 19922.747600
## converged
## # weights: 25
## initial value 23037.317650
## final value 19922.747600
## converged
## # weights: 41
## initial value 22634.266878
## final value 19922.747600
## converged
## # weights: 9
## initial value 23327.257096
## iter 10 value 19928.911530
## final value 19928.255220
## converged
## # weights: 25
## initial value 22739.160496
## iter 10 value 19931.503512
## iter 20 value 19926.723126
## final value 19926.721832
## converged
## # weights: 41
## initial value 22121.145861
## iter 10 value 19929.439765
## iter 20 value 19926.062773
## iter 20 value 19926.062692
## iter 20 value 19926.062686
## final value 19926.062686
## converged
## # weights: 9
## initial value 22828.928217
## iter 10 value 19933.185194
## iter 20 value 19922.867937
## iter 20 value 19922.867889
## final value 19922.867889
## converged
## # weights: 25
## initial value 22793.165866
## iter 10 value 19936.193140
## iter 20 value 19922.902617
## final value 19922.762827
## converged
## # weights: 41
## initial value 21428.554573
## iter 10 value 19936.280791
## iter 20 value 19922.903627
## final value 19922.756668
## converged
## # weights: 9
## initial value 23619.687804
## final value 20039.453200
## converged

```

```

## # weights: 25
## initial value 23199.074114
## final value 20039.453200
## converged
## # weights: 41
## initial value 22752.298192
## final value 20039.453200
## converged
## # weights: 9
## initial value 22070.903819
## iter 10 value 20049.099811
## iter 20 value 20044.963413
## iter 20 value 20044.963376
## final value 20044.963376
## converged
## # weights: 25
## initial value 21776.499129
## iter 10 value 20045.549894
## iter 20 value 20043.430013
## final value 20043.429059
## converged
## # weights: 41
## initial value 23441.471750
## iter 10 value 20054.467261
## iter 20 value 20042.769746
## iter 20 value 20042.769602
## iter 20 value 20042.769574
## final value 20042.769574
## converged
## # weights: 9
## initial value 22598.429303
## iter 10 value 20050.491930
## iter 20 value 20039.580468
## iter 20 value 20039.580417
## final value 20039.580417
## converged
## # weights: 25
## initial value 22531.525878
## iter 10 value 20052.472932
## iter 20 value 20039.603307
## final value 20039.470606
## converged
## # weights: 41
## initial value 22199.975817
## iter 10 value 20057.935504
## iter 20 value 20039.666286
## final value 20039.463389
## converged
## # weights: 9
## initial value 24018.976843
## final value 20044.507700
## converged
## # weights: 25
## initial value 23002.316701

```

```

## final value 20044.507700
## converged
## # weights: 41
## initial value 24011.021081
## final value 20044.507700
## converged
## # weights: 9
## initial value 23214.113101
## iter 10 value 20050.587393
## final value 20050.018047
## converged
## # weights: 25
## initial value 22976.483807
## iter 10 value 20049.195700
## final value 20048.483674
## converged
## # weights: 41
## initial value 22395.844505
## iter 10 value 20060.862001
## iter 20 value 20047.824992
## final value 20047.824289
## converged
## # weights: 9
## initial value 22330.892984
## iter 10 value 20054.973693
## iter 20 value 20044.628365
## iter 20 value 20044.628316
## final value 20044.628316
## converged
## # weights: 25
## initial value 21780.598484
## iter 10 value 20054.861508
## iter 20 value 20044.627071
## final value 20044.519523
## converged
## # weights: 41
## initial value 21868.914765
## iter 10 value 20058.286991
## iter 20 value 20044.666564
## final value 20044.517736
## converged
## # weights: 9
## initial value 23254.655451
## final value 20004.341200
## converged
## # weights: 25
## initial value 23593.290496
## final value 20004.341200
## converged
## # weights: 41
## initial value 22665.733401
## final value 20004.341200
## converged
## # weights: 9

```

```

## initial value 23706.687714
## iter 10 value 20012.108806
## final value 20009.850259
## converged
## # weights: 25
## initial value 23272.337650
## iter 10 value 20009.638349
## final value 20008.316303
## converged
## # weights: 41
## initial value 21896.670844
## iter 10 value 20021.442229
## iter 20 value 20007.658586
## final value 20007.657033
## converged
## # weights: 9
## initial value 21711.543980
## iter 10 value 20011.780220
## iter 20 value 20004.426966
## iter 20 value 20004.426932
## final value 20004.426932
## converged
## # weights: 25
## initial value 22612.022734
## iter 10 value 20020.199250
## iter 20 value 20004.524031
## final value 20004.352987
## converged
## # weights: 41
## initial value 22247.135299
## iter 10 value 20021.131187
## iter 20 value 20004.534775
## final value 20004.350540
## converged
## # weights: 9
## initial value 22790.352814
## final value 20012.190500
## converged
## # weights: 25
## initial value 22865.902542
## final value 20012.190500
## converged
## # weights: 41
## initial value 22271.898456
## final value 20012.190500
## converged
## # weights: 9
## initial value 22445.492380
## iter 10 value 20020.156381
## final value 20017.699764
## converged
## # weights: 25
## initial value 21738.148995
## iter 10 value 20018.565595

```

```

## iter 20 value 20016.165850
## iter 20 value 20016.165792
## iter 20 value 20016.165788
## final value 20016.165788
## converged
## # weights: 41
## initial value 21335.687809
## iter 10 value 20017.937703
## final value 20015.506380
## converged
## # weights: 9
## initial value 23193.756073
## iter 10 value 20021.664150
## iter 20 value 20012.299724
## iter 20 value 20012.299680
## final value 20012.299680
## converged
## # weights: 25
## initial value 23571.105970
## iter 10 value 20024.243129
## iter 20 value 20012.329457
## final value 20012.204631
## converged
## # weights: 41
## initial value 24175.597578
## iter 10 value 20024.530073
## iter 20 value 20012.332766
## final value 20012.203788
## converged
## # weights: 9
## initial value 22983.262395
## final value 20007.816500
## converged
## # weights: 25
## initial value 21472.699510
## final value 20007.816500
## converged
## # weights: 41
## initial value 22803.095745
## final value 20007.816500
## converged
## # weights: 9
## initial value 22351.563820
## iter 10 value 20015.491654
## final value 20013.325664
## converged
## # weights: 25
## initial value 22495.844501
## iter 10 value 20016.616129
## iter 20 value 20011.792267
## final value 20011.791753
## converged
## # weights: 41
## initial value 23235.997768

```

```

## iter 10 value 20021.685740
## iter 20 value 20011.134317
## final value 20011.132387
## converged
## # weights: 9
## initial value 22643.073388
## iter 10 value 20018.787236
## iter 20 value 20007.942984
## iter 20 value 20007.942933
## final value 20007.942933
## converged
## # weights: 25
## initial value 22447.421172
## iter 10 value 20022.011473
## iter 20 value 20007.980157
## final value 20007.829047
## converged
## # weights: 41
## initial value 24001.202357
## iter 10 value 20021.402169
## iter 20 value 20007.973132
## final value 20007.829981
## converged
## # weights: 9
## initial value 22440.235853
## final value 20043.189200
## converged
## # weights: 25
## initial value 23416.549525
## final value 20043.189200
## converged
## # weights: 41
## initial value 22441.343592
## final value 20043.189200
## converged
## # weights: 9
## initial value 22206.878891
## iter 10 value 20050.101171
## final value 20048.699457
## converged
## # weights: 25
## initial value 23352.916065
## iter 10 value 20049.212574
## final value 20047.165110
## converged
## # weights: 41
## initial value 23487.182329
## iter 10 value 20047.142748
## final value 20046.505635
## converged
## # weights: 9
## initial value 23461.199872
## iter 10 value 20052.582237
## iter 20 value 20043.297494

```



```

## iter 20 value 20043.297451
## final value 20043.297451
## converged
## # weights: 25
## initial value 22651.974293
## iter 10 value 20059.081687
## iter 20 value 20043.372428
## final value 20043.200316
## converged
## # weights: 41
## initial value 22686.149812
## iter 10 value 20060.130016
## iter 20 value 20043.384514
## final value 20043.200424
## converged
## # weights: 9
## initial value 23693.622044
## final value 20037.160100
## converged
## # weights: 25
## initial value 22628.742725
## final value 20037.160100
## converged
## # weights: 41
## initial value 22363.406499
## final value 20037.160100
## converged
## # weights: 9
## initial value 23722.754836
## iter 10 value 20046.203914
## iter 20 value 20042.670154
## iter 20 value 20042.670151
## final value 20042.670151
## converged
## # weights: 25
## initial value 22259.129721
## iter 10 value 20048.553806
## iter 20 value 20041.154281
## final value 20041.135873
## converged
## # weights: 41
## initial value 22820.847368
## iter 10 value 20053.292864
## iter 20 value 20040.476623
## iter 20 value 20040.476479
## iter 20 value 20040.476451
## final value 20040.476451
## converged
## # weights: 9
## initial value 22494.960358
## iter 10 value 20047.824899
## iter 20 value 20037.283057
## iter 20 value 20037.283008
## final value 20037.283008

```

```

## converged
## # weights: 25
## initial value 21843.242229
## iter 10 value 20046.934269
## iter 20 value 20037.272788
## final value 20037.173414
## converged
## # weights: 41
## initial value 23193.100340
## iter 10 value 20054.703484
## iter 20 value 20037.362361
## final value 20037.173962
## converged
## # weights: 9
## initial value 22367.388347
## final value 20050.709200
## converged
## # weights: 25
## initial value 23090.085040
## final value 20050.709200
## converged
## # weights: 41
## initial value 23369.093079
## final value 20050.709200
## converged
## # weights: 9
## initial value 22174.367746
## iter 10 value 20056.380520
## final value 20056.219788
## converged
## # weights: 25
## initial value 23023.631240
## iter 10 value 20055.414773
## final value 20054.685302
## converged
## # weights: 41
## initial value 23438.983779
## iter 10 value 20054.420412
## final value 20054.025773
## converged
## # weights: 9
## initial value 21884.522117
## iter 10 value 20059.226950
## iter 20 value 20050.807403
## iter 20 value 20050.807364
## final value 20050.807364
## converged
## # weights: 25
## initial value 22230.357996
## iter 10 value 20062.809476
## iter 20 value 20050.848707
## final value 20050.724124
## converged
## # weights: 41

```

```

## initial value 23941.335875
## iter 10 value 20065.742132
## iter 20 value 20050.882518
## final value 20050.723783
## converged
## # weights: 9
## initial value 23855.436509
## final value 20042.285200
## converged
## # weights: 25
## initial value 23587.657800
## final value 20042.285200
## converged
## # weights: 41
## initial value 21468.462349
## final value 20042.285200
## converged
## # weights: 9
## initial value 21530.839797
## iter 10 value 20047.917466
## final value 20047.795391
## converged
## # weights: 25
## initial value 21855.132945
## iter 10 value 20049.772505
## final value 20046.261066
## converged
## # weights: 41
## initial value 23208.905550
## iter 10 value 20057.124101
## iter 20 value 20045.601892
## final value 20045.601571
## converged
## # weights: 9
## initial value 22130.125235
## iter 10 value 20052.032218
## iter 20 value 20042.397575
## iter 20 value 20042.397531
## final value 20042.397531
## converged
## # weights: 25
## initial value 22871.011980
## iter 10 value 20055.797537
## iter 20 value 20042.440987
## final value 20042.297781
## converged
## # weights: 41
## initial value 21939.184805
## iter 10 value 20059.726198
## iter 20 value 20042.486281
## final value 20042.295850
## converged
## # weights: 9
## initial value 22695.299274

```

```

## final value 20044.247600
## converged
## # weights: 25
## initial value 21513.564544
## final value 20044.247600
## converged
## # weights: 41
## initial value 21956.365698
## final value 20044.247600
## converged
## # weights: 9
## initial value 21849.929423
## iter 10 value 20050.156368
## final value 20049.757868
## converged
## # weights: 25
## initial value 23056.261969
## iter 10 value 20049.177320
## final value 20048.223539
## converged
## # weights: 41
## initial value 23130.460042
## iter 10 value 20051.033849
## iter 20 value 20047.566639
## final value 20047.564107
## converged
## # weights: 9
## initial value 23442.874304
## iter 10 value 20053.302533
## iter 20 value 20044.351996
## iter 20 value 20044.351955
## final value 20044.351955
## converged
## # weights: 25
## initial value 21537.805428
## iter 10 value 20053.381792
## iter 20 value 20044.352910
## final value 20044.259225
## converged
## # weights: 41
## initial value 23895.920380
## iter 10 value 20061.281461
## iter 20 value 20044.443987
## final value 20044.259092
## converged
## # weights: 9
## initial value 22688.946638
## final value 19929.305200
## converged
## # weights: 25
## initial value 22985.138380
## final value 19929.305200
## converged
## # weights: 41

```

```

## initial value 23311.576783
## final value 19929.305200
## converged
## # weights: 9
## initial value 23323.999301
## iter 10 value 19937.188196
## final value 19934.812913
## converged
## # weights: 25
## initial value 23420.440724
## iter 10 value 19934.068591
## final value 19933.279519
## converged
## # weights: 41
## initial value 22229.381017
## iter 10 value 19942.435267
## iter 20 value 19932.623926
## final value 19932.620305
## converged
## # weights: 9
## initial value 22181.586882
## iter 10 value 19939.055771
## iter 20 value 19929.417616
## iter 20 value 19929.417571
## final value 19929.417571
## converged
## # weights: 25
## initial value 22352.293459
## iter 10 value 19942.951883
## iter 20 value 19929.462536
## final value 19929.320159
## converged
## # weights: 41
## initial value 21621.413024
## iter 10 value 19942.589493
## iter 20 value 19929.458357
## final value 19929.315553
## converged
## # weights: 9
## initial value 21930.962503
## final value 20036.750500
## converged
## # weights: 25
## initial value 22289.045402
## final value 20036.750500
## converged
## # weights: 41
## initial value 22882.965623
## final value 20036.750500
## converged
## # weights: 9
## initial value 23090.571072
## iter 10 value 20104.838834
## iter 20 value 20043.336259

```

```

## final value 20042.260524
## converged
## # weights: 25
## initial value 22880.792603
## iter 10 value 20041.488159
## final value 20040.726319
## converged
## # weights: 41
## initial value 22726.590413
## iter 10 value 20044.664875
## iter 20 value 20040.067978
## final value 20040.066823
## converged
## # weights: 9
## initial value 22825.279371
## iter 10 value 20048.632922
## iter 20 value 20036.887495
## iter 20 value 20036.887440
## final value 20036.887440
## converged
## # weights: 25
## initial value 22231.561999
## iter 10 value 20052.733315
## iter 20 value 20036.934769
## final value 20036.764360
## converged
## # weights: 41
## initial value 21800.657955
## iter 10 value 20051.355150
## iter 20 value 20036.918880
## final value 20036.760695
## converged
## # weights: 9
## initial value 23451.089554
## final value 20022.082000
## converged
## # weights: 25
## initial value 21898.403968
## final value 20022.082000
## converged
## # weights: 41
## initial value 23093.456521
## final value 20022.082000
## converged
## # weights: 9
## initial value 23487.438247
## iter 10 value 20029.273736
## final value 20027.591500
## converged
## # weights: 25
## initial value 21682.916705
## iter 10 value 20027.265794
## final value 20026.057380
## converged

```

```

## # weights: 41
## initial value 23343.061492
## iter 10 value 20028.886827
## iter 20 value 20025.398066
## iter 20 value 20025.398005
## iter 20 value 20025.397979
## final value 20025.397979
## converged
## # weights: 9
## initial value 21933.256277
## iter 10 value 20030.241448
## iter 20 value 20022.176072
## iter 20 value 20022.176034
## final value 20022.176034
## converged
## # weights: 25
## initial value 23606.656168
## iter 10 value 20035.307488
## iter 20 value 20022.234479
## final value 20022.097062
## converged
## # weights: 41
## initial value 23691.428065
## iter 10 value 20038.321428
## iter 20 value 20022.269228
## final value 20022.094880
## converged
## # weights: 9
## initial value 21601.265598
## final value 20038.766500
## converged
## # weights: 25
## initial value 24251.904086
## final value 20038.766500
## converged
## # weights: 41
## initial value 22712.180181
## final value 20038.766500
## converged
## # weights: 9
## initial value 21975.929508
## iter 10 value 20044.493884
## final value 20044.276542
## converged
## # weights: 25
## initial value 23194.558120
## iter 10 value 20046.550427
## iter 20 value 20042.770579
## final value 20042.742266
## converged
## # weights: 41
## initial value 22447.410979
## iter 10 value 20055.385474
## iter 20 value 20042.083193

```

```

## final value 20042.082813
## converged
## # weights: 9
## initial value 22217.758775
## iter 10 value 20049.275962
## iter 20 value 20038.887666
## iter 20 value 20038.887617
## final value 20038.887617
## converged
## # weights: 25
## initial value 23277.751512
## iter 10 value 20054.577347
## iter 20 value 20038.948787
## final value 20038.786926
## converged
## # weights: 41
## initial value 23185.632814
## iter 10 value 20058.729275
## iter 20 value 20038.996655
## final value 20038.779176
## converged
## # weights: 9
## initial value 23138.186110
## final value 19987.306000
## converged
## # weights: 25
## initial value 23909.695232
## final value 19987.306000
## converged
## # weights: 41
## initial value 21704.126438
## final value 19987.306000
## converged
## # weights: 9
## initial value 22840.974514
## iter 10 value 19996.170592
## iter 20 value 19992.814722
## iter 20 value 19992.814719
## final value 19992.814719
## converged
## # weights: 25
## initial value 22658.200424
## iter 10 value 19992.116218
## final value 19991.280893
## converged
## # weights: 41
## initial value 23766.104608
## iter 10 value 19992.175074
## iter 20 value 19990.621855
## final value 19990.621463
## converged
## # weights: 9
## initial value 22281.545350
## iter 10 value 19997.147551

```



```
## iter 20 value 19987.419465
## iter 20 value 19987.419420
## final value 19987.419420
## converged
## # weights: 25
## initial value 22942.316645
## iter 10 value 20002.215905
## iter 20 value 19987.477900
## final value 19987.318755
## converged
## # weights: 41
## initial value 24248.552736
## iter 10 value 19998.254659
## iter 20 value 19987.432229
## final value 19987.322461
## converged
## # weights: 9
## initial value 21832.705901
## iter 10 value 20072.120430
## iter 20 value 20063.273290
## iter 20 value 20063.273249
## final value 20063.273249
## 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  3.198331e-01  6.511659
##   3     0e+00  7.082226      NA      6.511475
##   3     1e-04  7.082226  4.566133e-05  6.511475
##   3     1e-01  7.082337  3.277002e-01  6.511597
##   5     0e+00  7.082226      NA      6.511475
##   5     1e-04  7.082226  1.236284e-04  6.511475
##   5     1e-01  7.082317  3.307867e-01  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 closest Rsquared is **3.198331e-01** for a model with decay 1e-01 and RMSE of 7.082396.

**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 <- data.frame(Sales, Price, Population, Advertising, Age, Income, Education)
```

Prediction using the network.

```
prediction_sales <- predict(nnet_Cars, test_data)

prediction_sales
```

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

The model predicts that only **1** sale will occur with the given record based on the Neural Network created using the instructions provided.