ADM\_Assignment\_3

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**============================PART-A=============================**

**Question 1: What is the difference between SVM with hard margin and soft margin?**

Support Vector Machine (SVM) is a machine learning algorithm used for both classification and regression analysis. Two variants of SVM are hard margin and soft margin, which differ in the flexibility allowed in the placement of the decision boundary.

Hard margin SVM aims to find a decision boundary that separates two classes with maximum margin, without any misclassifications or errors. This is only possible if the data is linearly separable, meaning there is a clear gap between the classes. The maximum margin is defined as the minimum distance between the decision boundary and the nearest training data points. Hard margin SVM is sensitive to outliers and overfits when the margin is small.

Soft margin SVM allows some degree of misclassification in the training data by introducing a penalty term for misclassifications. This approach is more flexible in finding a decision boundary that handles non-linearly separable data. The degree of flexibility is controlled by the regularization parameter C, which balances maximizing the margin and minimizing misclassification errors. Larger C values result in smaller margins and fewer misclassifications, while smaller C values lead to larger margins and more misclassifications. Soft margin SVM is preferred in real-world applications because data is often noisy or overlapping, and linearly separable data is rare.

The difference between hard margin and soft margin SVM lies in data separability. Hard margin SVM can find the decision boundary with maximum margin without misclassifications only when data is linearly separable. On the other hand, soft margin SVM is more suitable for non-linearly separable data by allowing some degree of misclassification while finding the decision boundary. Soft margin SVM is also useful for linearly separable data with a small margin, where overfitting or sensitivity to outliers may occur.

In summary, hard margin and soft margin SVM are two SVM variants that approach decision boundary differently. Hard margin SVM aims for maximum margin without misclassifications, while soft margin SVM allows some misclassification to handle non-linearly separable data. Soft margin SVM is preferred in real-world applications because of its flexibility in handling noisy or overlapping data.

**Question 2: What is the role of the cost parameter, C, in SVM (with soft margin) classifiers?**

The cost parameter, C, is a vital component in SVM with soft margin classifiers as it regulates the trade-off between maximizing the margin and minimizing classification errors. As a regularization parameter, it assigns weights to constraints and determines how strictly the model should abide by them.

A lower C value results in a softer margin, permitting more misclassifications, indicating that the model is more tolerant of errors and prioritizes discovering the largest margin. Conversely, a higher C value creates a stricter margin, producing fewer misclassifications, and the model tries to minimize errors in the training set, leading to a smaller margin.

When C is set to infinity, no slack variables exist, and the model strictly follows constraints. Thus, all training data points must be correctly classified, making it akin to the hard margin SVM.

In essence, the cost parameter, C, influences how much the model is penalized for misclassifications, creating a balance between margin size and classification error. The optimal C value is problem-specific, depending on the desired trade-off between model complexity and accuracy. A smaller C value produces a simpler model, while a larger C value generates a more intricate model with higher accuracy in the training set.

**Question 3: Will the following perceptron be activated (2.8 is the activation threshold)**

The perceptron is a linear classification algorithm that employs a threshold function and a weighted sum of inputs to make predictions. The perceptron’s output is determined by the sign of the weighted sum, and the threshold function decides whether the output should be +1 or -1.

In this instance, the perceptron’s weighted sum is calculated as (0.1 \* 0.8) + (1 \* 1.1 \* (-0.2)) = 0.08 - 2.22 = -2.14. Since the result is negative, the perceptron’s activation function will output -1. Hence, the perceptron will not be activated.

**Question4: What is the role of alpha, the learning rate in the delta rule?**

The delta rule is a gradient descent-based learning algorithm that aims to find the best weights to fit the training examples. The learning rate, denoted by alpha, is a crucial hyperparameter that determines the speed and stability of weight updates. A high learning rate causes the weights to update quickly, while a low learning rate leads to more stable changes. The optimal learning rate ensures the algorithm’s fastest convergence, so it’s often recommended to start with a high learning rate and gradually reduce it to fine-tune the weights.

The size of the gradient considered during gradient descent is controlled by the learning rate, alpha. A high alpha takes a larger part of the current gradient, while a low alpha takes a smaller part. Thus, alpha is named the learning rate because it influences the weight updates’ speed based on the input, output, and target. A higher alpha leads to faster weight changes, while a lower alpha results in smoother changes. Typically, using a high learning rate at the beginning helps approach the target and then shifting to a smaller rate results in smoothly reaching the optimal weight values.

**=============================PART-B============================**

## Importing the required Packages

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(ISLR)  
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

## Selecting the required attributes.

Carseats\_required = Carseats %>% select("Sales", "Price","Advertising","Population","Age","Income","Education")

**Question B1. 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?**

tc = trainControl(method = "repeatedcv", number = 10, repeats = 3)  
set.seed(143)  
linearsvm = train(Sales~., data = Carseats\_required, method = "svmLinear",  
 trControl=tc,preProcess = c("center", "scale"),tuneLength = 10)  
linearsvm

## 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, 361, 360, 360, 360, 360, ...   
## Resampling results:  
##   
## RMSE Rsquared MAE   
## 2.261506 0.364091 1.825005  
##   
## Tuning parameter 'C' was held constant at a value of 1

## In the above model, I added a train control section that adds cross validation to the model.

## R-squared value is 0.3532603

**Question B2 - Customize the search grid by checking the model’s performance for C parameter of0.1,.5,1 and 10 using 2 repeats of 5-fold cross validation?**

grid = expand.grid(C = c(0.1,0.5,1,10))  
  
tc2 = trainControl(method = "repeatedcv", number = 5, repeats = 2)  
  
linearsvm\_grid = train(Sales~., data = Carseats\_required, method = "svmLinear",trControl=tc2,preProcess = c("center", "scale"),tuneGrid = grid,tuneLength = 10)  
linearsvm\_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, 321, 319, 320, 320, 320, ...   
## Resampling results across tuning parameters:  
##   
## C RMSE Rsquared MAE   
## 0.1 2.278002 0.3587961 1.827667  
## 0.5 2.278275 0.3580688 1.828202  
## 1.0 2.280269 0.3575282 1.830420  
## 10.0 2.280439 0.3575484 1.830520  
##   
## RMSE was used to select the optimal model using the smallest value.  
## The final value used for the model was C = 0.1.

## I have customized the search grid with the given values. The number of folds used is 5 with total repeats of 2. Hence, the best value for c when rmse considered is c=0.1 (rmse= 2.277129).

**Question B3 - 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(6354)  
number\_of\_folds <- trainControl(method = 'LOOCV', verboseIter = FALSE)  
carseats\_nnet <- train(Sales~., data = Carseats\_required, method = "nnet",  
preProcess = c("center", "scale"),trControl = number\_of\_folds)

## # weights: 9  
## initial value 23489.039098   
## final value 19990.920100   
## converged  
## # weights: 25  
## initial value 21886.204741   
## final value 19990.920100   
## converged  
## # weights: 41  
## initial value 23384.241747   
## final value 19990.920100   
## converged  
## # weights: 9  
## initial value 23009.503745   
## iter 10 value 19998.668066  
## final value 19996.428872   
## converged  
## # weights: 25  
## initial value 23199.634800   
## iter 10 value 19995.819217  
## final value 19994.895066   
## converged  
## # weights: 41  
## initial value 22311.022309   
## iter 10 value 20008.252681  
## iter 20 value 19994.286021  
## final value 19994.235718   
## converged  
## # weights: 9  
## initial value 22507.755190   
## iter 10 value 20000.618930  
## iter 20 value 19991.031920  
## iter 20 value 19991.031875  
## final value 19991.031875   
## converged  
## # weights: 25  
## initial value 21787.701353   
## iter 10 value 20001.771080  
## iter 20 value 19991.045203  
## final value 19990.932617   
## converged  
## # weights: 41  
## initial value 21941.703635   
## iter 10 value 20005.924735  
## iter 20 value 19991.093092  
## iter 30 value 19990.929087  
## iter 30 value 19990.929069  
## iter 30 value 19990.929069  
## final value 19990.929069   
## converged  
## # weights: 9  
## initial value 22031.326927   
## final value 19958.721700   
## converged  
## # weights: 25  
## initial value 22565.962692   
## final value 19958.721700   
## converged  
## # weights: 41  
## initial value 23519.062243   
## final value 19958.721700   
## converged  
## # weights: 9  
## initial value 22708.043222   
## iter 10 value 19964.645538  
## final value 19964.229895   
## converged  
## # weights: 25  
## initial value 21978.101782   
## iter 10 value 19963.603714  
## final value 19962.696311   
## converged  
## # weights: 41  
## initial value 23057.423125   
## iter 10 value 19963.422341  
## final value 19962.037084   
## converged  
## # weights: 9  
## initial value 23054.580038   
## iter 10 value 19968.383776  
## iter 20 value 19958.833096  
## iter 20 value 19958.833052  
## final value 19958.833052   
## converged  
## # weights: 25  
## initial value 22849.869162   
## iter 10 value 19973.276712  
## iter 20 value 19958.889508  
## final value 19958.734808   
## converged  
## # weights: 41  
## initial value 23698.743798   
## iter 10 value 19972.633692  
## iter 20 value 19958.882094  
## final value 19958.732812   
## converged  
## # weights: 9  
## initial value 22156.113239   
## final value 19981.086500   
## converged  
## # weights: 25  
## initial value 22422.630353   
## final value 19981.086500   
## converged  
## # weights: 41  
## initial value 22648.076426   
## final value 19981.086500   
## converged  
## # weights: 9  
## initial value 23276.336476   
## iter 10 value 19986.663899  
## final value 19986.595086   
## converged  
## # weights: 25  
## initial value 22188.229879   
## iter 10 value 19985.839326  
## final value 19985.061357   
## converged  
## # weights: 41  
## initial value 23454.632179   
## iter 10 value 20003.264762  
## iter 20 value 19984.414512  
## final value 19984.402062   
## converged  
## # weights: 9  
## initial value 22567.880071   
## iter 10 value 19991.693341  
## iter 20 value 19981.208789  
## iter 20 value 19981.208740  
## final value 19981.208740   
## converged  
## # weights: 25  
## initial value 22650.629070   
## iter 10 value 19996.345631  
## iter 20 value 19981.262426  
## final value 19981.100836   
## converged  
## # weights: 41  
## initial value 22058.365823   
## iter 10 value 19995.997107  
## iter 20 value 19981.258408  
## final value 19981.096394   
## converged  
## # weights: 9  
## initial value 21619.614343   
## final value 20022.210100   
## converged  
## # weights: 25  
## initial value 22223.321013   
## final value 20022.210100   
## converged  
## # weights: 41  
## initial value 22334.858213   
## final value 20022.210100   
## converged  
## # weights: 9  
## initial value 22603.086800   
## iter 10 value 20027.964495  
## final value 20027.719633   
## converged  
## # weights: 25  
## initial value 22679.483268   
## iter 10 value 20027.005588  
## final value 20026.185530   
## converged  
## # weights: 41  
## initial value 22780.035349   
## iter 10 value 20035.414240  
## iter 20 value 20025.526311  
## iter 20 value 20025.526164  
## iter 20 value 20025.526158  
## final value 20025.526158   
## converged  
## # weights: 9  
## initial value 22152.425393   
## iter 10 value 20032.609272  
## iter 20 value 20022.329994  
## iter 20 value 20022.329946  
## final value 20022.329946   
## converged  
## # weights: 25  
## initial value 22764.969701   
## iter 10 value 20037.636125  
## iter 20 value 20022.387950  
## final value 20022.225752   
## converged  
## # weights: 41  
## initial value 21434.598009   
## iter 10 value 20034.471832  
## iter 20 value 20022.351468  
## final value 20022.219840   
## converged  
## # weights: 9  
## initial value 22705.910823   
## final value 20053.247600   
## converged  
## # weights: 25  
## initial value 22719.519354   
## final value 20053.247600   
## converged  
## # weights: 41  
## initial value 22244.778917   
## final value 20053.247600   
## converged  
## # weights: 9  
## initial value 23420.996276   
## iter 10 value 20061.227433  
## final value 20058.758382   
## converged  
## # weights: 25  
## initial value 21827.340363   
## iter 10 value 20059.606062  
## final value 20057.223886   
## converged  
## # weights: 41  
## initial value 22069.575799   
## iter 10 value 20058.036063  
## iter 20 value 20056.564322  
## iter 20 value 20056.564290  
## iter 20 value 20056.564281  
## final value 20056.564281   
## converged  
## # weights: 9  
## initial value 22545.903855   
## iter 10 value 20064.782660  
## iter 20 value 20053.380590  
## iter 20 value 20053.380537  
## final value 20053.380537   
## converged  
## # weights: 25  
## initial value 22066.082608   
## iter 10 value 20066.049451  
## iter 20 value 20053.395195  
## final value 20053.259530   
## converged  
## # weights: 41  
## initial value 24342.986663   
## iter 10 value 20063.398730  
## iter 20 value 20053.364635  
## final value 20053.262066   
## converged  
## # weights: 9  
## initial value 23281.074597   
## final value 19966.934000   
## converged  
## # weights: 25  
## initial value 23179.364164   
## final value 19966.934000   
## converged  
## # weights: 41  
## initial value 22615.906736   
## final value 19966.934000   
## converged  
## # weights: 9  
## initial value 22652.852886   
## iter 10 value 19972.513269  
## final value 19972.442326   
## converged  
## # weights: 25  
## initial value 21774.508348   
## iter 10 value 19972.235586  
## iter 20 value 19970.908775  
## iter 20 value 19970.908665  
## iter 20 value 19970.908663  
## final value 19970.908663   
## converged  
## # weights: 41  
## initial value 23766.055401   
## iter 10 value 19971.300695  
## iter 20 value 19970.249519  
## iter 20 value 19970.249430  
## iter 20 value 19970.249424  
## final value 19970.249424   
## converged  
## # weights: 9  
## initial value 23062.431663   
## iter 10 value 19978.757692  
## iter 20 value 19967.070318  
## iter 20 value 19967.070263  
## final value 19967.070263   
## converged  
## # weights: 25  
## initial value 22359.196663   
## iter 10 value 19981.699222  
## iter 20 value 19967.104231  
## final value 19966.946830   
## converged  
## # weights: 41  
## initial value 22544.535443   
## iter 10 value 19987.263439  
## iter 20 value 19967.168382  
## final value 19966.945784   
## converged  
## # weights: 9  
## initial value 22927.097560   
## final value 20031.473200   
## converged  
## # weights: 25  
## initial value 22595.307093   
## final value 20031.473200   
## converged  
## # weights: 41  
## initial value 22392.572390   
## final value 20031.473200   
## converged  
## # weights: 9  
## initial value 22780.096078   
## iter 10 value 20037.246917  
## final value 20036.983087   
## converged  
## # weights: 25  
## initial value 23184.411553   
## iter 10 value 20036.779084  
## final value 20035.448900   
## converged  
## # weights: 41  
## initial value 22016.810970   
## iter 10 value 20047.464770  
## iter 20 value 20034.789934  
## final value 20034.789390   
## converged  
## # weights: 9  
## initial value 22924.470199   
## iter 10 value 20042.885549  
## iter 20 value 20031.604775  
## iter 20 value 20031.604723  
## final value 20031.604723   
## converged  
## # weights: 25  
## initial value 22971.172430   
## iter 10 value 20049.266856  
## iter 20 value 20031.678347  
## final value 20031.487137   
## converged  
## # weights: 41  
## initial value 23038.533760   
## iter 10 value 20052.082572  
## iter 20 value 20031.710810  
## final value 20031.486317   
## converged  
## # weights: 9  
## initial value 22805.122205   
## final value 19945.447600   
## converged  
## # weights: 25  
## initial value 22585.479753   
## final value 19945.447600   
## converged  
## # weights: 41  
## initial value 21611.523683   
## final value 19945.447600   
## converged  
## # weights: 9  
## initial value 22048.948019   
## iter 10 value 19952.543673  
## final value 19950.955487   
## converged  
## # weights: 25  
## initial value 22978.915297   
## iter 10 value 19952.766512  
## iter 20 value 19949.423180  
## final value 19949.421967   
## converged  
## # weights: 41  
## initial value 23281.064883   
## iter 10 value 19962.111177  
## iter 20 value 19948.763805  
## final value 19948.762815   
## converged  
## # weights: 9  
## initial value 22509.606864   
## iter 10 value 19955.515340  
## iter 20 value 19945.563673  
## iter 20 value 19945.563627  
## final value 19945.563627   
## converged  
## # weights: 25  
## initial value 22741.119919   
## iter 10 value 19959.504122  
## iter 20 value 19945.609661  
## final value 19945.464853   
## converged  
## # weights: 41  
## initial value 23020.191371   
## iter 10 value 19965.100552  
## iter 20 value 19945.674183  
## final value 19945.457586   
## converged  
## # weights: 9  
## initial value 21541.423939   
## final value 20032.478500   
## converged  
## # weights: 25  
## initial value 23730.233708   
## final value 20032.478500   
## converged  
## # weights: 41  
## initial value 24061.168313   
## final value 20032.478500   
## converged  
## # weights: 9  
## initial value 22396.989611   
## iter 10 value 20038.432162  
## final value 20037.988365   
## converged  
## # weights: 25  
## initial value 23286.530830   
## iter 10 value 20037.368759  
## final value 20036.454153   
## converged  
## # weights: 41  
## initial value 21667.230208   
## iter 10 value 20037.056989  
## final value 20035.794754   
## converged  
## # weights: 9  
## initial value 22289.251750   
## iter 10 value 20042.684565  
## iter 20 value 20032.596168  
## iter 20 value 20032.596121  
## final value 20032.596121   
## converged  
## # weights: 25  
## initial value 21939.037629   
## iter 10 value 20045.885046  
## iter 20 value 20032.633067  
## final value 20032.490573   
## converged  
## # weights: 41  
## initial value 22300.625921   
## iter 10 value 20049.809437  
## iter 20 value 20032.678312  
## final value 20032.489490   
## converged  
## # weights: 9  
## initial value 23425.474550   
## final value 20049.554000   
## converged  
## # weights: 25  
## initial value 23298.912861   
## final value 20049.554000   
## converged  
## # weights: 41  
## initial value 22866.101144   
## final value 20049.554000   
## converged  
## # weights: 9  
## initial value 23387.975392   
## iter 10 value 20057.161065  
## final value 20055.064669   
## converged  
## # weights: 25  
## initial value 22971.125745   
## iter 10 value 20054.543820  
## final value 20053.530211   
## converged  
## # weights: 41  
## initial value 22801.742398   
## iter 10 value 20054.106659  
## final value 20052.870656   
## converged  
## # weights: 9  
## initial value 22143.234006   
## iter 10 value 20059.337273  
## iter 20 value 20049.666793  
## iter 20 value 20049.666748  
## final value 20049.666748   
## converged  
## # weights: 25  
## initial value 22953.331187   
## iter 10 value 20062.410970  
## iter 20 value 20049.702231  
## final value 20049.567156   
## converged  
## # weights: 41  
## initial value 23907.759154   
## iter 10 value 20062.181489  
## iter 20 value 20049.699585  
## final value 20049.566131   
## converged  
## # weights: 9  
## initial value 23843.600712   
## final value 19999.010000   
## converged  
## # weights: 25  
## initial value 22714.647852   
## final value 19999.010000   
## converged  
## # weights: 41  
## initial value 22615.512699   
## final value 19999.010000   
## converged  
## # weights: 9  
## initial value 22422.774867   
## iter 10 value 20005.672652  
## final value 20004.518955   
## converged  
## # weights: 25  
## initial value 22187.202317   
## iter 10 value 20003.480656  
## final value 20002.985083   
## converged  
## # weights: 41  
## initial value 22011.758789   
## iter 10 value 20003.025271  
## final value 20002.325702   
## converged  
## # weights: 9  
## initial value 22679.019001   
## iter 10 value 20010.022375  
## iter 20 value 19999.136964  
## iter 20 value 19999.136913  
## final value 19999.136913   
## converged  
## # weights: 25  
## initial value 21965.406816   
## iter 10 value 20010.153887  
## iter 20 value 19999.138480  
## final value 19999.024352   
## converged  
## # weights: 41  
## initial value 24352.015608   
## iter 10 value 20007.629320  
## iter 20 value 19999.109374  
## final value 19999.025577   
## converged  
## # weights: 9  
## initial value 23186.623283   
## final value 19943.048500   
## converged  
## # weights: 25  
## initial value 21760.892154   
## final value 19943.048500   
## converged  
## # weights: 41  
## initial value 23591.997798   
## final value 19943.048500   
## converged  
## # weights: 9  
## initial value 22149.348816   
## iter 10 value 19950.683777  
## final value 19948.556402   
## converged  
## # weights: 25  
## initial value 22959.438193   
## iter 10 value 19948.413609  
## final value 19947.022912   
## converged  
## # weights: 41  
## initial value 22060.338122   
## iter 10 value 19947.612166  
## iter 20 value 19946.363855  
## iter 20 value 19946.363784  
## iter 20 value 19946.363762  
## final value 19946.363762   
## converged  
## # weights: 9  
## initial value 22098.217715   
## iter 10 value 19952.789184  
## iter 20 value 19943.160802  
## iter 20 value 19943.160758  
## final value 19943.160758   
## converged  
## # weights: 25  
## initial value 23926.693554   
## iter 10 value 19953.114255  
## iter 20 value 19943.164550  
## final value 19943.065311   
## converged  
## # weights: 41  
## initial value 22142.634472   
## iter 10 value 19961.104404  
## iter 20 value 19943.256670  
## final value 19943.057844   
## converged  
## # weights: 9  
## initial value 23158.846761   
## final value 20054.289700   
## converged  
## # weights: 25  
## initial value 23183.734565   
## final value 20054.289700   
## converged  
## # weights: 41  
## initial value 23656.866838   
## final value 20054.289700   
## converged  
## # weights: 9  
## initial value 22305.187122   
## iter 10 value 20059.902824  
## final value 20059.800716   
## converged  
## # weights: 25  
## initial value 21909.758541   
## iter 10 value 20060.294567  
## final value 20058.266105   
## converged  
## # weights: 41  
## initial value 22228.262801   
## iter 10 value 20069.899680  
## iter 20 value 20057.613819  
## final value 20057.606604   
## converged  
## # weights: 9  
## initial value 22162.426748   
## iter 10 value 20063.632333  
## iter 20 value 20054.397413  
## iter 20 value 20054.397370  
## final value 20054.397370   
## converged  
## # weights: 25  
## initial value 23370.231522   
## iter 10 value 20069.742609  
## iter 20 value 20054.467860  
## final value 20054.302602   
## converged  
## # weights: 41  
## initial value 21862.843092   
## iter 10 value 20071.531833  
## iter 20 value 20054.488488  
## final value 20054.300354   
## converged  
## # weights: 9  
## initial value 22746.691674   
## final value 19963.968500   
## converged  
## # weights: 25  
## initial value 21471.097420   
## final value 19963.968500   
## converged  
## # weights: 41  
## initial value 22101.017888   
## final value 19963.968500   
## converged  
## # weights: 9  
## initial value 22649.714350   
## iter 10 value 19970.263824  
## final value 19969.476763   
## converged  
## # weights: 25  
## initial value 23066.365754   
## iter 10 value 19969.526849  
## iter 20 value 19967.943363  
## iter 20 value 19967.943222  
## iter 20 value 19967.943183  
## final value 19967.943183   
## converged  
## # weights: 41  
## initial value 20690.709660   
## iter 10 value 19975.072683  
## final value 19967.283939   
## converged  
## # weights: 9  
## initial value 23408.845707   
## iter 10 value 19973.537785  
## iter 20 value 19964.078826  
## iter 20 value 19964.078782  
## final value 19964.078782   
## converged  
## # weights: 25  
## initial value 22465.667811   
## iter 10 value 19978.846353  
## iter 20 value 19964.140030  
## final value 19963.982271   
## converged  
## # weights: 41  
## initial value 22026.984684   
## iter 10 value 19981.260365  
## iter 20 value 19964.167862  
## final value 19963.978767   
## converged  
## # weights: 9  
## initial value 22123.025450   
## final value 19959.741200   
## converged  
## # weights: 25  
## initial value 23456.435502   
## final value 19959.741200   
## converged  
## # weights: 41  
## initial value 22058.975155   
## final value 19959.741200   
## converged  
## # weights: 9  
## initial value 21729.076772   
## iter 10 value 19965.560513  
## final value 19965.249367   
## converged  
## # weights: 25  
## initial value 22116.134086   
## iter 10 value 19984.304604  
## iter 20 value 19963.766046  
## final value 19963.715742   
## converged  
## # weights: 41  
## initial value 23121.585973   
## iter 10 value 19965.531290  
## iter 20 value 19963.057084  
## final value 19963.056532   
## converged  
## # weights: 9  
## initial value 23010.336105   
## iter 10 value 19970.834664  
## iter 20 value 19959.869099  
## iter 20 value 19959.869048  
## final value 19959.869048   
## converged  
## # weights: 25  
## initial value 22220.959217   
## iter 10 value 19971.271444  
## iter 20 value 19959.874135  
## final value 19959.752445   
## converged  
## # weights: 41  
## initial value 22058.845119   
## iter 10 value 19976.958841  
## iter 20 value 19959.939706  
## final value 19959.751240   
## converged  
## # weights: 9  
## initial value 22669.645158   
## final value 20003.726000   
## converged  
## # weights: 25  
## initial value 22716.314435   
## final value 20003.726000   
## converged  
## # weights: 41  
## initial value 22308.806996   
## final value 20003.726000   
## converged  
## # weights: 9  
## initial value 22645.751800   
## iter 10 value 20011.198764  
## final value 20009.234945   
## converged  
## # weights: 25  
## initial value 22882.305061   
## iter 10 value 20008.993742  
## iter 20 value 20007.701019  
## iter 20 value 20007.700948  
## iter 20 value 20007.700944  
## final value 20007.700944   
## converged  
## # weights: 41  
## initial value 22999.964293   
## iter 10 value 20020.086629  
## iter 20 value 20007.042054  
## final value 20007.041631   
## converged  
## # weights: 9  
## initial value 23281.633446   
## iter 10 value 20013.187211  
## iter 20 value 20003.835080  
## iter 20 value 20003.835037  
## final value 20003.835037   
## converged  
## # weights: 25  
## initial value 21920.713725   
## iter 10 value 20014.751415  
## iter 20 value 20003.853114  
## final value 20003.741324   
## converged  
## # weights: 41  
## initial value 21381.847917   
## iter 10 value 20016.485069  
## iter 20 value 20003.873102  
## final value 20003.736123   
## converged  
## # weights: 9  
## initial value 23290.533343   
## final value 20019.873700   
## converged  
## # weights: 25  
## initial value 23159.834758   
## final value 20019.873700   
## converged  
## # weights: 41  
## initial value 23290.191097   
## final value 20019.873700   
## converged  
## # weights: 9  
## initial value 23344.789162   
## iter 10 value 20075.816004  
## iter 20 value 20025.635241  
## final value 20025.383153   
## converged  
## # weights: 25  
## initial value 23423.832265   
## iter 10 value 20025.213728  
## final value 20023.849064   
## converged  
## # weights: 41  
## initial value 21415.339869   
## iter 10 value 20034.528888  
## iter 20 value 20023.190716  
## final value 20023.189662   
## converged  
## # weights: 9  
## initial value 22465.065471   
## iter 10 value 20029.668357  
## iter 20 value 20019.986625  
## iter 20 value 20019.986580  
## final value 20019.986580   
## converged  
## # weights: 25  
## initial value 23062.384044   
## iter 10 value 20033.197133  
## iter 20 value 20020.027309  
## final value 20019.885501   
## converged  
## # weights: 41  
## initial value 23631.344341   
## iter 10 value 20037.152885  
## iter 20 value 20020.072915  
## final value 20019.886141   
## converged  
## # weights: 9  
## initial value 22084.073173   
## final value 19935.706000   
## converged  
## # weights: 25  
## initial value 23796.950392   
## final value 19935.706000   
## converged  
## # weights: 41  
## initial value 21640.263610   
## final value 19935.706000   
## converged  
## # weights: 9  
## initial value 21850.635086   
## iter 10 value 19941.733661  
## final value 19941.213724   
## converged  
## # weights: 25  
## initial value 22688.264103   
## iter 10 value 19941.060635  
## iter 20 value 19939.680329  
## iter 20 value 19939.680229  
## iter 20 value 19939.680215  
## final value 19939.680215   
## converged  
## # weights: 41  
## initial value 22285.742623   
## iter 10 value 19940.295989  
## final value 19939.021056   
## converged  
## # weights: 9  
## initial value 22669.190138   
## iter 10 value 19947.531438  
## iter 20 value 19935.842338  
## iter 20 value 19935.842283  
## final value 19935.842283   
## converged  
## # weights: 25  
## initial value 21754.422178   
## iter 10 value 19947.286977  
## iter 20 value 19935.839520  
## final value 19935.719364   
## converged  
## # weights: 41  
## initial value 22939.120966   
## iter 10 value 19953.342533  
## iter 20 value 19935.909335  
## final value 19935.716936   
## converged  
## # weights: 9  
## initial value 22961.354864   
## final value 19896.502000   
## converged  
## # weights: 25  
## initial value 22580.073012   
## final value 19896.502000   
## converged  
## # weights: 41  
## initial value 21704.425482   
## final value 19896.502000   
## converged  
## # weights: 9  
## initial value 23108.085682   
## iter 10 value 19902.060784  
## final value 19902.009265   
## converged  
## # weights: 25  
## initial value 23096.032025   
## iter 10 value 19901.898743  
## iter 20 value 19900.476124  
## iter 20 value 19900.476054  
## iter 20 value 19900.476045  
## final value 19900.476045   
## converged  
## # weights: 41  
## initial value 23669.506091   
## iter 10 value 19912.083895  
## iter 20 value 19899.819438  
## final value 19899.816904   
## converged  
## # weights: 9  
## initial value 23641.010303   
## iter 10 value 19904.707636  
## iter 20 value 19896.596605  
## iter 20 value 19896.596567  
## final value 19896.596567   
## converged  
## # weights: 25  
## initial value 22213.826322   
## iter 10 value 19910.386670  
## iter 20 value 19896.662079  
## final value 19896.519545   
## converged  
## # weights: 41  
## initial value 21129.216028   
## iter 10 value 19905.414032  
## iter 20 value 19896.604749  
## final value 19896.510594   
## converged  
## # weights: 9  
## initial value 23812.263761   
## final value 20003.417200   
## converged  
## # weights: 25  
## initial value 22144.799847   
## final value 20003.417200   
## converged  
## # weights: 41  
## initial value 22455.585579   
## final value 20003.417200   
## converged  
## # weights: 9  
## initial value 22834.145256   
## iter 10 value 20009.618962  
## final value 20008.926246   
## converged  
## # weights: 25  
## initial value 23270.710380   
## iter 10 value 20008.418266  
## final value 20007.392402   
## converged  
## # weights: 41  
## initial value 22473.448209   
## iter 10 value 20007.773136  
## iter 20 value 20006.733070  
## iter 20 value 20006.732963  
## iter 20 value 20006.732956  
## final value 20006.732956   
## converged  
## # weights: 9  
## initial value 23101.576421   
## iter 10 value 20012.939575  
## iter 20 value 20003.526986  
## iter 20 value 20003.526942  
## final value 20003.526942   
## converged  
## # weights: 25  
## initial value 23663.703475   
## iter 10 value 20016.026604  
## iter 20 value 20003.562577  
## final value 20003.432892   
## converged  
## # weights: 41  
## initial value 22141.626009   
## iter 10 value 20019.967687  
## iter 20 value 20003.608014  
## final value 20003.426897   
## converged  
## # weights: 9  
## initial value 22344.904357   
## final value 20033.902000   
## converged  
## # weights: 25  
## initial value 22567.803009   
## final value 20033.902000   
## converged  
## # weights: 41  
## initial value 23543.826932   
## final value 20033.902000   
## converged  
## # weights: 9  
## initial value 21532.818596   
## iter 10 value 20040.851829  
## final value 20039.411923   
## converged  
## # weights: 25  
## initial value 22048.338352   
## iter 10 value 20045.524411  
## iter 20 value 20037.877974  
## final value 20037.877680   
## converged  
## # weights: 41  
## initial value 21583.911014   
## iter 10 value 20038.165236  
## iter 20 value 20037.218322  
## iter 20 value 20037.218223  
## iter 20 value 20037.218208  
## final value 20037.218208   
## converged  
## # weights: 9  
## initial value 22749.667899   
## iter 10 value 20045.895304  
## iter 20 value 20034.040273  
## iter 20 value 20034.040218  
## final value 20034.040218   
## converged  
## # weights: 25  
## initial value 22529.473477   
## iter 10 value 20046.853499  
## iter 20 value 20034.051321  
## final value 20033.923146   
## converged  
## # weights: 41  
## initial value 21482.714898   
## iter 10 value 20045.046567  
## iter 20 value 20034.030488  
## final value 20033.911610   
## converged  
## # weights: 9  
## initial value 23057.474717   
## final value 19939.293200   
## converged  
## # weights: 25  
## initial value 23178.432018   
## final value 19939.293200   
## converged  
## # weights: 41  
## initial value 23629.626046   
## final value 19939.293200   
## converged  
## # weights: 9  
## initial value 21751.455325   
## iter 10 value 19945.002711  
## final value 19944.800965   
## converged  
## # weights: 25  
## initial value 23020.398199   
## iter 10 value 19943.675140  
## final value 19943.267512   
## converged  
## # weights: 41  
## initial value 22208.110136   
## iter 10 value 19944.603231  
## iter 20 value 19942.608346  
## iter 20 value 19942.608284  
## iter 20 value 19942.608262  
## final value 19942.608262   
## converged  
## # weights: 9  
## initial value 21900.619123   
## iter 10 value 19947.858975  
## iter 20 value 19939.391957  
## iter 20 value 19939.391917  
## final value 19939.391917   
## converged  
## # weights: 25  
## initial value 22036.473655   
## iter 10 value 19952.276185  
## iter 20 value 19939.442884  
## final value 19939.309230   
## converged  
## # weights: 41  
## initial value 22906.828365   
## iter 10 value 19958.357578  
## iter 20 value 19939.512997  
## final value 19939.303670   
## converged  
## # weights: 9  
## initial value 23630.001119   
## final value 20046.523700   
## converged  
## # weights: 25  
## initial value 21387.886253   
## final value 20046.523700   
## converged  
## # weights: 41  
## initial value 21962.326651   
## final value 20046.523700   
## converged  
## # weights: 9  
## initial value 22156.867612   
## iter 10 value 20053.680987  
## final value 20052.034137   
## converged  
## # weights: 25  
## initial value 22142.630214   
## iter 10 value 20051.976752  
## final value 20050.499760   
## converged  
## # weights: 41  
## initial value 21530.478363   
## iter 10 value 20051.253722  
## final value 20049.840293   
## converged  
## # weights: 9  
## initial value 23492.079914   
## iter 10 value 20055.390539  
## iter 20 value 20046.625928  
## iter 20 value 20046.625887  
## final value 20046.625887   
## converged  
## # weights: 25  
## initial value 23241.851449   
## iter 10 value 20058.875470  
## iter 20 value 20046.666106  
## final value 20046.536723   
## converged  
## # weights: 41  
## initial value 22410.711358   
## iter 10 value 20067.875222  
## iter 20 value 20046.769866  
## final value 20046.533553   
## converged  
## # weights: 9  
## initial value 22179.012905   
## final value 20039.453200   
## converged  
## # weights: 25  
## initial value 22546.099313   
## final value 20039.453200   
## converged  
## # weights: 41  
## initial value 23372.873136   
## final value 20039.453200   
## converged  
## # weights: 9  
## initial value 22394.764267   
## iter 10 value 20045.289483  
## final value 20044.963338   
## converged  
## # weights: 25  
## initial value 22994.567419   
## iter 10 value 20046.573606  
## iter 20 value 20043.429328  
## final value 20043.429038   
## converged  
## # weights: 41  
## initial value 22276.470224   
## iter 10 value 20050.275429  
## iter 20 value 20042.773417  
## final value 20042.769597   
## converged  
## # weights: 9  
## initial value 21940.905354   
## iter 10 value 20048.977177  
## iter 20 value 20039.563004  
## iter 20 value 20039.562960  
## final value 20039.562960   
## converged  
## # weights: 25  
## initial value 21814.454137   
## iter 10 value 20050.963384  
## iter 20 value 20039.585903  
## final value 20039.465385   
## converged  
## # weights: 41  
## initial value 22294.385904   
## iter 10 value 20054.595235  
## iter 20 value 20039.627776  
## iter 30 value 20039.462349  
## iter 30 value 20039.462347  
## iter 30 value 20039.462345  
## final value 20039.462345   
## converged  
## # weights: 9  
## initial value 22673.263725   
## final value 19979.630500   
## converged  
## # weights: 25  
## initial value 23325.137226   
## final value 19979.630500   
## converged  
## # weights: 41  
## initial value 20971.637014   
## final value 19979.630500   
## converged  
## # weights: 9  
## initial value 23614.233344   
## iter 10 value 19986.391431  
## final value 19985.139070   
## converged  
## # weights: 25  
## initial value 21578.827284   
## iter 10 value 19986.097241  
## iter 20 value 19983.607328  
## final value 19983.605350   
## converged  
## # weights: 41  
## initial value 21808.960735   
## iter 10 value 19985.589826  
## iter 20 value 19982.946313  
## iter 20 value 19982.946119  
## iter 20 value 19982.946079  
## final value 19982.946079   
## converged  
## # weights: 9  
## initial value 23112.834517   
## iter 10 value 19990.017683  
## iter 20 value 19979.750256  
## iter 20 value 19979.750208  
## final value 19979.750208   
## converged  
## # weights: 25  
## initial value 23050.864421   
## iter 10 value 19995.016569  
## iter 20 value 19979.807889  
## final value 19979.642796   
## converged  
## # weights: 41  
## initial value 23030.743640   
## iter 10 value 19998.906755  
## iter 20 value 19979.852740  
## final value 19979.645342   
## converged  
## # weights: 9  
## initial value 21891.863257   
## final value 19869.960100   
## converged  
## # weights: 25  
## initial value 23038.727868   
## final value 19869.960100   
## converged  
## # weights: 41  
## initial value 22485.739110   
## final value 19869.960100   
## converged  
## # weights: 9  
## initial value 22357.599337   
## iter 10 value 19875.939903  
## final value 19875.466888   
## converged  
## # weights: 25  
## initial value 23181.270926   
## iter 10 value 19875.290029  
## final value 19873.933768   
## converged  
## # weights: 41  
## initial value 23222.748054   
## iter 10 value 19885.786276  
## iter 20 value 19873.274798  
## iter 20 value 19873.274723  
## iter 20 value 19873.274700  
## final value 19873.274700   
## converged  
## # weights: 9  
## initial value 21532.163332   
## iter 10 value 19876.827445  
## iter 20 value 19870.039275  
## iter 20 value 19870.039243  
## final value 19870.039243   
## converged  
## # weights: 25  
## initial value 23609.083046   
## iter 10 value 19881.046371  
## iter 20 value 19870.087916  
## final value 19869.976825   
## converged  
## # weights: 41  
## initial value 22957.330692   
## iter 10 value 19890.169887  
## iter 20 value 19870.193103  
## final value 19869.971823   
## converged  
## # weights: 9  
## initial value 21999.391134   
## final value 20009.441200   
## converged  
## # weights: 25  
## initial value 22369.896602   
## final value 20009.441200   
## converged  
## # weights: 41  
## initial value 22626.493188   
## final value 20009.441200   
## converged  
## # weights: 9  
## initial value 22895.838653   
## iter 10 value 20016.598601  
## final value 20014.950400   
## converged  
## # weights: 25  
## initial value 22781.420495   
## iter 10 value 20013.503194  
## final value 20013.416437   
## converged  
## # weights: 41  
## initial value 22188.541408   
## iter 10 value 20027.105880  
## iter 20 value 20012.757476  
## final value 20012.757098   
## converged  
## # weights: 9  
## initial value 22244.178733   
## iter 10 value 20020.019694  
## iter 20 value 20009.563162  
## iter 20 value 20009.563113  
## final value 20009.563113   
## converged  
## # weights: 25  
## initial value 21563.474570   
## iter 10 value 20020.232949  
## iter 20 value 20009.565620  
## final value 20009.453258   
## converged  
## # weights: 41  
## initial value 22258.759064   
## iter 10 value 20028.450614  
## iter 20 value 20009.660364  
## final value 20009.450095   
## converged  
## # weights: 9  
## initial value 23063.103119   
## final value 20044.937200   
## converged  
## # weights: 25  
## initial value 23648.354417   
## final value 20044.937200   
## converged  
## # weights: 41  
## initial value 22367.432756   
## final value 20044.937200   
## converged  
## # weights: 9  
## initial value 22520.981056   
## iter 10 value 20051.112802  
## final value 20050.447540   
## converged  
## # weights: 25  
## initial value 22227.997891   
## iter 10 value 20055.764684  
## iter 20 value 20048.914263  
## final value 20048.913206   
## converged  
## # weights: 41  
## initial value 23571.198102   
## iter 10 value 20049.047262  
## final value 20048.253650   
## converged  
## # weights: 9  
## initial value 22782.744989   
## iter 10 value 20056.845980  
## iter 20 value 20045.074499  
## iter 20 value 20045.074444  
## final value 20045.074444   
## converged  
## # weights: 25  
## initial value 22713.206735   
## iter 10 value 20057.972302  
## iter 20 value 20045.087484  
## final value 20044.949715   
## converged  
## # weights: 41  
## initial value 23012.286431   
## iter 10 value 20062.384908  
## iter 20 value 20045.138358  
## final value 20044.947937   
## converged  
## # weights: 9  
## initial value 22802.564146   
## final value 20059.210000   
## converged  
## # weights: 25  
## initial value 22105.722841   
## final value 20059.210000   
## converged  
## # weights: 41  
## initial value 22820.598175   
## final value 20059.210000   
## converged  
## # weights: 9  
## initial value 23137.772713   
## iter 10 value 20065.610890  
## final value 20064.721166   
## converged  
## # weights: 25  
## initial value 23525.283694   
## iter 10 value 20064.722397  
## final value 20063.186521   
## converged  
## # weights: 41  
## initial value 22351.396856   
## iter 10 value 20067.017237  
## iter 20 value 20062.535410  
## final value 20062.526951   
## converged  
## # weights: 9  
## initial value 22061.720353   
## iter 10 value 20067.431863  
## iter 20 value 20059.304792  
## iter 20 value 20059.304754  
## final value 20059.304754   
## converged  
## # weights: 25  
## initial value 22319.657175   
## iter 10 value 20075.246122  
## iter 20 value 20059.394884  
## final value 20059.221066   
## converged  
## # weights: 41  
## initial value 22566.034379   
## iter 10 value 20077.361590  
## iter 20 value 20059.419274  
## final value 20059.222123   
## converged  
## # weights: 9  
## initial value 22950.093514   
## final value 20016.794000   
## converged  
## # weights: 25  
## initial value 23459.295551   
## final value 20016.794000   
## converged  
## # weights: 41  
## initial value 21975.242039   
## final value 20016.794000   
## converged  
## # weights: 9  
## initial value 23176.303222   
## iter 10 value 20023.525862  
## final value 20022.303384   
## converged  
## # weights: 25  
## initial value 22259.199009   
## iter 10 value 20023.280226  
## final value 20020.769308   
## converged  
## # weights: 41  
## initial value 21987.139127   
## iter 10 value 20023.720950  
## iter 20 value 20020.110458  
## final value 20020.109980   
## converged  
## # weights: 9  
## initial value 22200.508540   
## iter 10 value 20025.798740  
## iter 20 value 20016.897818  
## iter 20 value 20016.897776  
## final value 20016.897776   
## converged  
## # weights: 25  
## initial value 22184.039713   
## iter 10 value 20029.436350  
## iter 20 value 20016.939756  
## final value 20016.805686   
## converged  
## # weights: 41  
## initial value 22547.991013   
## iter 10 value 20035.811950  
## iter 20 value 20017.013262  
## final value 20016.805287   
## converged  
## # weights: 9  
## initial value 21660.429924   
## final value 19905.667600   
## converged  
## # weights: 25  
## initial value 22299.062207   
## final value 19905.667600   
## converged  
## # weights: 41  
## initial value 21720.458502   
## final value 19905.667600   
## converged  
## # weights: 9  
## initial value 22062.646602   
## iter 10 value 19912.324698  
## final value 19911.174975   
## converged  
## # weights: 25  
## initial value 23459.575184   
## iter 10 value 19911.166997  
## final value 19909.641700   
## converged  
## # weights: 41  
## initial value 22725.921854   
## iter 10 value 19910.221903  
## iter 20 value 19908.982624  
## iter 20 value 19908.982558  
## iter 20 value 19908.982553  
## final value 19908.982553   
## converged  
## # weights: 9  
## initial value 23577.402329   
## iter 10 value 19915.019822  
## iter 20 value 19905.775424  
## iter 20 value 19905.775381  
## final value 19905.775381   
## converged  
## # weights: 25  
## initial value 22919.101300   
## iter 10 value 19920.980856  
## iter 20 value 19905.844150  
## final value 19905.681299   
## converged  
## # weights: 41  
## initial value 23555.212711   
## iter 10 value 19921.845061  
## iter 20 value 19905.854113  
## final value 19905.679219   
## converged  
## # weights: 9  
## initial value 22788.477885   
## final value 20010.607600   
## converged  
## # weights: 25  
## initial value 22834.228085   
## final value 20010.607600   
## converged  
## # weights: 41  
## initial value 22081.787711   
## final value 20010.607600   
## converged  
## # weights: 9  
## initial value 23617.027700   
## iter 10 value 20016.542560  
## final value 20016.116819   
## converged  
## # weights: 25  
## initial value 21768.791495   
## iter 10 value 20015.879960  
## final value 20014.582843   
## converged  
## # weights: 41  
## initial value 23364.678583   
## iter 10 value 20023.223470  
## iter 20 value 20013.924418  
## final value 20013.923440   
## converged  
## # weights: 9  
## initial value 22328.789280   
## iter 10 value 20020.728439  
## iter 20 value 20010.724285  
## iter 20 value 20010.724239  
## final value 20010.724239   
## converged  
## # weights: 25  
## initial value 22169.957340   
## iter 10 value 20025.726052  
## iter 20 value 20010.781904  
## final value 20010.620069   
## converged  
## # weights: 41  
## initial value 22024.950749   
## iter 10 value 20026.763157  
## iter 20 value 20010.793861  
## final value 20010.617067   
## converged  
## # weights: 9  
## initial value 21951.000296   
## final value 20036.130100   
## converged  
## # weights: 25  
## initial value 24323.121003   
## final value 20036.130100   
## converged  
## # weights: 41  
## initial value 22564.672914   
## final value 20036.130100   
## converged  
## # weights: 9  
## initial value 23468.609838   
## iter 10 value 20043.449467  
## iter 20 value 20041.640113  
## iter 20 value 20041.640103  
## final value 20041.640103   
## converged  
## # weights: 25  
## initial value 24337.268729   
## iter 10 value 20040.220240  
## final value 20040.105957   
## converged  
## # weights: 41  
## initial value 22661.887756   
## iter 10 value 20066.404883  
## iter 20 value 20039.488892  
## final value 20039.446425   
## converged  
## # weights: 9  
## initial value 23464.202478   
## iter 10 value 20044.886870  
## iter 20 value 20036.231059  
## iter 20 value 20036.231018  
## final value 20036.231018   
## converged  
## # weights: 25  
## initial value 22125.992859   
## iter 10 value 20050.459748  
## iter 20 value 20036.295310  
## final value 20036.142767   
## converged  
## # weights: 41  
## initial value 21574.845177   
## iter 10 value 20048.557944  
## iter 20 value 20036.273383  
## final value 20036.139111   
## converged  
## # weights: 9  
## initial value 22613.901278   
## final value 20002.797200   
## converged  
## # weights: 25  
## initial value 22844.274556   
## final value 20002.797200   
## converged  
## # weights: 41  
## initial value 22729.028236   
## final value 20002.797200   
## converged  
## # weights: 9  
## initial value 23055.624011   
## iter 10 value 20008.771898  
## final value 20008.306215   
## converged  
## # weights: 25  
## initial value 22725.230030   
## iter 10 value 20007.923302  
## iter 20 value 20006.772336  
## iter 20 value 20006.772283  
## iter 20 value 20006.772279  
## final value 20006.772279   
## converged  
## # weights: 41  
## initial value 23431.259247   
## iter 10 value 20017.765055  
## iter 20 value 20006.114345  
## final value 20006.112958   
## converged  
## # weights: 9  
## initial value 23635.449527   
## iter 10 value 20012.453910  
## iter 20 value 20002.908534  
## iter 20 value 20002.908490  
## final value 20002.908490   
## converged  
## # weights: 25  
## initial value 23525.417540   
## iter 10 value 20015.939467  
## iter 20 value 20002.948720  
## final value 20002.812682   
## converged  
## # weights: 41  
## initial value 22378.190726   
## iter 10 value 20022.451400  
## iter 20 value 20003.023797  
## final value 20002.808348   
## converged  
## # weights: 9  
## initial value 22039.266026   
## final value 20060.381200   
## converged  
## # weights: 25  
## initial value 22431.640304   
## final value 20060.381200   
## converged  
## # weights: 41  
## initial value 22885.435909   
## final value 20060.381200   
## converged  
## # weights: 9  
## initial value 22327.919837   
## iter 10 value 20068.169391  
## final value 20065.892602   
## converged  
## # weights: 25  
## initial value 22955.119136   
## iter 10 value 20073.738332  
## final value 20064.357943   
## converged  
## # weights: 41  
## initial value 23096.618799   
## iter 10 value 20077.964617  
## iter 20 value 20063.698885  
## final value 20063.698295   
## converged  
## # weights: 9  
## initial value 21883.017181   
## iter 10 value 20068.329831  
## iter 20 value 20060.472841  
## iter 20 value 20060.472805  
## final value 20060.472805   
## converged  
## # weights: 25  
## initial value 22865.189953   
## iter 10 value 20073.671881  
## iter 20 value 20060.534431  
## final value 20060.394077   
## converged  
## # weights: 41  
## initial value 24410.091512   
## iter 10 value 20069.581037  
## iter 20 value 20060.487267  
## final value 20060.396469   
## converged  
## # weights: 9  
## initial value 22697.159279   
## final value 19961.765200   
## converged  
## # weights: 25  
## initial value 23942.646686   
## final value 19961.765200   
## converged  
## # weights: 41  
## initial value 22805.909433   
## final value 19961.765200   
## converged  
## # weights: 9  
## initial value 23381.363344   
## iter 10 value 19967.929683  
## final value 19967.273445   
## converged  
## # weights: 25  
## initial value 23642.223477   
## iter 10 value 19966.378280  
## final value 19965.739873   
## converged  
## # weights: 41  
## initial value 24375.484604   
## iter 10 value 19976.044444  
## iter 20 value 19965.081508  
## final value 19965.080562   
## converged  
## # weights: 9  
## initial value 22024.008432   
## iter 10 value 19970.692347  
## iter 20 value 19961.868123  
## iter 20 value 19961.868082  
## final value 19961.868082   
## converged  
## # weights: 25  
## initial value 22160.105691   
## iter 10 value 19975.918834  
## iter 20 value 19961.928380  
## final value 19961.776378   
## converged  
## # weights: 41  
## initial value 24093.093180   
## iter 10 value 19972.802371  
## iter 20 value 19961.892450  
## final value 19961.779972   
## converged  
## # weights: 9  
## initial value 22224.686880   
## final value 20000.918000   
## converged  
## # weights: 25  
## initial value 22897.029311   
## final value 20000.918000   
## converged  
## # weights: 41  
## initial value 23579.741909   
## final value 20000.918000   
## converged  
## # weights: 9  
## initial value 21854.052276   
## iter 10 value 20006.446682  
## final value 20006.427045   
## converged  
## # weights: 25  
## initial value 24086.498085   
## iter 10 value 20006.309806  
## final value 20004.893186   
## converged  
## # weights: 41  
## initial value 21810.143548   
## iter 10 value 20005.107980  
## final value 20004.233756   
## converged  
## # weights: 9  
## initial value 21634.510974   
## iter 10 value 20008.288125  
## iter 20 value 20001.002972  
## iter 20 value 20001.002938  
## final value 20001.002938   
## converged  
## # weights: 25  
## initial value 23523.511516   
## iter 10 value 20013.620996  
## iter 20 value 20001.064456  
## final value 20000.932187   
## converged  
## # weights: 41  
## initial value 23360.352658   
## iter 10 value 20019.013243  
## iter 20 value 20001.126624  
## final value 20000.929573   
## converged  
## # weights: 9  
## initial value 22357.996674   
## final value 20047.567600   
## converged  
## # weights: 25  
## initial value 22129.808324   
## final value 20047.567600   
## converged  
## # weights: 41  
## initial value 22010.055804   
## final value 20047.567600   
## converged  
## # weights: 9  
## initial value 22169.215244   
## iter 10 value 20054.221396  
## final value 20053.078061   
## converged  
## # weights: 25  
## initial value 21959.443285   
## iter 10 value 20052.270803  
## iter 20 value 20051.547175  
## final value 20051.543633   
## converged  
## # weights: 41  
## initial value 22407.564884   
## iter 10 value 20062.631678  
## iter 20 value 20050.886075  
## final value 20050.884177   
## converged  
## # weights: 9  
## initial value 22327.890670   
## iter 10 value 20056.887467  
## iter 20 value 20047.675051  
## iter 20 value 20047.675008  
## final value 20047.675008   
## converged  
## # weights: 25  
## initial value 22712.213573   
## iter 10 value 20062.758648  
## iter 20 value 20047.742741  
## final value 20047.578842   
## converged  
## # weights: 41  
## initial value 24265.975543   
## iter 10 value 20059.007026  
## iter 20 value 20047.699488  
## final value 20047.580585   
## converged  
## # weights: 9  
## initial value 23647.367173   
## final value 20031.922000   
## converged  
## # weights: 25  
## initial value 23421.846752   
## final value 20031.922000   
## converged  
## # weights: 41  
## initial value 23186.757281   
## final value 20031.922000   
## converged  
## # weights: 9  
## initial value 22121.587503   
## iter 10 value 20037.555117  
## final value 20037.431847   
## converged  
## # weights: 25  
## initial value 23467.040728   
## iter 10 value 20037.789420  
## iter 20 value 20035.899626  
## final value 20035.897635   
## converged  
## # weights: 41  
## initial value 22170.289274   
## iter 10 value 20050.447866  
## iter 20 value 20035.239498  
## final value 20035.238218   
## converged  
## # weights: 9  
## initial value 23263.756864   
## iter 10 value 20041.882810  
## iter 20 value 20032.036840  
## iter 20 value 20032.036794  
## final value 20032.036794   
## converged  
## # weights: 25  
## initial value 21503.316157   
## iter 10 value 20040.649130  
## iter 20 value 20032.022617  
## final value 20031.933664   
## converged  
## # weights: 41  
## initial value 22213.922697   
## iter 10 value 20050.991410  
## iter 20 value 20032.141855  
## final value 20031.932476   
## converged  
## # weights: 9  
## initial value 23843.165909   
## final value 20058.152500   
## converged  
## # weights: 25  
## initial value 23490.163236   
## final value 20058.152500   
## converged  
## # weights: 41  
## initial value 21892.614049   
## final value 20058.152500   
## converged  
## # weights: 9  
## initial value 22290.993907   
## iter 10 value 20064.378975  
## final value 20063.663664   
## converged  
## # weights: 25  
## initial value 23800.815330   
## iter 10 value 20064.742884  
## final value 20062.129137   
## converged  
## # weights: 41  
## initial value 21364.638289   
## iter 10 value 20070.576356  
## iter 20 value 20061.469893  
## final value 20061.469439   
## converged  
## # weights: 9  
## initial value 23141.905235   
## iter 10 value 20069.453938  
## iter 20 value 20058.282797  
## iter 20 value 20058.282745  
## final value 20058.282745   
## converged  
## # weights: 25  
## initial value 23708.065944   
## iter 10 value 20071.099882  
## iter 20 value 20058.301773  
## final value 20058.169369   
## converged  
## # weights: 41  
## initial value 22686.928436   
## iter 10 value 20078.278926  
## iter 20 value 20058.384542  
## final value 20058.163903   
## converged  
## # weights: 9  
## initial value 22593.307386   
## final value 20062.025200   
## converged  
## # weights: 25  
## initial value 22354.880329   
## final value 20062.025200   
## converged  
## # weights: 41  
## initial value 21677.980237   
## final value 20062.025200   
## converged  
## # weights: 9  
## initial value 22729.095490   
## iter 10 value 20068.999470  
## final value 20067.536880   
## converged  
## # weights: 25  
## initial value 22249.905500   
## iter 10 value 20067.086236  
## final value 20066.002132   
## converged  
## # weights: 41  
## initial value 22637.109565   
## iter 10 value 20077.631748  
## iter 20 value 20065.342680  
## iter 20 value 20065.342574  
## iter 20 value 20065.342565  
## final value 20065.342565   
## converged  
## # weights: 9  
## initial value 21989.925563   
## iter 10 value 20071.863446  
## iter 20 value 20062.138627  
## iter 20 value 20062.138582  
## final value 20062.138582   
## converged  
## # weights: 25  
## initial value 21654.486897   
## iter 10 value 20073.392255  
## iter 20 value 20062.156253  
## final value 20062.037821   
## converged  
## # weights: 41  
## initial value 21328.179440   
## iter 10 value 20070.179006  
## iter 20 value 20062.119207  
## final value 20062.034150   
## converged  
## # weights: 9  
## initial value 22386.429259   
## final value 20014.728500   
## converged  
## # weights: 25  
## initial value 22903.657581   
## final value 20014.728500   
## converged  
## # weights: 41  
## initial value 22309.411635   
## final value 20014.728500   
## converged  
## # weights: 9  
## initial value 21933.830477   
## iter 10 value 20021.310347  
## final value 20020.237790   
## converged  
## # weights: 25  
## initial value 22570.268927   
## iter 10 value 20019.501330  
## final value 20018.703742   
## converged  
## # weights: 41  
## initial value 22797.136346   
## iter 10 value 20024.789272  
## iter 20 value 20018.044794  
## final value 20018.044344   
## converged  
## # weights: 9  
## initial value 23508.243803   
## iter 10 value 20023.843936  
## iter 20 value 20014.833594  
## iter 20 value 20014.833552  
## final value 20014.833552   
## converged  
## # weights: 25  
## initial value 22251.139740   
## iter 10 value 20029.694446  
## iter 20 value 20014.901046  
## final value 20014.743712   
## converged  
## # weights: 41  
## initial value 23875.347170   
## iter 10 value 20028.460240  
## iter 20 value 20014.886816  
## final value 20014.741226   
## converged  
## # weights: 9  
## initial value 23450.084818   
## final value 19974.245200   
## converged  
## # weights: 25  
## initial value 23080.324471   
## final value 19974.245200   
## converged  
## # weights: 41  
## initial value 22431.479125   
## final value 19974.245200   
## converged  
## # weights: 9  
## initial value 23154.587070   
## iter 10 value 19980.357091  
## final value 19979.753618   
## converged  
## # weights: 25  
## initial value 22800.341657   
## iter 10 value 19980.623377  
## iter 20 value 19978.219947  
## iter 20 value 19978.219898  
## iter 20 value 19978.219895  
## final value 19978.219895   
## converged  
## # weights: 41  
## initial value 22395.071385   
## iter 10 value 19978.472255  
## iter 20 value 19977.560679  
## iter 20 value 19977.560628  
## iter 20 value 19977.560624  
## final value 19977.560624   
## converged  
## # weights: 9  
## initial value 22000.798169   
## iter 10 value 19983.757273  
## iter 20 value 19974.354867  
## iter 20 value 19974.354823  
## final value 19974.354823   
## converged  
## # weights: 25  
## initial value 22607.497882   
## iter 10 value 19990.317237  
## iter 20 value 19974.430498  
## final value 19974.260079   
## converged  
## # weights: 41  
## initial value 22358.641574   
## iter 10 value 19992.423756  
## iter 20 value 19974.454784  
## final value 19974.256451   
## converged  
## # weights: 9  
## initial value 22403.088483   
## final value 20053.435700   
## converged  
## # weights: 25  
## initial value 22491.031437   
## final value 20053.435700   
## converged  
## # weights: 41  
## initial value 22811.670943   
## final value 20053.435700   
## converged  
## # weights: 9  
## initial value 23659.676951   
## iter 10 value 20062.535175  
## final value 20058.946510   
## converged  
## # weights: 25  
## initial value 22110.989303   
## iter 10 value 20059.236697  
## final value 20057.412023   
## converged  
## # weights: 41  
## initial value 22031.741058   
## iter 10 value 20067.920898  
## iter 20 value 20056.753430  
## final value 20056.752411   
## converged  
## # weights: 9  
## initial value 21859.471758   
## iter 10 value 20061.336506  
## iter 20 value 20053.526790  
## iter 20 value 20053.526754  
## final value 20053.526754   
## converged  
## # weights: 25  
## initial value 22870.574229   
## iter 10 value 20067.461766  
## iter 20 value 20053.597410  
## final value 20053.448779   
## converged  
## # weights: 41  
## initial value 21043.551995   
## iter 10 value 20059.820971  
## iter 20 value 20053.509317  
## final value 20053.444747   
## converged  
## # weights: 9  
## initial value 21808.875439   
## final value 20053.184500   
## converged  
## # weights: 25  
## initial value 22035.310490   
## final value 20053.184500   
## converged  
## # weights: 41  
## initial value 22289.380411   
## final value 20053.184500   
## converged  
## # weights: 9  
## initial value 23399.590277   
## iter 10 value 20059.379283  
## final value 20058.695225   
## converged  
## # weights: 25  
## initial value 23187.847433   
## iter 10 value 20059.045968  
## final value 20057.160727   
## converged  
## # weights: 41  
## initial value 21791.627476   
## iter 10 value 20064.602022  
## iter 20 value 20056.503390  
## final value 20056.501162   
## converged  
## # weights: 9  
## initial value 23467.683970   
## iter 10 value 20062.375207  
## iter 20 value 20053.290462  
## iter 20 value 20053.290419  
## final value 20053.290419   
## converged  
## # weights: 25  
## initial value 21580.912247   
## iter 10 value 20062.244052  
## iter 20 value 20053.288950  
## final value 20053.195867   
## converged  
## # weights: 41  
## initial value 22627.170466   
## iter 10 value 20071.802701  
## iter 20 value 20053.399153  
## final value 20053.194770   
## converged  
## # weights: 9  
## initial value 23978.103625   
## final value 20050.496500   
## converged  
## # weights: 25  
## initial value 23388.221070   
## final value 20050.496500   
## converged  
## # weights: 41  
## initial value 22832.175742   
## final value 20050.496500   
## converged  
## # weights: 9  
## initial value 23557.220000   
## iter 10 value 20056.170713  
## final value 20056.007153   
## converged  
## # weights: 25  
## initial value 22327.840454   
## iter 10 value 20059.274471  
## iter 20 value 20054.475640  
## final value 20054.472880   
## converged  
## # weights: 41  
## initial value 21378.703910   
## iter 10 value 20066.178122  
## iter 20 value 20053.813319  
## iter 20 value 20053.813236  
## iter 20 value 20053.813194  
## final value 20053.813194   
## converged  
## # weights: 9  
## initial value 23067.039479   
## iter 10 value 20060.752692  
## iter 20 value 20050.614746  
## iter 20 value 20050.614699  
## final value 20050.614699   
## converged  
## # weights: 25  
## initial value 23837.990827   
## iter 10 value 20063.126587  
## iter 20 value 20050.642115  
## final value 20050.511076   
## converged  
## # weights: 41  
## initial value 23372.739464   
## iter 10 value 20069.823320  
## iter 20 value 20050.719323  
## final value 20050.509537   
## converged  
## # weights: 9  
## initial value 22482.046097   
## final value 19932.296500   
## converged  
## # weights: 25  
## initial value 21659.699410   
## final value 19932.296500   
## converged  
## # weights: 41  
## initial value 22870.118168   
## final value 19932.296500   
## converged  
## # weights: 9  
## initial value 23497.365721   
## iter 10 value 19997.994101  
## iter 20 value 19938.050827  
## final value 19937.804309   
## converged  
## # weights: 25  
## initial value 21591.802804   
## iter 10 value 19938.119767  
## iter 20 value 19936.271048  
## iter 20 value 19936.270922  
## iter 20 value 19936.270893  
## final value 19936.270893   
## converged  
## # weights: 41  
## initial value 21771.683446   
## iter 10 value 19938.234614  
## iter 20 value 19935.612229  
## final value 19935.611724   
## converged  
## # weights: 9  
## initial value 22452.378771   
## iter 10 value 19942.968283  
## iter 20 value 19932.419537  
## iter 20 value 19932.419488  
## final value 19932.419488   
## converged  
## # weights: 25  
## initial value 23149.976802   
## iter 10 value 19948.086157  
## iter 20 value 19932.478542  
## final value 19932.310581   
## converged  
## # weights: 41  
## initial value 23689.724232   
## iter 10 value 19947.025529  
## iter 20 value 19932.466314  
## final value 19932.308171   
## converged  
## # weights: 9  
## initial value 22161.613569   
## final value 20051.745700   
## converged  
## # weights: 25  
## initial value 21678.683497   
## final value 20051.745700   
## converged  
## # weights: 41  
## initial value 22192.743384   
## final value 20051.745700   
## converged  
## # weights: 9  
## initial value 22307.569726   
## iter 10 value 20073.735591  
## iter 20 value 20057.256967  
## final value 20057.256398   
## converged  
## # weights: 25  
## initial value 23026.409089   
## iter 10 value 20056.838281  
## final value 20055.721923   
## converged  
## # weights: 41  
## initial value 22408.854345   
## iter 10 value 20056.423587  
## iter 20 value 20055.062697  
## final value 20055.062344   
## converged  
## # weights: 9  
## initial value 23310.193039   
## iter 10 value 20061.759273  
## iter 20 value 20051.861149  
## iter 20 value 20051.861102  
## final value 20051.861102   
## converged  
## # weights: 25  
## initial value 23746.115417   
## iter 10 value 20063.297430  
## iter 20 value 20051.878882  
## final value 20051.765925   
## converged  
## # weights: 41  
## initial value 23879.900161   
## iter 10 value 20068.171588  
## iter 20 value 20051.935078  
## final value 20051.758579   
## converged  
## # weights: 9  
## initial value 23708.316718   
## final value 20054.702000   
## converged  
## # weights: 25  
## initial value 22801.156450   
## final value 20054.702000   
## converged  
## # weights: 41  
## initial value 22179.146750   
## final value 20054.702000   
## converged  
## # weights: 9  
## initial value 23045.495207   
## iter 10 value 20060.279673  
## final value 20060.212887   
## converged  
## # weights: 25  
## initial value 23491.341163   
## iter 10 value 20059.977871  
## iter 20 value 20058.678533  
## iter 20 value 20058.678390  
## iter 20 value 20058.678383  
## final value 20058.678383   
## converged  
## # weights: 41  
## initial value 24590.237696   
## iter 10 value 20070.596646  
## iter 20 value 20058.020373  
## final value 20058.018810   
## converged  
## # weights: 9  
## initial value 23053.526456   
## iter 10 value 20065.240819  
## iter 20 value 20054.823504  
## iter 20 value 20054.823456  
## final value 20054.823456   
## converged  
## # weights: 25  
## initial value 23714.497840   
## iter 10 value 20067.817079  
## iter 20 value 20054.853207  
## final value 20054.721032   
## converged  
## # weights: 41  
## initial value 22068.929134   
## iter 10 value 20070.613726  
## iter 20 value 20054.885450  
## iter 30 value 20054.711497  
## iter 30 value 20054.711497  
## iter 30 value 20054.711494  
## final value 20054.711494   
## converged  
## # weights: 9  
## initial value 22073.237860   
## final value 19970.818000   
## converged  
## # weights: 25  
## initial value 22689.758357   
## final value 19970.818000   
## converged  
## # weights: 41  
## initial value 22203.240563   
## final value 19970.818000   
## converged  
## # weights: 9  
## initial value 23523.039043   
## iter 10 value 19979.057486  
## final value 19976.326227   
## converged  
## # weights: 25  
## initial value 21828.736402   
## iter 10 value 19975.668215  
## final value 19974.792495   
## converged  
## # weights: 41  
## initial value 22543.841326   
## iter 10 value 19975.384065  
## final value 19974.133258   
## converged  
## # weights: 9  
## initial value 22278.268259   
## iter 10 value 19980.430123  
## iter 20 value 19970.928820  
## iter 20 value 19970.928776  
## final value 19970.928776   
## converged  
## # weights: 25  
## initial value 22026.746773   
## iter 10 value 19983.356105  
## iter 20 value 19970.962555  
## final value 19970.829431   
## converged  
## # weights: 41  
## initial value 22055.171615   
## iter 10 value 19987.936960  
## iter 20 value 19971.015368  
## final value 19970.828768   
## converged  
## # weights: 9  
## initial value 23509.356809   
## final value 20062.993700   
## converged  
## # weights: 25  
## initial value 23868.278145   
## final value 20062.993700   
## converged  
## # weights: 41  
## initial value 23037.008541   
## final value 20062.993700   
## converged  
## # weights: 9  
## initial value 22711.426389   
## iter 10 value 20086.132831  
## iter 20 value 20068.506840  
## final value 20068.505535   
## converged  
## # weights: 25  
## initial value 22103.273581   
## iter 10 value 20067.570869  
## final value 20066.970627   
## converged  
## # weights: 41  
## initial value 23498.865681   
## iter 10 value 20077.174679  
## iter 20 value 20066.312012  
## final value 20066.310947   
## converged  
## # weights: 9  
## initial value 22140.646024   
## iter 10 value 20071.522310  
## iter 20 value 20063.092028  
## iter 20 value 20063.091989  
## final value 20063.091989   
## converged  
## # weights: 25  
## initial value 23267.428592   
## iter 10 value 20078.215815  
## iter 20 value 20063.169199  
## final value 20063.008062   
## converged  
## # weights: 41  
## initial value 22301.404644   
## iter 10 value 20079.602718  
## iter 20 value 20063.185189  
## final value 20063.003882   
## converged  
## # weights: 9  
## initial value 23558.037098   
## final value 20051.473700   
## converged  
## # weights: 25  
## initial value 23327.703180   
## final value 20051.473700   
## converged  
## # weights: 41  
## initial value 23428.238947   
## final value 20051.473700   
## converged  
## # weights: 9  
## initial value 22380.040997   
## iter 10 value 20059.236644  
## final value 20056.984398   
## converged  
## # weights: 25  
## initial value 23579.227295   
## iter 10 value 20056.040539  
## final value 20055.449917   
## converged  
## # weights: 41  
## initial value 22552.165185   
## iter 10 value 20055.351888  
## final value 20054.790432   
## converged  
## # weights: 9  
## initial value 22774.819287   
## iter 10 value 20062.893776  
## iter 20 value 20051.605365  
## iter 20 value 20051.605312  
## final value 20051.605312   
## converged  
## # weights: 25  
## initial value 22300.590718   
## iter 10 value 20064.649884  
## iter 20 value 20051.625611  
## final value 20051.490506   
## converged  
## # weights: 41  
## initial value 22770.361556   
## iter 10 value 20073.471349  
## iter 20 value 20051.727316  
## final value 20051.485660   
## converged  
## # weights: 9  
## initial value 23162.103854   
## final value 20015.422000   
## converged  
## # weights: 25  
## initial value 21882.000295   
## final value 20015.422000   
## converged  
## # weights: 41  
## initial value 22432.373744   
## final value 20015.422000   
## converged  
## # weights: 9  
## initial value 22990.177157   
## iter 10 value 20023.386008  
## final value 20020.931331   
## converged  
## # weights: 25  
## initial value 22001.628126   
## iter 10 value 20020.637471  
## final value 20019.397336   
## converged  
## # weights: 41  
## initial value 23161.008303   
## iter 10 value 20021.407560  
## iter 20 value 20018.739289  
## final value 20018.737954   
## converged  
## # weights: 9  
## initial value 22364.315326   
## iter 10 value 20025.559028  
## iter 20 value 20015.538872  
## iter 20 value 20015.538825  
## final value 20015.538825   
## converged  
## # weights: 25  
## initial value 22224.129098   
## iter 10 value 20028.493395  
## iter 20 value 20015.572703  
## final value 20015.434084   
## converged  
## # weights: 41  
## initial value 23888.355420   
## iter 10 value 20030.431711  
## iter 20 value 20015.595050  
## final value 20015.434020   
## converged  
## # weights: 9  
## initial value 22519.318987   
## final value 20028.123700   
## converged  
## # weights: 25  
## initial value 23435.530319   
## final value 20028.123700   
## converged  
## # weights: 41  
## initial value 21628.095296   
## final value 20028.123700   
## converged  
## # weights: 9  
## initial value 21965.816060   
## iter 10 value 20034.220908  
## final value 20033.633416   
## converged  
## # weights: 25  
## initial value 22630.835248   
## iter 10 value 20032.796337  
## final value 20032.099275   
## converged  
## # weights: 41  
## initial value 22760.158607   
## iter 10 value 20033.024681  
## iter 20 value 20031.440086  
## final value 20031.439810   
## converged  
## # weights: 9  
## initial value 22982.467858   
## iter 10 value 20038.182489  
## iter 20 value 20028.239670  
## iter 20 value 20028.239624  
## final value 20028.239624   
## converged  
## # weights: 25  
## initial value 21850.789100   
## iter 10 value 20040.395159  
## iter 20 value 20028.265180  
## final value 20028.136445   
## converged  
## # weights: 41  
## initial value 22965.569783   
## iter 10 value 20046.066129  
## iter 20 value 20028.330562  
## final value 20028.133902   
## converged  
## # weights: 9  
## initial value 22106.680950   
## final value 20047.960100   
## converged  
## # weights: 25  
## initial value 24454.312741   
## final value 20047.960100   
## converged  
## # weights: 41  
## initial value 22311.212006   
## final value 20047.960100   
## converged  
## # weights: 9  
## initial value 21969.465621   
## iter 10 value 20053.792352  
## final value 20053.470612   
## converged  
## # weights: 25  
## initial value 23275.902614   
## iter 10 value 20058.983456  
## iter 20 value 20051.940187  
## final value 20051.936277   
## converged  
## # weights: 41  
## initial value 22886.268193   
## iter 10 value 20052.567861  
## final value 20051.276759   
## converged  
## # weights: 9  
## initial value 23881.547849   
## iter 10 value 20056.492391  
## iter 20 value 20048.058471  
## iter 20 value 20048.058431  
## final value 20048.058431   
## converged  
## # weights: 25  
## initial value 22824.082282   
## iter 10 value 20064.772134  
## iter 20 value 20048.153930  
## final value 20047.971630   
## converged  
## # weights: 41  
## initial value 21940.609815   
## iter 10 value 20063.451732  
## iter 20 value 20048.138706  
## final value 20047.969852   
## converged  
## # weights: 9  
## initial value 22353.143233   
## final value 20028.947600   
## converged  
## # weights: 25  
## initial value 22449.532969   
## final value 20028.947600   
## converged  
## # weights: 41  
## initial value 22656.273686   
## final value 20028.947600   
## converged  
## # weights: 9  
## initial value 21943.331906   
## iter 10 value 20035.702094  
## final value 20034.457312   
## converged  
## # weights: 25  
## initial value 23248.294939   
## iter 10 value 20033.843574  
## final value 20032.923131   
## converged  
## # weights: 41  
## initial value 23831.195934   
## iter 10 value 20046.610264  
## iter 20 value 20032.264266  
## final value 20032.263761   
## converged  
## # weights: 9  
## initial value 22655.592061   
## iter 10 value 20038.971451  
## iter 20 value 20029.063167  
## iter 20 value 20029.063121  
## final value 20029.063121   
## converged  
## # weights: 25  
## initial value 22012.120746   
## iter 10 value 20041.657627  
## iter 20 value 20029.094137  
## final value 20028.960763   
## converged  
## # weights: 41  
## initial value 23035.535867   
## iter 10 value 20047.872478  
## iter 20 value 20029.165789  
## final value 20028.961971   
## converged  
## # weights: 9  
## initial value 22250.550266   
## final value 19944.142000   
## converged  
## # weights: 25  
## initial value 22725.613487   
## final value 19944.142000   
## converged  
## # weights: 41  
## initial value 22232.069025   
## final value 19944.142000   
## converged  
## # weights: 9  
## initial value 21919.153608   
## iter 10 value 19951.395768  
## final value 19949.649909   
## converged  
## # weights: 25  
## initial value 22126.257130   
## iter 10 value 19949.666866  
## final value 19948.116385   
## converged  
## # weights: 41  
## initial value 23161.287247   
## iter 10 value 19948.126705  
## final value 19947.457166   
## converged  
## # weights: 9  
## initial value 22715.806204   
## iter 10 value 19954.048823  
## iter 20 value 19944.256218  
## iter 20 value 19944.256172  
## final value 19944.256172   
## converged  
## # weights: 25  
## initial value 22455.669954   
## iter 10 value 19960.499624  
## iter 20 value 19944.330591  
## final value 19944.154759   
## converged  
## # weights: 41  
## initial value 22517.321068   
## iter 10 value 19966.449616  
## iter 20 value 19944.399189  
## final value 19944.151588   
## converged  
## # weights: 9  
## initial value 23336.711412   
## final value 20063.162000   
## converged  
## # weights: 25  
## initial value 23122.468815   
## final value 20063.162000   
## converged  
## # weights: 41  
## initial value 23358.730540   
## final value 20063.162000   
## converged  
## # weights: 9  
## initial value 23610.199914   
## iter 10 value 20069.034051  
## final value 20068.674097   
## converged  
## # weights: 25  
## initial value 22266.494948   
## iter 10 value 20068.872183  
## final value 20067.139270   
## converged  
## # weights: 41  
## initial value 23864.654132   
## iter 10 value 20082.910570  
## iter 20 value 20066.485758  
## final value 20066.479581   
## converged  
## # weights: 9  
## initial value 23640.690948   
## iter 10 value 20073.008692  
## iter 20 value 20063.275525  
## iter 20 value 20063.275479  
## final value 20063.275479   
## converged  
## # weights: 25  
## initial value 21519.434323   
## iter 10 value 20071.343248  
## iter 20 value 20063.256323  
## final value 20063.173933   
## converged  
## # weights: 41  
## initial value 23741.468635   
## iter 10 value 20079.598635  
## iter 20 value 20063.351502  
## final value 20063.175490   
## converged  
## # weights: 9  
## initial value 23468.270703   
## final value 20043.633700   
## converged  
## # weights: 25  
## initial value 23227.313417   
## final value 20043.633700   
## converged  
## # weights: 41  
## initial value 22977.858492   
## final value 20043.633700   
## converged  
## # weights: 9  
## initial value 22155.034020   
## iter 10 value 20049.169563  
## final value 20049.143948   
## converged  
## # weights: 25  
## initial value 23859.961526   
## iter 10 value 20048.052408  
## final value 20047.609568   
## converged  
## # weights: 41  
## initial value 23097.894449   
## iter 10 value 20062.187699  
## iter 20 value 20046.951010  
## final value 20046.950153   
## converged  
## # weights: 9  
## initial value 23634.526934   
## iter 10 value 20052.584312  
## iter 20 value 20043.736894  
## iter 20 value 20043.736852  
## final value 20043.736852   
## converged  
## # weights: 25  
## initial value 23233.979491   
## iter 10 value 20059.834043  
## iter 20 value 20043.820477  
## final value 20043.646267   
## converged  
## # weights: 41  
## initial value 22920.761722   
## iter 10 value 20067.153949  
## iter 20 value 20043.904870  
## final value 20043.645790   
## converged  
## # weights: 9  
## initial value 22078.249353   
## final value 20045.446000   
## converged  
## # weights: 25  
## initial value 23396.834371   
## final value 20045.446000   
## converged  
## # weights: 41  
## initial value 21323.099241   
## final value 20045.446000   
## converged  
## # weights: 9  
## initial value 22038.275272   
## iter 10 value 20052.412645  
## final value 20050.956391   
## converged  
## # weights: 25  
## initial value 21852.294609   
## iter 10 value 20049.708737  
## final value 20049.422115   
## converged  
## # weights: 41  
## initial value 23183.898053   
## iter 10 value 20075.425217  
## iter 20 value 20048.808903  
## final value 20048.762536   
## converged  
## # weights: 9  
## initial value 23110.171199   
## iter 10 value 20055.295036  
## iter 20 value 20045.559552  
## iter 20 value 20045.559506  
## final value 20045.559506   
## converged  
## # weights: 25  
## initial value 24186.343477   
## iter 10 value 20053.288998  
## iter 20 value 20045.536424  
## final value 20045.464933   
## converged  
## # weights: 41  
## initial value 23015.175597   
## iter 10 value 20064.309114  
## iter 20 value 20045.663477  
## final value 20045.458866   
## converged  
## # weights: 9  
## initial value 23028.390085   
## final value 20009.587700   
## converged  
## # weights: 25  
## initial value 22057.077589   
## final value 20009.587700   
## converged  
## # weights: 41  
## initial value 22971.708783   
## final value 20009.587700   
## converged  
## # weights: 9  
## initial value 22697.293001   
## iter 10 value 20015.145274  
## final value 20015.096892   
## converged  
## # weights: 25  
## initial value 23074.248868   
## iter 10 value 20020.378733  
## iter 20 value 20013.563433  
## iter 20 value 20013.563254  
## iter 20 value 20013.563179  
## final value 20013.563179   
## converged  
## # weights: 41  
## initial value 23895.334428   
## iter 10 value 20014.798555  
## iter 20 value 20012.903826  
## iter 20 value 20012.903648  
## iter 20 value 20012.903571  
## final value 20012.903571   
## converged  
## # weights: 9  
## initial value 22521.082787   
## iter 10 value 20020.860722  
## iter 20 value 20009.717669  
## iter 20 value 20009.717617  
## final value 20009.717617   
## converged  
## # weights: 25  
## initial value 23531.845559   
## iter 10 value 20022.738447  
## iter 20 value 20009.739318  
## final value 20009.605168   
## converged  
## # weights: 41  
## initial value 22554.311224   
## iter 10 value 20028.968148  
## iter 20 value 20009.811141  
## final value 20009.597684   
## converged  
## # weights: 9  
## initial value 22935.847624   
## final value 20023.227700   
## converged  
## # weights: 25  
## initial value 23241.773185   
## final value 20023.227700   
## converged  
## # weights: 41  
## initial value 23622.243407   
## final value 20023.227700   
## converged  
## # weights: 9  
## initial value 22655.723515   
## iter 10 value 20031.090919  
## final value 20028.737261   
## converged  
## # weights: 25  
## initial value 22967.674476   
## iter 10 value 20028.162006  
## final value 20027.203162   
## converged  
## # weights: 41  
## initial value 22117.683796   
## iter 10 value 20028.233778  
## final value 20026.543841   
## converged  
## # weights: 9  
## initial value 22661.390328   
## iter 10 value 20033.250079  
## iter 20 value 20023.343250  
## iter 20 value 20023.343204  
## final value 20023.343204   
## converged  
## # weights: 25  
## initial value 23579.869037   
## iter 10 value 20037.138425  
## iter 20 value 20023.388080  
## final value 20023.242580   
## converged  
## # weights: 41  
## initial value 22495.663210   
## iter 10 value 20042.698428  
## iter 20 value 20023.452182  
## final value 20023.237876   
## converged  
## # weights: 9  
## initial value 23185.164771   
## final value 20062.497700   
## converged  
## # weights: 25  
## initial value 24165.033755   
## final value 20062.497700   
## converged  
## # weights: 41  
## initial value 22169.262941   
## final value 20062.497700   
## converged  
## # weights: 9  
## initial value 22419.801251   
## iter 10 value 20068.101618  
## final value 20068.009593   
## converged  
## # weights: 25  
## initial value 23354.162258   
## iter 10 value 20067.833488  
## final value 20066.474957   
## converged  
## # weights: 41  
## initial value 22021.481352   
## iter 10 value 20076.924270  
## iter 20 value 20065.815493  
## final value 20065.815156   
## converged  
## # weights: 9  
## initial value 22325.162099   
## iter 10 value 20072.899455  
## iter 20 value 20062.617624  
## iter 20 value 20062.617576  
## final value 20062.617576   
## converged  
## # weights: 25  
## initial value 23447.050317   
## iter 10 value 20076.055142  
## iter 20 value 20062.654007  
## final value 20062.511794   
## converged  
## # weights: 41  
## initial value 22178.817417   
## iter 10 value 20080.308024  
## iter 20 value 20062.703039  
## final value 20062.508236   
## converged  
## # weights: 9  
## initial value 21778.036485   
## final value 20007.369200   
## converged  
## # weights: 25  
## initial value 23769.000775   
## final value 20007.369200   
## converged  
## # weights: 41  
## initial value 22765.829099   
## final value 20007.369200   
## converged  
## # weights: 9  
## initial value 22585.990903   
## iter 10 value 20014.400189  
## final value 20012.878347   
## converged  
## # weights: 25  
## initial value 23105.932346   
## iter 10 value 20014.808300  
## iter 20 value 20011.345200  
## final value 20011.344447   
## converged  
## # weights: 41  
## initial value 23908.644632   
## iter 10 value 20014.287236  
## iter 20 value 20010.685868  
## final value 20010.685023   
## converged  
## # weights: 9  
## initial value 22868.907289   
## iter 10 value 20018.518906  
## iter 20 value 20007.497747  
## iter 20 value 20007.497696  
## final value 20007.497696   
## converged  
## # weights: 25  
## initial value 22233.422751   
## iter 10 value 20021.410342  
## iter 20 value 20007.531083  
## final value 20007.381224   
## converged  
## # weights: 41  
## initial value 21708.910883   
## iter 10 value 20022.895484  
## iter 20 value 20007.548206  
## final value 20007.378715   
## converged  
## # weights: 9  
## initial value 22280.775656   
## final value 20016.930100   
## converged  
## # weights: 25  
## initial value 22507.687360   
## final value 20016.930100   
## converged  
## # weights: 41  
## initial value 22420.273263   
## final value 20016.930100   
## converged  
## # weights: 9  
## initial value 22585.431904   
## iter 10 value 20024.100500  
## final value 20022.439491   
## converged  
## # weights: 25  
## initial value 23563.320492   
## iter 10 value 20022.175519  
## final value 20020.905476   
## converged  
## # weights: 41  
## initial value 22165.083509   
## iter 10 value 20035.470779  
## iter 20 value 20020.248186  
## final value 20020.246094   
## converged  
## # weights: 9  
## initial value 22731.508174   
## iter 10 value 20027.698622  
## iter 20 value 20017.054253  
## iter 20 value 20017.054203  
## final value 20017.054203   
## converged  
## # weights: 25  
## initial value 22256.528647   
## iter 10 value 20030.300031  
## iter 20 value 20017.084245  
## final value 20016.942694   
## converged  
## # weights: 41  
## initial value 24163.467203   
## iter 10 value 20028.528277  
## iter 20 value 20017.063818  
## final value 20016.942936   
## converged  
## # weights: 9  
## initial value 23260.387662   
## final value 20047.960100   
## converged  
## # weights: 25  
## initial value 22710.083360   
## final value 20047.960100   
## converged  
## # weights: 41  
## initial value 23190.255313   
## final value 20047.960100   
## converged  
## # weights: 9  
## initial value 22928.649152   
## iter 10 value 20053.802015  
## final value 20053.470632   
## converged  
## # weights: 25  
## initial value 22714.574719   
## iter 10 value 20055.851588  
## iter 20 value 20051.940480  
## final value 20051.936215   
## converged  
## # weights: 41  
## initial value 22516.116949   
## iter 10 value 20066.623023  
## iter 20 value 20051.281006  
## final value 20051.276737   
## converged  
## # weights: 9  
## initial value 22253.291898   
## iter 10 value 20058.303223  
## iter 20 value 20048.079348  
## iter 20 value 20048.079300  
## final value 20048.079300   
## converged  
## # weights: 25  
## initial value 22646.190484   
## iter 10 value 20062.070751  
## iter 20 value 20048.122785  
## iter 30 value 20047.974238  
## iter 30 value 20047.974200  
## iter 30 value 20047.974194  
## final value 20047.974194   
## converged  
## # weights: 41  
## initial value 23545.613637   
## iter 10 value 20064.552934  
## iter 20 value 20048.151402  
## final value 20047.972378   
## converged  
## # weights: 9  
## initial value 21739.035486   
## final value 20001.547600   
## converged  
## # weights: 25  
## initial value 22256.601989   
## final value 20001.547600   
## converged  
## # weights: 41  
## initial value 22913.461110   
## final value 20001.547600   
## converged  
## # weights: 9  
## initial value 21565.514751   
## iter 10 value 20009.234524  
## final value 20007.056607   
## converged  
## # weights: 25  
## initial value 22491.407317   
## iter 10 value 20006.932364  
## final value 20005.522811   
## converged  
## # weights: 41  
## initial value 23407.754983   
## iter 10 value 20006.036178  
## final value 20004.863394   
## converged  
## # weights: 9  
## initial value 23450.407147   
## iter 10 value 20011.370167  
## iter 20 value 20001.660846  
## iter 20 value 20001.660801  
## final value 20001.660801   
## converged  
## # weights: 25  
## initial value 21390.071978   
## iter 10 value 20008.820484  
## iter 20 value 20001.631451  
## final value 20001.558632   
## converged  
## # weights: 41  
## initial value 23088.226915   
## iter 10 value 20021.807787  
## iter 20 value 20001.781184  
## final value 20001.557256   
## converged  
## # weights: 9  
## initial value 22774.541255   
## final value 19999.010000   
## converged  
## # weights: 25  
## initial value 22297.384673   
## final value 19999.010000   
## converged  
## # weights: 41  
## initial value 21856.634259   
## final value 19999.010000   
## converged  
## # weights: 9  
## initial value 23391.245320   
## iter 10 value 20005.368486  
## final value 20004.518955   
## converged  
## # weights: 25  
## initial value 23780.349133   
## iter 10 value 20010.569605  
## iter 20 value 20002.985183  
## iter 20 value 20002.985069  
## iter 20 value 20002.985063  
## final value 20002.985063   
## converged  
## # weights: 41  
## initial value 22609.791505   
## iter 10 value 20013.493878  
## iter 20 value 20002.326203  
## final value 20002.325754   
## converged  
## # weights: 9  
## initial value 22742.700814   
## iter 10 value 20009.093812  
## iter 20 value 19999.126258  
## iter 20 value 19999.126212  
## final value 19999.126212   
## converged  
## # weights: 25  
## initial value 21951.742602   
## iter 10 value 20013.732192  
## iter 20 value 19999.179735  
## final value 19999.022096   
## converged  
## # weights: 41  
## initial value 23566.089644   
## iter 10 value 20017.831066  
## iter 20 value 19999.226992  
## final value 19999.022725   
## converged  
## # weights: 9  
## initial value 21711.990565   
## final value 19909.658000   
## converged  
## # weights: 25  
## initial value 22027.559364   
## final value 19909.658000   
## converged  
## # weights: 41  
## initial value 21731.583007   
## final value 19909.658000   
## converged  
## # weights: 9  
## initial value 22175.772641   
## iter 10 value 19916.108121  
## final value 19915.165302   
## converged  
## # weights: 25  
## initial value 21505.562384   
## iter 10 value 19914.492420  
## iter 20 value 19913.632083  
## iter 20 value 19913.631982  
## iter 20 value 19913.631957  
## final value 19913.631957   
## converged  
## # weights: 41  
## initial value 22862.788372   
## iter 10 value 19918.197916  
## final value 19912.972924   
## converged  
## # weights: 9  
## initial value 23061.690343   
## iter 10 value 19918.990457  
## iter 20 value 19909.765596  
## iter 20 value 19909.765553  
## final value 19909.765553   
## converged  
## # weights: 25  
## initial value 22961.014808   
## iter 10 value 19923.871612  
## iter 20 value 19909.821872  
## final value 19909.672607   
## converged  
## # weights: 41  
## initial value 22038.026867   
## iter 10 value 19924.282639  
## iter 20 value 19909.826611  
## final value 19909.667878   
## converged  
## # weights: 9  
## initial value 23410.155259   
## final value 20014.310000   
## converged  
## # weights: 25  
## initial value 23700.080641   
## final value 20014.310000   
## converged  
## # weights: 41  
## initial value 23994.987966   
## final value 20014.310000   
## converged  
## # weights: 9  
## initial value 22191.225559   
## iter 10 value 20032.383670  
## iter 20 value 20019.819659  
## final value 20019.819323   
## converged  
## # weights: 25  
## initial value 23261.854431   
## iter 10 value 20018.864203  
## final value 20018.285274   
## converged  
## # weights: 41  
## initial value 22744.812801   
## iter 10 value 20018.552050  
## final value 20017.625944   
## converged  
## # weights: 9  
## initial value 22332.911636   
## iter 10 value 20025.637705  
## iter 20 value 20014.440600  
## iter 20 value 20014.440547  
## final value 20014.440547   
## converged  
## # weights: 25  
## initial value 22681.197798   
## iter 10 value 20028.154454  
## iter 20 value 20014.469616  
## final value 20014.321599   
## converged  
## # weights: 41  
## initial value 22758.228988   
## iter 10 value 20033.357697  
## iter 20 value 20014.529605  
## final value 20014.320580   
## converged  
## # weights: 9  
## initial value 22569.091940   
## final value 19991.598500   
## converged  
## # weights: 25  
## initial value 22825.412545   
## final value 19991.598500   
## converged  
## # weights: 41  
## initial value 22844.481513   
## final value 19991.598500   
## converged  
## # weights: 9  
## initial value 23371.959026   
## iter 10 value 19997.758734  
## final value 19997.107296   
## converged  
## # weights: 25  
## initial value 22481.325430   
## iter 10 value 19997.065255  
## final value 19995.573525   
## converged  
## # weights: 41  
## initial value 21585.537878   
## iter 10 value 20006.347430  
## iter 20 value 19994.915218  
## final value 19994.914124   
## converged  
## # weights: 9  
## initial value 22989.416714   
## iter 10 value 20003.493017  
## iter 20 value 19991.735634  
## iter 20 value 19991.735580  
## final value 19991.735580   
## converged  
## # weights: 25  
## initial value 22749.908398   
## iter 10 value 20004.411672  
## iter 20 value 19991.746226  
## final value 19991.609644   
## converged  
## # weights: 41  
## initial value 21660.678892   
## iter 10 value 20005.811285  
## iter 20 value 19991.762362  
## final value 19991.607913   
## converged  
## # weights: 9  
## initial value 23229.509122   
## final value 20032.920100   
## converged  
## # weights: 25  
## initial value 22646.398406   
## final value 20032.920100   
## converged  
## # weights: 41  
## initial value 21221.575684   
## final value 20032.920100   
## converged  
## # weights: 9  
## initial value 24045.967503   
## iter 10 value 20038.835215  
## final value 20038.429972   
## converged  
## # weights: 25  
## initial value 24254.654145   
## iter 10 value 20044.473300  
## iter 20 value 20036.927270  
## final value 20036.895757   
## converged  
## # weights: 41  
## initial value 22425.223879   
## iter 10 value 20039.883312  
## iter 20 value 20036.236454  
## iter 20 value 20036.236325  
## iter 20 value 20036.236299  
## final value 20036.236299   
## converged  
## # weights: 9  
## initial value 23301.634572   
## iter 10 value 20043.354390  
## iter 20 value 20033.040399  
## iter 20 value 20033.040351  
## final value 20033.040351   
## converged  
## # weights: 25  
## initial value 22187.137625   
## iter 10 value 20047.427165  
## iter 20 value 20033.087355  
## final value 20032.933516   
## converged  
## # weights: 41  
## initial value 22759.981623   
## iter 10 value 20054.504530  
## iter 20 value 20033.168952  
## final value 20032.931289   
## converged  
## # weights: 9  
## initial value 22318.951202   
## final value 20042.739700   
## converged  
## # weights: 25  
## initial value 22722.881961   
## final value 20042.739700   
## converged  
## # weights: 41  
## initial value 22660.279163   
## final value 20042.739700   
## converged  
## # weights: 9  
## initial value 22609.312621   
## iter 10 value 20050.475876  
## final value 20048.249934   
## converged  
## # weights: 25  
## initial value 23829.749763   
## iter 10 value 20048.618266  
## final value 20046.715614   
## converged  
## # weights: 41  
## initial value 23445.690919   
## iter 10 value 20061.292827  
## iter 20 value 20046.056668  
## final value 20046.056143   
## converged  
## # weights: 9  
## initial value 22897.215352   
## iter 10 value 20054.388269  
## iter 20 value 20042.873999  
## iter 20 value 20042.873945  
## final value 20042.873945   
## converged  
## # weights: 25  
## initial value 22153.106083   
## iter 10 value 20056.630995  
## iter 20 value 20042.899856  
## final value 20042.751290   
## converged  
## # weights: 41  
## initial value 23949.133398   
## iter 10 value 20054.338798  
## iter 20 value 20042.873428  
## final value 20042.752996   
## converged  
## # weights: 9  
## initial value 23078.812522   
## final value 19928.378000   
## converged  
## # weights: 25  
## initial value 22872.564117   
## final value 19928.378000   
## converged  
## # weights: 41  
## initial value 22045.865165   
## final value 19928.378000   
## converged  
## # weights: 9  
## initial value 23380.630586   
## iter 10 value 19934.202719  
## final value 19933.885725   
## converged  
## # weights: 25  
## initial value 22656.731909   
## iter 10 value 19933.215199  
## final value 19932.352300   
## converged  
## # weights: 41  
## initial value 21792.922817   
## iter 10 value 19933.751247  
## iter 20 value 19931.693298  
## iter 20 value 19931.693175  
## iter 20 value 19931.693170  
## final value 19931.693170   
## converged  
## # weights: 9  
## initial value 23232.532645   
## iter 10 value 19937.962305  
## iter 20 value 19928.488500  
## iter 20 value 19928.488455  
## final value 19928.488455   
## converged  
## # weights: 25  
## initial value 22547.957710   
## iter 10 value 19943.002408  
## iter 20 value 19928.546608  
## final value 19928.391257   
## converged  
## # weights: 41  
## initial value 22981.952351   
## iter 10 value 19946.690645  
## iter 20 value 19928.589130  
## final value 19928.389333   
## converged  
## # weights: 9  
## initial value 22187.005691   
## final value 20036.130100   
## converged  
## # weights: 25  
## initial value 22520.900853   
## final value 20036.130100   
## converged  
## # weights: 41  
## initial value 23307.763595   
## final value 20036.130100   
## converged  
## # weights: 9  
## initial value 23180.968859   
## iter 10 value 20044.170676  
## final value 20041.640099   
## converged  
## # weights: 25  
## initial value 23816.722332   
## iter 10 value 20040.924645  
## final value 20040.105860   
## converged  
## # weights: 41  
## initial value 22991.809051   
## iter 10 value 20059.403643  
## iter 20 value 20039.455638  
## final value 20039.446466   
## converged  
## # weights: 9  
## initial value 22579.226706   
## iter 10 value 20045.659260  
## iter 20 value 20036.239964  
## iter 20 value 20036.239920  
## final value 20036.239920   
## converged  
## # weights: 25  
## initial value 23098.371419   
## iter 10 value 20050.937170  
## iter 20 value 20036.300814  
## final value 20036.148062   
## converged  
## # weights: 41  
## initial value 23542.510943   
## iter 10 value 20053.202233  
## iter 20 value 20036.326928  
## final value 20036.142953   
## converged  
## # weights: 9  
## initial value 22669.887117   
## final value 20006.167600   
## converged  
## # weights: 25  
## initial value 22427.322799   
## final value 20006.167600   
## converged  
## # weights: 41  
## initial value 23511.597616   
## final value 20006.167600   
## converged  
## # weights: 9  
## initial value 22152.592000   
## iter 10 value 20012.464759  
## final value 20011.676670   
## converged  
## # weights: 25  
## initial value 23756.290086   
## iter 10 value 20011.368159  
## final value 20010.142699   
## converged  
## # weights: 41  
## initial value 22267.071913   
## iter 10 value 20010.318530  
## final value 20009.483425   
## converged  
## # weights: 9  
## initial value 22623.091244   
## iter 10 value 20017.963066  
## iter 20 value 20006.303592  
## iter 20 value 20006.303538  
## final value 20006.303538   
## converged  
## # weights: 25  
## initial value 23196.559350   
## iter 10 value 20019.669130  
## iter 20 value 20006.323262  
## final value 20006.180089   
## converged  
## # weights: 41  
## initial value 22660.534791   
## iter 10 value 20024.824362  
## iter 20 value 20006.382698  
## final value 20006.177640   
## converged  
## # weights: 9  
## initial value 22646.632418   
## final value 19970.240500   
## converged  
## # weights: 25  
## initial value 22996.854547   
## final value 19970.240500   
## converged  
## # weights: 41  
## initial value 23126.173673   
## final value 19970.240500   
## converged  
## # weights: 9  
## initial value 23282.829958   
## iter 10 value 19977.032620  
## final value 19975.748894   
## converged  
## # weights: 25  
## initial value 23071.455753   
## iter 10 value 19990.160221  
## iter 20 value 19974.323176  
## final value 19974.215229   
## converged  
## # weights: 41  
## initial value 22264.671652   
## iter 10 value 19974.285237  
## final value 19973.555957   
## converged  
## # weights: 9  
## initial value 22492.189534   
## iter 10 value 19981.986289  
## iter 20 value 19970.375920  
## iter 20 value 19970.375866  
## final value 19970.375866   
## converged  
## # weights: 25  
## initial value 22637.676767   
## iter 10 value 19986.238312  
## iter 20 value 19970.424942  
## final value 19970.252446   
## converged  
## # weights: 41  
## initial value 22659.322817   
## iter 10 value 19988.805965  
## iter 20 value 19970.454545  
## final value 19970.250748   
## converged  
## # weights: 9  
## initial value 23160.004133   
## final value 20018.280100   
## converged  
## # weights: 25  
## initial value 22026.272899   
## final value 20018.280100   
## converged  
## # weights: 41  
## initial value 22247.180488   
## final value 20018.280100   
## converged  
## # weights: 9  
## initial value 22216.073577   
## iter 10 value 20023.863135  
## final value 20023.789518   
## converged  
## # weights: 25  
## initial value 23199.829352   
## iter 10 value 20028.174806  
## iter 20 value 20022.258630  
## final value 20022.255447   
## converged  
## # weights: 41  
## initial value 22942.587395   
## iter 10 value 20023.979359  
## iter 20 value 20021.596345  
## iter 20 value 20021.596165  
## iter 20 value 20021.596125  
## final value 20021.596125   
## converged  
## # weights: 9  
## initial value 22004.017316   
## iter 10 value 20026.799593  
## iter 20 value 20018.378323  
## iter 20 value 20018.378284  
## final value 20018.378284   
## converged  
## # weights: 25  
## initial value 23036.091343   
## iter 10 value 20034.739872  
## iter 20 value 20018.469868  
## final value 20018.294144   
## converged  
## # weights: 41  
## initial value 23017.289556   
## iter 10 value 20035.850914  
## iter 20 value 20018.482678  
## final value 20018.294550   
## converged  
## # weights: 9  
## initial value 23145.195383   
## final value 20051.405200   
## converged  
## # weights: 25  
## initial value 22262.139269   
## final value 20051.405200   
## converged  
## # weights: 41  
## initial value 21797.588039   
## final value 20051.405200   
## converged  
## # weights: 9  
## initial value 23225.120006   
## iter 10 value 20058.532856  
## final value 20056.915945   
## converged  
## # weights: 25  
## initial value 22801.363318   
## iter 10 value 20056.291454  
## final value 20055.381471   
## converged  
## # weights: 41  
## initial value 22718.756257   
## iter 10 value 20055.722671  
## final value 20054.721908   
## converged  
## # weights: 9  
## initial value 23507.983579   
## iter 10 value 20060.590884  
## iter 20 value 20051.511104  
## iter 20 value 20051.511061  
## final value 20051.511061   
## converged  
## # weights: 25  
## initial value 21927.173845   
## iter 10 value 20063.717440  
## iter 20 value 20051.547150  
## final value 20051.416546   
## converged  
## # weights: 41  
## initial value 24105.867450   
## iter 10 value 20063.439189  
## iter 20 value 20051.543942  
## final value 20051.417691   
## converged  
## # weights: 9  
## initial value 22373.006565   
## final value 19996.910500   
## converged  
## # weights: 25  
## initial value 22160.111049   
## final value 19996.910500   
## converged  
## # weights: 41  
## initial value 23112.944408   
## final value 19996.910500   
## converged  
## # weights: 9  
## initial value 23044.554706   
## iter 10 value 20003.912355  
## final value 20002.419404   
## converged  
## # weights: 25  
## initial value 21649.826431   
## iter 10 value 20015.504368  
## iter 20 value 20000.885732  
## iter 20 value 20000.885570  
## iter 20 value 20000.885551  
## final value 20000.885551   
## converged  
## # weights: 41  
## initial value 23569.259918   
## iter 10 value 20015.169635  
## iter 20 value 20000.228510  
## final value 20000.226208   
## converged  
## # weights: 9  
## initial value 21517.292797   
## iter 10 value 20004.034765  
## iter 20 value 19996.992637  
## iter 20 value 19996.992604  
## final value 19996.992604   
## converged  
## # weights: 25  
## initial value 22554.123876   
## iter 10 value 20011.864446  
## iter 20 value 19997.082907  
## final value 19996.923365   
## converged  
## # weights: 41  
## initial value 23834.211026   
## iter 10 value 20011.183695  
## iter 20 value 19997.075059  
## final value 19996.923932   
## converged  
## # weights: 9  
## initial value 23386.366967   
## final value 20014.030000   
## converged  
## # weights: 25  
## initial value 21697.915018   
## final value 20014.030000   
## converged  
## # weights: 41  
## initial value 22902.386437   
## final value 20014.030000   
## converged  
## # weights: 9  
## initial value 23342.693178   
## iter 10 value 20020.712260  
## final value 20019.539283   
## converged  
## # weights: 25  
## initial value 22230.099269   
## iter 10 value 20018.633497  
## final value 20018.005235   
## converged  
## # weights: 41  
## initial value 21530.344864   
## iter 10 value 20030.212774  
## iter 20 value 20017.347296  
## final value 20017.345852   
## converged  
## # weights: 9  
## initial value 21804.183328   
## iter 10 value 20021.894076  
## iter 20 value 20014.120667  
## iter 20 value 20014.120630  
## final value 20014.120630   
## converged  
## # weights: 25  
## initial value 23130.585036   
## iter 10 value 20029.229706  
## iter 20 value 20014.205241  
## final value 20014.046190   
## converged  
## # weights: 41  
## initial value 23313.896048   
## iter 10 value 20033.852684  
## iter 20 value 20014.258540  
## final value 20014.040323   
## converged  
## # weights: 9  
## initial value 22115.783355   
## final value 20020.659700   
## converged  
## # weights: 25  
## initial value 23276.860441   
## final value 20020.659700   
## converged  
## # weights: 41  
## initial value 23649.927815   
## final value 20020.659700   
## converged  
## # weights: 9  
## initial value 23089.940173   
## iter 10 value 20026.323304  
## final value 20026.169159   
## converged  
## # weights: 25  
## initial value 22498.891713   
## iter 10 value 20025.431776  
## final value 20024.635123   
## converged  
## # weights: 41  
## initial value 21373.432550   
## iter 10 value 20034.522279  
## iter 20 value 20023.976302  
## final value 20023.975704   
## converged  
## # weights: 9  
## initial value 22138.825570   
## iter 10 value 20029.419880  
## iter 20 value 20020.760698  
## iter 20 value 20020.760658  
## final value 20020.760658   
## converged  
## # weights: 25  
## initial value 23096.453621   
## iter 10 value 20034.214846  
## iter 20 value 20020.815980  
## final value 20020.676313   
## converged  
## # weights: 41  
## initial value 23893.593413   
## iter 10 value 20033.905730  
## iter 20 value 20020.812416  
## final value 20020.672145   
## converged  
## # weights: 9  
## initial value 23394.328423   
## final value 19950.385700   
## converged  
## # weights: 25  
## initial value 24375.756653   
## final value 19950.385700   
## converged  
## # weights: 41  
## initial value 22440.508465   
## final value 19950.385700   
## converged  
## # weights: 9  
## initial value 21859.851187   
## iter 10 value 19957.128960  
## final value 19955.893619   
## converged  
## # weights: 25  
## initial value 23709.940910   
## iter 10 value 19956.159344  
## iter 20 value 19954.364539  
## final value 19954.360043   
## converged  
## # weights: 41  
## initial value 21714.863119   
## iter 10 value 19955.356087  
## iter 20 value 19953.701067  
## iter 20 value 19953.700931  
## iter 20 value 19953.700896  
## final value 19953.700896   
## converged  
## # weights: 9  
## initial value 22857.932139   
## iter 10 value 19960.292605  
## iter 20 value 19950.499919  
## iter 20 value 19950.499873  
## final value 19950.499873   
## converged  
## # weights: 25  
## initial value 23747.108130   
## iter 10 value 19961.988916  
## iter 20 value 19950.519476  
## final value 19950.402437   
## converged  
## # weights: 41  
## initial value 22569.446412   
## iter 10 value 19968.775868  
## iter 20 value 19950.597724  
## final value 19950.397089   
## converged  
## # weights: 9  
## initial value 23172.512508   
## final value 20051.473700   
## converged  
## # weights: 25  
## initial value 22522.347598   
## final value 20051.473700   
## converged  
## # weights: 41  
## initial value 22286.169448   
## final value 20051.473700   
## converged  
## # weights: 9  
## initial value 21707.897029   
## iter 10 value 20059.230815  
## final value 20056.984351   
## converged  
## # weights: 25  
## initial value 22900.946801   
## iter 10 value 20058.475172  
## final value 20055.449938   
## converged  
## # weights: 41  
## initial value 21688.706122   
## iter 10 value 20062.470342  
## iter 20 value 20054.790495  
## iter 20 value 20054.790393  
## iter 20 value 20054.790333  
## final value 20054.790333   
## converged  
## # weights: 9  
## initial value 22189.480355   
## iter 10 value 20061.274971  
## iter 20 value 20051.586701  
## iter 20 value 20051.586656  
## final value 20051.586656   
## converged  
## # weights: 25  
## initial value 22684.433294   
## iter 10 value 20066.175914  
## iter 20 value 20051.643205  
## final value 20051.485221   
## converged  
## # weights: 41  
## initial value 22291.488588   
## iter 10 value 20069.762912  
## iter 20 value 20051.684560  
## final value 20051.484129   
## converged  
## # weights: 9  
## initial value 22032.593245   
## final value 20061.657200   
## converged  
## # weights: 25  
## initial value 23439.465769   
## final value 20061.657200   
## converged  
## # weights: 41  
## initial value 23478.180274   
## final value 20061.657200   
## converged  
## # weights: 9  
## initial value 23259.326569   
## iter 10 value 20068.877435  
## final value 20067.168762   
## converged  
## # weights: 25  
## initial value 22651.789233   
## iter 10 value 20066.537607  
## final value 20065.634073   
## converged  
## # weights: 41  
## initial value 23528.428467   
## iter 10 value 20068.740416  
## final value 20064.974429   
## converged  
## # weights: 9  
## initial value 22125.950838   
## iter 10 value 20071.541196  
## iter 20 value 20061.771155  
## iter 20 value 20061.771109  
## final value 20061.771109   
## converged  
## # weights: 25  
## initial value 22004.318081   
## iter 10 value 20076.311513  
## iter 20 value 20061.826153  
## final value 20061.670020   
## converged  
## # weights: 41  
## initial value 24532.972088   
## iter 10 value 20068.962855  
## iter 20 value 20061.741428  
## final value 20061.674168   
## converged  
## # weights: 9  
## initial value 22231.547945   
## final value 20007.369200   
## converged  
## # weights: 25  
## initial value 22632.455440   
## final value 20007.369200   
## converged  
## # weights: 41  
## initial value 23660.668000   
## final value 20007.369200   
## converged  
## # weights: 9  
## initial value 22030.906897   
## iter 10 value 20013.465818  
## final value 20012.878340   
## converged  
## # weights: 25  
## initial value 22795.925722   
## iter 10 value 20012.064627  
## final value 20011.344419   
## converged  
## # weights: 41  
## initial value 22717.918786   
## iter 10 value 20011.628365  
## iter 20 value 20010.685076  
## iter 20 value 20010.685006  
## iter 20 value 20010.684990  
## final value 20010.684990   
## converged  
## # weights: 9  
## initial value 22501.933673   
## iter 10 value 20018.885325  
## iter 20 value 20007.501972  
## iter 20 value 20007.501919  
## final value 20007.501919   
## converged  
## # weights: 25  
## initial value 22672.095382   
## iter 10 value 20022.162417  
## iter 20 value 20007.539754  
## final value 20007.386311   
## converged  
## # weights: 41  
## initial value 23585.028833   
## iter 10 value 20022.535954  
## iter 20 value 20007.544061  
## final value 20007.381701   
## converged  
## # weights: 9  
## initial value 22693.391189   
## final value 20003.880100   
## converged  
## # weights: 25  
## initial value 23700.035062   
## final value 20003.880100   
## converged  
## # weights: 41  
## initial value 24422.798827   
## final value 20003.880100   
## converged  
## # weights: 9  
## initial value 22545.767102   
## iter 10 value 20009.773572  
## final value 20009.389114   
## converged  
## # weights: 25  
## initial value 23816.431598   
## iter 10 value 20009.104403  
## final value 20007.855277   
## converged  
## # weights: 41  
## initial value 23017.767753   
## iter 10 value 20022.366707  
## iter 20 value 20007.196433  
## final value 20007.195828   
## converged  
## # weights: 9  
## initial value 21768.591860   
## iter 10 value 20012.284009  
## iter 20 value 20003.976990  
## iter 20 value 20003.976952  
## final value 20003.976952   
## converged  
## # weights: 25  
## initial value 24125.531929   
## iter 10 value 20012.487323  
## iter 20 value 20003.979335  
## final value 20003.901863   
## converged  
## # weights: 41  
## initial value 23014.726194   
## iter 10 value 20022.454690  
## iter 20 value 20004.094250  
## final value 20003.893888   
## converged  
## # weights: 9  
## initial value 23385.977828   
## final value 19948.680100   
## converged  
## # weights: 25  
## initial value 23494.894210   
## final value 19948.680100   
## converged  
## # weights: 41  
## initial value 22650.543552   
## final value 19948.680100   
## converged  
## # weights: 9  
## initial value 23558.603372   
## iter 10 value 19954.663843  
## final value 19954.187974   
## converged  
## # weights: 25  
## initial value 21660.952060   
## iter 10 value 19955.215834  
## iter 20 value 19952.654466  
## iter 20 value 19952.654413  
## iter 20 value 19952.654402  
## final value 19952.654402   
## converged  
## # weights: 41  
## initial value 21728.301924   
## iter 10 value 19953.374901  
## iter 20 value 19951.995369  
## iter 20 value 19951.995261  
## iter 20 value 19951.995210  
## final value 19951.995210   
## converged  
## # weights: 9  
## initial value 23106.747631   
## iter 10 value 19959.149475  
## iter 20 value 19948.800804  
## iter 20 value 19948.800755  
## final value 19948.800755   
## converged  
## # weights: 25  
## initial value 23735.704095   
## iter 10 value 19960.187407  
## iter 20 value 19948.812770  
## final value 19948.696328   
## converged  
## # weights: 41  
## initial value 22028.217250   
## iter 10 value 19965.234836  
## iter 20 value 19948.870963  
## final value 19948.690053   
## converged  
## # weights: 9  
## initial value 21546.680672   
## final value 20032.256500   
## converged  
## # weights: 25  
## initial value 23894.855387   
## final value 20032.256500   
## converged  
## # weights: 41  
## initial value 23624.245714   
## final value 20032.256500   
## converged  
## # weights: 9  
## initial value 23385.192312   
## iter 10 value 20038.032451  
## final value 20037.766355   
## converged  
## # weights: 25  
## initial value 21964.301056   
## iter 10 value 20037.712704  
## final value 20036.232162   
## converged  
## # weights: 41  
## initial value 23447.244083   
## iter 10 value 20037.808320  
## final value 20035.572793   
## converged  
## # weights: 9  
## initial value 23784.158153   
## iter 10 value 20039.997281  
## iter 20 value 20032.345745  
## iter 20 value 20032.345709  
## final value 20032.345709   
## converged  
## # weights: 25  
## initial value 23301.330249   
## iter 10 value 20045.287194  
## iter 20 value 20032.406734  
## final value 20032.276376   
## converged  
## # weights: 41  
## initial value 24280.226669   
## iter 10 value 20043.037463  
## iter 20 value 20032.380796  
## final value 20032.269867   
## converged  
## # weights: 9  
## initial value 23270.358507   
## final value 20014.867600   
## converged  
## # weights: 25  
## initial value 22138.591853   
## final value 20014.867600   
## converged  
## # weights: 41  
## initial value 22229.292594   
## final value 20014.867600   
## converged  
## # weights: 9  
## initial value 21596.530899   
## iter 10 value 20020.871491  
## final value 20020.376926   
## converged  
## # weights: 25  
## initial value 22166.037043   
## iter 10 value 20020.150376  
## final value 20018.842890   
## converged  
## # weights: 41  
## initial value 22865.448100   
## iter 10 value 20031.565201  
## iter 20 value 20018.184863  
## final value 20018.183527   
## converged  
## # weights: 9  
## initial value 22664.395187   
## iter 10 value 20025.126753  
## iter 20 value 20014.985880  
## iter 20 value 20014.985833  
## final value 20014.985833   
## converged  
## # weights: 25  
## initial value 23107.766838   
## iter 10 value 20027.952120  
## iter 20 value 20015.018454  
## final value 20014.880778   
## converged  
## # weights: 41  
## initial value 21757.681615   
## iter 10 value 20030.967064  
## iter 20 value 20015.053214  
## iter 30 value 20014.877210  
## iter 30 value 20014.877210  
## iter 30 value 20014.877204  
## final value 20014.877204   
## converged  
## # weights: 9  
## initial value 22882.546896   
## final value 20044.421200   
## converged  
## # weights: 25  
## initial value 23194.121261   
## final value 20044.421200   
## converged  
## # weights: 41  
## initial value 23132.024734   
## final value 20044.421200   
## converged  
## # weights: 9  
## initial value 22271.142598   
## iter 10 value 20067.581128  
## iter 20 value 20049.938752  
## final value 20049.931545   
## converged  
## # weights: 25  
## initial value 22591.577561   
## iter 10 value 20049.520518  
## final value 20048.397192   
## converged  
## # weights: 41  
## initial value 21510.996431   
## iter 10 value 20057.921945  
## iter 20 value 20047.738907  
## final value 20047.737678   
## converged  
## # weights: 9  
## initial value 21848.739015   
## iter 10 value 20053.395429  
## iter 20 value 20044.524666  
## iter 20 value 20044.524624  
## final value 20044.524624   
## converged  
## # weights: 25  
## initial value 22798.927972   
## iter 10 value 20059.739076  
## iter 20 value 20044.597803  
## final value 20044.436776   
## converged  
## # weights: 41  
## initial value 22454.063936   
## iter 10 value 20062.241473  
## iter 20 value 20044.626654  
## final value 20044.431236   
## converged  
## # weights: 9  
## initial value 23574.128926   
## final value 20048.654000   
## converged  
## # weights: 25  
## initial value 22969.267005   
## final value 20048.654000   
## converged  
## # weights: 41  
## initial value 22958.146744   
## final value 20048.654000   
## converged  
## # weights: 9  
## initial value 22093.026608   
## iter 10 value 20056.213340  
## final value 20054.164524   
## converged  
## # weights: 25  
## initial value 23385.165138   
## iter 10 value 20053.240947  
## final value 20052.630122   
## converged  
## # weights: 41  
## initial value 22685.191075   
## iter 10 value 20082.339152  
## iter 20 value 20052.508341  
## iter 30 value 20051.971298  
## final value 20051.970607   
## converged  
## # weights: 9  
## initial value 23352.087266   
## iter 10 value 20058.474818  
## iter 20 value 20048.767226  
## iter 20 value 20048.767181  
## final value 20048.767181   
## converged  
## # weights: 25  
## initial value 23700.636525   
## iter 10 value 20061.955056  
## iter 20 value 20048.807351  
## final value 20048.675320   
## converged  
## # weights: 41  
## initial value 22353.376282   
## iter 10 value 20069.988239  
## iter 20 value 20048.899967  
## final value 20048.663807   
## converged  
## # weights: 9  
## initial value 22890.867752   
## final value 20050.709200   
## converged  
## # weights: 25  
## initial value 22477.206545   
## final value 20050.709200   
## converged  
## # weights: 41  
## initial value 21966.898198   
## final value 20050.709200   
## converged  
## # weights: 9  
## initial value 22314.489150   
## iter 10 value 20081.469599  
## iter 20 value 20056.573923  
## final value 20056.219787   
## converged  
## # weights: 25  
## initial value 22686.843019   
## iter 10 value 20061.048302  
## iter 20 value 20054.690151  
## final value 20054.685363   
## converged  
## # weights: 41  
## initial value 23838.832452   
## iter 10 value 20055.233035  
## iter 20 value 20054.025852  
## iter 20 value 20054.025774  
## iter 20 value 20054.025768  
## final value 20054.025768   
## converged  
## # weights: 9  
## initial value 22171.666337   
## iter 10 value 20060.354868  
## iter 20 value 20050.820407  
## iter 20 value 20050.820363  
## final value 20050.820363   
## converged  
## # weights: 25  
## initial value 22133.370563   
## iter 10 value 20064.267881  
## iter 20 value 20050.865521  
## final value 20050.721294   
## converged  
## # weights: 41  
## initial value 22118.246835   
## iter 10 value 20067.501402  
## iter 20 value 20050.902801  
## final value 20050.718549   
## converged  
## # weights: 9  
## initial value 21815.691684   
## final value 20001.390500   
## converged  
## # weights: 25  
## initial value 23278.178725   
## final value 20001.390500   
## converged  
## # weights: 41  
## initial value 22363.833517   
## final value 20001.390500   
## converged  
## # weights: 9  
## initial value 23700.614020   
## iter 10 value 20007.084999  
## final value 20006.899466   
## converged  
## # weights: 25  
## initial value 23382.042347   
## iter 10 value 20007.072587  
## final value 20005.365571   
## converged  
## # weights: 41  
## initial value 22158.029118   
## iter 10 value 20006.594773  
## iter 20 value 20004.706418  
## iter 20 value 20004.706301  
## iter 20 value 20004.706244  
## final value 20004.706244   
## converged  
## # weights: 9  
## initial value 22310.684631   
## iter 10 value 20011.215049  
## iter 20 value 20001.503769  
## iter 20 value 20001.503724  
## final value 20001.503724   
## converged  
## # weights: 25  
## initial value 21930.950711   
## iter 10 value 20014.922324  
## iter 20 value 20001.546511  
## final value 20001.404901   
## converged  
## # weights: 41  
## initial value 23211.577143   
## iter 10 value 20020.282850  
## iter 20 value 20001.608314  
## final value 20001.402210   
## converged  
## # weights: 9  
## initial value 23472.558687   
## final value 20008.558000   
## converged  
## # weights: 25  
## initial value 22176.211380   
## final value 20008.558000   
## converged  
## # weights: 41  
## initial value 21873.286850   
## final value 20008.558000   
## converged  
## # weights: 9  
## initial value 23317.841234   
## iter 10 value 20015.846744  
## final value 20014.067176   
## converged  
## # weights: 25  
## initial value 23487.426483   
## iter 10 value 20013.419314  
## final value 20012.533189   
## converged  
## # weights: 41  
## initial value 24375.484404   
## iter 10 value 20026.500028  
## iter 20 value 20011.874072  
## iter 20 value 20011.873888  
## iter 20 value 20011.873883  
## final value 20011.873883   
## converged  
## # weights: 9  
## initial value 23574.012308   
## iter 10 value 20016.805644  
## iter 20 value 20008.653089  
## iter 20 value 20008.653051  
## final value 20008.653051   
## converged  
## # weights: 25  
## initial value 23134.367236   
## iter 10 value 20022.510816  
## iter 20 value 20008.718865  
## final value 20008.570934   
## converged  
## # weights: 41  
## initial value 22466.802186   
## iter 10 value 20026.978681  
## iter 20 value 20008.770376  
## final value 20008.568414   
## converged  
## # weights: 9  
## initial value 22702.645105   
## final value 20042.193700   
## converged  
## # weights: 25  
## initial value 23825.767212   
## final value 20042.193700   
## converged  
## # weights: 41  
## initial value 22173.839115   
## final value 20042.193700   
## converged  
## # weights: 9  
## initial value 22912.410199   
## iter 10 value 20048.214148  
## final value 20047.703949   
## converged  
## # weights: 25  
## initial value 23152.007664   
## iter 10 value 20046.515953  
## final value 20046.169647   
## converged  
## # weights: 41  
## initial value 23972.371126   
## iter 10 value 20051.634500  
## iter 20 value 20045.510579  
## final value 20045.510137   
## converged  
## # weights: 9  
## initial value 22203.197313   
## iter 10 value 20050.986220  
## iter 20 value 20042.295071  
## iter 20 value 20042.295030  
## final value 20042.295030   
## converged  
## # weights: 25  
## initial value 21394.998914   
## iter 10 value 20050.389799  
## iter 20 value 20042.288195  
## final value 20042.204805   
## converged  
## # weights: 41  
## initial value 21883.478238   
## iter 10 value 20055.482965  
## iter 20 value 20042.346915  
## final value 20042.203048   
## converged  
## # weights: 9  
## initial value 23581.504031   
## final value 19991.259700   
## converged  
## # weights: 25  
## initial value 22551.427971   
## final value 19991.259700   
## converged  
## # weights: 41  
## initial value 22932.099744   
## final value 19991.259700   
## converged  
## # weights: 9  
## initial value 23660.615681   
## iter 10 value 19997.678277  
## final value 19996.768362   
## converged  
## # weights: 25  
## initial value 23452.960541   
## iter 10 value 19995.856746  
## final value 19995.234509   
## converged  
## # weights: 41  
## initial value 23657.024536   
## iter 10 value 20007.428083  
## iter 20 value 19994.575483  
## iter 20 value 19994.575314  
## iter 20 value 19994.575259  
## final value 19994.575259   
## converged  
## # weights: 9  
## initial value 23074.972909   
## iter 10 value 20001.000420  
## iter 20 value 19991.372003  
## iter 20 value 19991.371958  
## final value 19991.371958   
## converged  
## # weights: 25  
## initial value 22638.958395   
## iter 10 value 20008.458630  
## iter 20 value 19991.457990  
## final value 19991.272116   
## converged  
## # weights: 41  
## initial value 21139.496948   
## iter 10 value 20000.923973  
## iter 20 value 19991.371121  
## final value 19991.268743   
## converged  
## # weights: 9  
## initial value 21823.639630   
## final value 20021.567600   
## converged  
## # weights: 25  
## initial value 22917.508639   
## final value 20021.567600   
## converged  
## # weights: 41  
## initial value 23709.603761   
## final value 20021.567600   
## converged  
## # weights: 9  
## initial value 22183.573238   
## iter 10 value 20027.694721  
## final value 20027.077117   
## converged  
## # weights: 25  
## initial value 22653.469874   
## iter 10 value 20026.543794  
## final value 20025.543046   
## converged  
## # weights: 41  
## initial value 23497.946516   
## iter 10 value 20038.810635  
## iter 20 value 20024.885495  
## final value 20024.883602   
## converged  
## # weights: 9  
## initial value 23054.523934   
## iter 10 value 20031.626237  
## iter 20 value 20021.683568  
## iter 20 value 20021.683522  
## final value 20021.683522   
## converged  
## # weights: 25  
## initial value 23272.987824   
## iter 10 value 20035.844768  
## iter 20 value 20021.732205  
## final value 20021.585682   
## converged  
## # weights: 41  
## initial value 23701.097308   
## iter 10 value 20037.169696  
## iter 20 value 20021.747480  
## final value 20021.579013   
## converged  
## # weights: 9  
## initial value 22127.539976   
## final value 19931.150000   
## converged  
## # weights: 25  
## initial value 21343.044222   
## final value 19931.150000   
## converged  
## # weights: 41  
## initial value 24196.893115   
## final value 19931.150000   
## converged  
## # weights: 9  
## initial value 21632.387687   
## iter 10 value 19937.103795  
## final value 19936.657748   
## converged  
## # weights: 25  
## initial value 22116.823929   
## iter 10 value 19936.952626  
## iter 20 value 19935.125746  
## final value 19935.124308   
## converged  
## # weights: 41  
## initial value 24019.234671   
## iter 10 value 19946.081596  
## iter 20 value 19934.466212  
## final value 19934.465138   
## converged  
## # weights: 9  
## initial value 22246.041006   
## iter 10 value 19941.982087  
## iter 20 value 19931.274885  
## iter 20 value 19931.274836  
## final value 19931.274836   
## converged  
## # weights: 25  
## initial value 22409.901008   
## iter 10 value 19945.450572  
## iter 20 value 19931.314874  
## final value 19931.165894   
## converged  
## # weights: 41  
## initial value 23164.167418   
## iter 10 value 19949.750286  
## iter 20 value 19931.364447  
## final value 19931.160111   
## converged  
## # weights: 9  
## initial value 22646.841833   
## final value 20048.115700   
## converged  
## # weights: 25  
## initial value 22538.108646   
## final value 20048.115700   
## converged  
## # weights: 41  
## initial value 23079.396501   
## final value 20048.115700   
## converged  
## # weights: 9  
## initial value 23387.660945   
## iter 10 value 20055.186451  
## final value 20053.626219   
## converged  
## # weights: 25  
## initial value 22752.389054   
## iter 10 value 20055.552457  
## iter 20 value 20052.095567  
## final value 20052.091782   
## converged  
## # weights: 41  
## initial value 22239.321391   
## iter 10 value 20052.775316  
## final value 20051.432328   
## converged  
## # weights: 9  
## initial value 22443.309851   
## iter 10 value 20058.492493  
## iter 20 value 20048.235336  
## iter 20 value 20048.235288  
## final value 20048.235288   
## converged  
## # weights: 25  
## initial value 21660.814385   
## iter 10 value 20058.565516  
## iter 20 value 20048.236178  
## final value 20048.126975   
## converged  
## # weights: 41  
## initial value 22908.667824   
## iter 10 value 20067.801717  
## iter 20 value 20048.342664  
## final value 20048.125688   
## converged  
## # weights: 9  
## initial value 22323.732085   
## final value 20053.498000   
## converged  
## # weights: 25  
## initial value 22007.008351   
## final value 20053.498000   
## converged  
## # weights: 41  
## initial value 23649.087132   
## final value 20053.498000   
## converged  
## # weights: 9  
## initial value 23118.885720   
## iter 10 value 20060.991386  
## final value 20059.008763   
## converged  
## # weights: 25  
## initial value 23075.170174   
## iter 10 value 20058.398570  
## final value 20057.474227   
## converged  
## # weights: 41  
## initial value 23693.281966   
## iter 10 value 20069.258996  
## iter 20 value 20056.827378  
## final value 20056.814759   
## converged  
## # weights: 9  
## initial value 22694.488597   
## iter 10 value 20064.729709  
## iter 20 value 20053.627493  
## iter 20 value 20053.627441  
## final value 20053.627441   
## converged  
## # weights: 25  
## initial value 22795.443243   
## iter 10 value 20066.677247  
## iter 20 value 20053.649946  
## final value 20053.515359   
## converged  
## # weights: 41  
## initial value 22502.145654   
## iter 10 value 20073.502591  
## iter 20 value 20053.728637  
## final value 20053.507286   
## converged  
## # weights: 9  
## initial value 22503.757543   
## final value 20036.130100   
## converged  
## # weights: 25  
## initial value 22629.511344   
## final value 20036.130100   
## converged  
## # weights: 41  
## initial value 22392.651519   
## final value 20036.130100   
## converged  
## # weights: 9  
## initial value 23653.973300   
## iter 10 value 20042.177339  
## final value 20041.640085   
## converged  
## # weights: 25  
## initial value 22739.735639   
## iter 10 value 20041.095586  
## final value 20040.105813   
## converged  
## # weights: 41  
## initial value 23074.550870   
## iter 10 value 20040.559273  
## final value 20039.446440   
## converged  
## # weights: 9  
## initial value 21920.527583   
## iter 10 value 20044.823704  
## iter 20 value 20036.230330  
## iter 20 value 20036.230290  
## final value 20036.230290   
## converged  
## # weights: 25  
## initial value 22192.249985   
## iter 10 value 20048.751974  
## iter 20 value 20036.275620  
## final value 20036.141584   
## converged  
## # weights: 41  
## initial value 23320.852780   
## iter 10 value 20056.890882  
## iter 20 value 20036.369456  
## final value 20036.144107   
## converged  
## # weights: 9  
## initial value 22980.958308   
## final value 20044.680100   
## converged  
## # weights: 25  
## initial value 21579.426293   
## final value 20044.680100   
## converged  
## # weights: 41  
## initial value 22438.694870   
## final value 20044.680100   
## converged  
## # weights: 9  
## initial value 22820.079103   
## iter 10 value 20051.759279  
## final value 20050.190444   
## converged  
## # weights: 25  
## initial value 22230.227994   
## iter 10 value 20049.235182  
## final value 20048.656170   
## converged  
## # weights: 41  
## initial value 22649.315857   
## iter 10 value 20049.365751  
## iter 20 value 20047.996758  
## iter 20 value 20047.996599  
## iter 20 value 20047.996589  
## final value 20047.996589   
## converged  
## # weights: 9  
## initial value 22782.210796   
## iter 10 value 20055.440916  
## iter 20 value 20044.804164  
## iter 20 value 20044.804114  
## final value 20044.804114   
## converged  
## # weights: 25  
## initial value 23117.864641   
## iter 10 value 20059.702041  
## iter 20 value 20044.853291  
## final value 20044.701860   
## converged  
## # weights: 41  
## initial value 22292.748759   
## iter 10 value 20065.264032  
## iter 20 value 20044.917417  
## final value 20044.689580   
## converged  
## # weights: 9  
## initial value 22461.845563   
## final value 20046.605200   
## converged  
## # weights: 25  
## initial value 23508.697846   
## final value 20046.605200   
## converged  
## # weights: 41  
## initial value 21789.637182   
## final value 20046.605200   
## converged  
## # weights: 9  
## initial value 22907.951777   
## iter 10 value 20056.893765  
## iter 20 value 20052.115854  
## iter 20 value 20052.115841  
## final value 20052.115841   
## converged  
## # weights: 25  
## initial value 22456.457340   
## iter 10 value 20050.742088  
## final value 20050.581221   
## converged  
## # weights: 41  
## initial value 22322.413149   
## iter 10 value 20050.962098  
## final value 20049.921759   
## converged  
## # weights: 9  
## initial value 22380.621021   
## iter 10 value 20056.239345  
## iter 20 value 20046.716274  
## iter 20 value 20046.716230  
## final value 20046.716230   
## converged  
## # weights: 25  
## initial value 22727.742012   
## iter 10 value 20059.089928  
## iter 20 value 20046.749139  
## final value 20046.617792   
## converged  
## # weights: 41  
## initial value 22206.756138   
## iter 10 value 20065.656601  
## iter 20 value 20046.824848  
## final value 20046.614777   
## converged  
## # weights: 9  
## initial value 23162.155414   
## final value 20050.065700   
## converged  
## # weights: 25  
## initial value 21974.089254   
## final value 20050.065700   
## converged  
## # weights: 41  
## initial value 22239.899879   
## final value 20050.065700   
## converged  
## # weights: 9  
## initial value 23152.610840   
## iter 10 value 20055.634532  
## final value 20055.576355   
## converged  
## # weights: 25  
## initial value 23108.611378   
## iter 10 value 20055.015725  
## final value 20054.041933   
## converged  
## # weights: 41  
## initial value 24008.961399   
## iter 10 value 20066.314333  
## iter 20 value 20053.386105  
## final value 20053.382372   
## converged  
## # weights: 9  
## initial value 23618.578904   
## iter 10 value 20059.035400  
## iter 20 value 20050.169114  
## iter 20 value 20050.169072  
## final value 20050.169072   
## converged  
## # weights: 25  
## initial value 23353.415191   
## iter 10 value 20064.736019  
## iter 20 value 20050.234837  
## final value 20050.078975   
## converged  
## # weights: 41  
## initial value 23212.274311   
## iter 10 value 20072.105258  
## iter 20 value 20050.319799  
## final value 20050.076801   
## converged  
## # weights: 9  
## initial value 22022.813528   
## final value 20042.467600   
## converged  
## # weights: 25  
## initial value 22979.359493   
## final value 20042.467600   
## converged  
## # weights: 41  
## initial value 22754.312060   
## final value 20042.467600   
## converged  
## # weights: 9  
## initial value 22595.354519   
## iter 10 value 20048.354703  
## final value 20047.977788   
## converged  
## # weights: 25  
## initial value 21891.871355   
## iter 10 value 20051.459601  
## iter 20 value 20046.443980  
## final value 20046.443434   
## converged  
## # weights: 41  
## initial value 22880.162878   
## iter 10 value 20054.391243  
## iter 20 value 20045.785177  
## final value 20045.783981   
## converged  
## # weights: 9  
## initial value 23338.431979   
## iter 10 value 20053.296850  
## iter 20 value 20042.592453  
## iter 20 value 20042.592403  
## final value 20042.592403   
## converged  
## # weights: 25  
## initial value 22887.014921   
## iter 10 value 20056.891087  
## iter 20 value 20042.633891  
## final value 20042.484370   
## converged  
## # weights: 41  
## initial value 22533.568422   
## iter 10 value 20062.395866  
## iter 20 value 20042.697357  
## final value 20042.477885   
## converged  
## # weights: 9  
## initial value 22763.046016   
## final value 20062.464500   
## converged  
## # weights: 25  
## initial value 23824.956911   
## final value 20062.464500   
## converged  
## # weights: 41  
## initial value 24358.113283   
## final value 20062.464500   
## converged  
## # weights: 9  
## initial value 23055.064372   
## iter 10 value 20068.212340  
## final value 20067.977119   
## converged  
## # weights: 25  
## initial value 22246.778994   
## iter 10 value 20067.537533  
## final value 20066.442272   
## converged  
## # weights: 41  
## initial value 22403.427652   
## iter 10 value 20068.218206  
## iter 20 value 20065.782585  
## iter 20 value 20065.782411  
## iter 20 value 20065.782406  
## final value 20065.782406   
## converged  
## # weights: 9  
## initial value 23508.919148   
## iter 10 value 20072.563409  
## iter 20 value 20062.580932  
## iter 20 value 20062.580886  
## final value 20062.580886   
## converged  
## # weights: 25  
## initial value 21517.724806   
## iter 10 value 20072.474217  
## iter 20 value 20062.579904  
## final value 20062.476878   
## converged  
## # weights: 41  
## initial value 21607.825965   
## iter 10 value 20074.918763  
## iter 20 value 20062.608088  
## final value 20062.474238   
## converged  
## # weights: 9  
## initial value 22880.921471   
## final value 20006.167600   
## converged  
## # weights: 25  
## initial value 23294.819403   
## final value 20006.167600   
## converged  
## # weights: 41  
## initial value 22853.226766   
## final value 20006.167600   
## converged  
## # weights: 9  
## initial value 22581.447364   
## iter 10 value 20015.178581  
## iter 20 value 20011.676904  
## iter 20 value 20011.676825  
## final value 20011.676825   
## converged  
## # weights: 25  
## initial value 21570.875268   
## iter 10 value 20011.126771  
## final value 20010.142749   
## converged  
## # weights: 41  
## initial value 24026.828878   
## iter 10 value 20013.419533  
## iter 20 value 20009.484065  
## final value 20009.483410   
## converged  
## # weights: 9  
## initial value 22939.076777   
## iter 10 value 20017.921664  
## iter 20 value 20006.303115  
## iter 20 value 20006.303061  
## final value 20006.303061   
## converged  
## # weights: 25  
## initial value 22629.460704   
## iter 10 value 20019.083244  
## iter 20 value 20006.316507  
## final value 20006.182160   
## converged  
## # weights: 41  
## initial value 23517.946369   
## iter 10 value 20022.281361  
## iter 20 value 20006.353379  
## final value 20006.180320   
## converged  
## # weights: 9  
## initial value 22337.557813   
## final value 20057.069200   
## converged  
## # weights: 25  
## initial value 23626.268607   
## final value 20057.069200   
## converged  
## # weights: 41  
## initial value 21449.664314   
## final value 20057.069200   
## converged  
## # weights: 9  
## initial value 22201.222708   
## iter 10 value 20063.993693  
## final value 20062.580231   
## converged  
## # weights: 25  
## initial value 21907.037411   
## iter 10 value 20061.877903  
## final value 20061.045643   
## converged  
## # weights: 41  
## initial value 21527.153366   
## iter 10 value 20063.624527  
## iter 20 value 20060.386174  
## iter 20 value 20060.386085  
## iter 20 value 20060.386061  
## final value 20060.386061   
## converged  
## # weights: 9  
## initial value 22840.093717   
## iter 10 value 20068.158572  
## iter 20 value 20057.197052  
## iter 20 value 20057.197001  
## final value 20057.197001   
## converged  
## # weights: 25  
## initial value 21812.785750   
## iter 10 value 20067.287808  
## iter 20 value 20057.187013  
## final value 20057.082278   
## converged  
## # weights: 41  
## initial value 22025.360353   
## iter 10 value 20075.949327  
## iter 20 value 20057.286873  
## final value 20057.078628   
## converged  
## # weights: 9  
## initial value 22958.453231   
## final value 19999.489700   
## converged  
## # weights: 25  
## initial value 22743.630911   
## final value 19999.489700   
## converged  
## # weights: 41  
## initial value 23390.635710   
## final value 19999.489700   
## converged  
## # weights: 9  
## initial value 21872.895025   
## iter 10 value 20005.362680  
## final value 20004.998646   
## converged  
## # weights: 25  
## initial value 21915.464642   
## iter 10 value 20006.170912  
## final value 20003.464734   
## converged  
## # weights: 41  
## initial value 21734.281854   
## iter 10 value 20004.188763  
## final value 20002.805537   
## converged  
## # weights: 9  
## initial value 23016.539344   
## iter 10 value 20009.132000  
## iter 20 value 19999.600868  
## iter 20 value 19999.600824  
## final value 19999.600824   
## converged  
## # weights: 25  
## initial value 22565.933938   
## iter 10 value 20014.615301  
## iter 20 value 19999.664086  
## iter 30 value 19999.503260  
## final value 19999.502993   
## converged  
## # weights: 41  
## initial value 22009.929335   
## iter 10 value 20016.051670  
## iter 20 value 19999.680647  
## final value 19999.499239   
## converged  
## # weights: 9  
## initial value 22042.900875   
## final value 19999.170100   
## converged  
## # weights: 25  
## initial value 22107.126508   
## final value 19999.170100   
## converged  
## # weights: 41  
## initial value 23534.723264   
## final value 19999.170100   
## converged  
## # weights: 9  
## initial value 23856.480924   
## iter 10 value 20005.255792  
## final value 20004.679049   
## converged  
## # weights: 25  
## initial value 22596.552755   
## iter 10 value 20005.623978  
## iter 20 value 20003.145440  
## iter 20 value 20003.145275  
## iter 20 value 20003.145272  
## final value 20003.145272   
## converged  
## # weights: 41  
## initial value 22234.766513   
## iter 10 value 20003.745951  
## final value 20002.485878   
## converged  
## # weights: 9  
## initial value 22202.127127   
## iter 10 value 20009.239181  
## iter 20 value 19999.286189  
## iter 20 value 19999.286142  
## final value 19999.286142   
## converged  
## # weights: 25  
## initial value 21886.088216   
## iter 10 value 20011.336783  
## iter 20 value 19999.310372  
## final value 19999.183705   
## converged  
## # weights: 41  
## initial value 24464.268931   
## iter 10 value 20007.371834  
## iter 20 value 19999.264660  
## final value 19999.184509   
## converged  
## # weights: 9  
## initial value 23317.277876   
## final value 20031.585700   
## converged  
## # weights: 25  
## initial value 24118.160141   
## final value 20031.585700   
## converged  
## # weights: 41  
## initial value 22350.963756   
## final value 20031.585700   
## converged  
## # weights: 9  
## initial value 22997.902635   
## iter 10 value 20054.955765  
## iter 20 value 20037.203423  
## final value 20037.095522   
## converged  
## # weights: 25  
## initial value 22710.050195   
## iter 10 value 20036.905125  
## final value 20035.561377   
## converged  
## # weights: 41  
## initial value 21379.982552   
## iter 10 value 20047.920930  
## iter 20 value 20034.906491  
## final value 20034.901918   
## converged  
## # weights: 9  
## initial value 23074.664509   
## iter 10 value 20042.453147  
## iter 20 value 20031.710993  
## iter 20 value 20031.710943  
## final value 20031.710943   
## converged  
## # weights: 25  
## initial value 22178.368367   
## iter 10 value 20045.752869  
## iter 20 value 20031.749036  
## final value 20031.597738   
## converged  
## # weights: 41  
## initial value 22379.382230   
## iter 10 value 20050.801327  
## iter 20 value 20031.807241  
## final value 20031.595290   
## converged  
## # weights: 9  
## initial value 23381.848787   
## final value 20031.021200   
## converged  
## # weights: 25  
## initial value 24198.496132   
## final value 20031.021200   
## converged  
## # weights: 41  
## initial value 22969.467308   
## final value 20031.021200   
## converged  
## # weights: 9  
## initial value 22132.980102   
## iter 10 value 20038.660817  
## final value 20036.531015   
## converged  
## # weights: 25  
## initial value 22677.558498   
## iter 10 value 20036.993852  
## iter 20 value 20034.997299  
## final value 20034.996848   
## converged  
## # weights: 41  
## initial value 22501.883430   
## iter 10 value 20040.434757  
## iter 20 value 20034.338672  
## final value 20034.337430   
## converged  
## # weights: 9  
## initial value 21701.053096   
## iter 10 value 20038.126139  
## iter 20 value 20031.103114  
## iter 20 value 20031.103082  
## final value 20031.103082   
## converged  
## # weights: 25  
## initial value 22371.796254   
## iter 10 value 20047.497105  
## iter 20 value 20031.211154  
## final value 20031.034969   
## converged  
## # weights: 41  
## initial value 22482.859996   
## iter 10 value 20050.179931  
## iter 20 value 20031.242085  
## final value 20031.031634   
## converged  
## # weights: 9  
## initial value 23062.708883   
## final value 20038.070000   
## converged  
## # weights: 25  
## initial value 22606.577557   
## final value 20038.070000   
## converged  
## # weights: 41  
## initial value 23921.193119   
## final value 20038.070000   
## converged  
## # weights: 9  
## initial value 23118.886914   
## iter 10 value 20046.447260  
## iter 20 value 20043.580324  
## iter 20 value 20043.580161  
## final value 20043.580161   
## converged  
## # weights: 25  
## initial value 22677.966568   
## iter 10 value 20042.733635  
## final value 20042.045867   
## converged  
## # weights: 41  
## initial value 23018.012317   
## iter 10 value 20042.694215  
## iter 20 value 20041.386312  
## iter 20 value 20041.386280  
## iter 20 value 20041.386278  
## final value 20041.386278   
## converged  
## # weights: 9  
## initial value 22888.965191   
## iter 10 value 20049.421194  
## iter 20 value 20038.200870  
## iter 20 value 20038.200818  
## final value 20038.200818   
## converged  
## # weights: 25  
## initial value 24043.890247   
## iter 10 value 20048.968264  
## iter 20 value 20038.195648  
## final value 20038.090029   
## converged  
## # weights: 41  
## initial value 21457.734683   
## iter 10 value 20049.784457  
## iter 20 value 20038.205058  
## final value 20038.079778   
## converged  
## # weights: 9  
## initial value 22444.205735   
## final value 19994.114000   
## converged  
## # weights: 25  
## initial value 22721.834374   
## final value 19994.114000   
## converged  
## # weights: 41  
## initial value 22746.348342   
## final value 19994.114000   
## converged  
## # weights: 9  
## initial value 22302.335205   
## iter 10 value 20001.841930  
## final value 19999.622838   
## converged  
## # weights: 25  
## initial value 22031.463111   
## iter 10 value 19999.086999  
## iter 20 value 19998.089245  
## final value 19998.088980   
## converged  
## # weights: 41  
## initial value 23752.323854   
## iter 10 value 20018.898219  
## iter 20 value 19997.437429  
## final value 19997.429677   
## converged  
## # weights: 9  
## initial value 22304.717530   
## iter 10 value 20004.860254  
## iter 20 value 19994.237896  
## iter 20 value 19994.237846  
## final value 19994.237846   
## converged  
## # weights: 25  
## initial value 23604.038709   
## iter 10 value 20005.870261  
## iter 20 value 19994.249540  
## final value 19994.129044   
## converged  
## # weights: 41  
## initial value 22558.325617   
## iter 10 value 20012.902641  
## iter 20 value 19994.330618  
## final value 19994.123573   
## converged  
## # weights: 9  
## initial value 23232.002773   
## final value 20006.318500   
## converged  
## # weights: 25  
## initial value 23453.120428   
## final value 20006.318500   
## converged  
## # weights: 41  
## initial value 23587.232154   
## final value 20006.318500   
## converged  
## # weights: 9  
## initial value 22422.652242   
## iter 10 value 20014.415044  
## final value 20011.827569   
## converged  
## # weights: 25  
## initial value 21353.106481   
## iter 10 value 20011.261553  
## final value 20010.293621   
## converged  
## # weights: 41  
## initial value 21529.897175   
## iter 10 value 20022.073366  
## iter 20 value 20009.634582  
## final value 20009.634254   
## converged  
## # weights: 9  
## initial value 22935.937050   
## iter 10 value 20017.187343  
## iter 20 value 20006.443809  
## iter 20 value 20006.443759  
## final value 20006.443759   
## converged  
## # weights: 25  
## initial value 22947.353797   
## iter 10 value 20019.278684  
## iter 20 value 20006.467921  
## final value 20006.330957   
## converged  
## # weights: 41  
## initial value 22784.086071   
## iter 10 value 20025.070927  
## iter 20 value 20006.534701  
## final value 20006.328727   
## converged  
## # weights: 9  
## initial value 22505.036670   
## final value 20046.523700   
## converged  
## # weights: 25  
## initial value 21858.901758   
## final value 20046.523700   
## converged  
## # weights: 41  
## initial value 22255.440144   
## final value 20046.523700   
## converged  
## # weights: 9  
## initial value 22013.715203   
## iter 10 value 20053.077524  
## final value 20052.034162   
## converged  
## # weights: 25  
## initial value 24269.283146   
## iter 10 value 20051.800379  
## final value 20050.499797   
## converged  
## # weights: 41  
## initial value 21191.354510   
## iter 10 value 20062.018863  
## iter 20 value 20049.847448  
## final value 20049.840333   
## converged  
## # weights: 9  
## initial value 21568.745864   
## iter 10 value 20053.448616  
## iter 20 value 20046.603539  
## iter 20 value 20046.603507  
## final value 20046.603507   
## converged  
## # weights: 25  
## initial value 22708.595408   
## iter 10 value 20061.983244  
## iter 20 value 20046.701936  
## final value 20046.538493   
## converged  
## # weights: 41  
## initial value 21598.903806   
## iter 10 value 20061.578477  
## iter 20 value 20046.697270  
## final value 20046.533646   
## converged  
## # weights: 9  
## initial value 22315.949835   
## final value 20002.330100   
## converged  
## # weights: 25  
## initial value 22373.143878   
## final value 20002.330100   
## converged  
## # weights: 41  
## initial value 21991.703954   
## final value 20002.330100   
## converged  
## # weights: 9  
## initial value 23203.627963   
## iter 10 value 20010.767003  
## final value 20007.839094   
## converged  
## # weights: 25  
## initial value 22126.678186   
## iter 10 value 20008.950632  
## iter 20 value 20006.305193  
## iter 20 value 20006.305162  
## iter 20 value 20006.305160  
## final value 20006.305160   
## converged  
## # weights: 41  
## initial value 23152.302510   
## iter 10 value 20016.503782  
## iter 20 value 20005.647329  
## final value 20005.645808   
## converged  
## # weights: 9  
## initial value 21922.203592   
## iter 10 value 20011.530321  
## iter 20 value 20002.436171  
## iter 20 value 20002.436129  
## final value 20002.436129   
## converged  
## # weights: 25  
## initial value 22370.262528   
## iter 10 value 20016.641523  
## iter 20 value 20002.495099  
## final value 20002.342879   
## converged  
## # weights: 41  
## initial value 23016.970168   
## iter 10 value 20020.177702  
## iter 20 value 20002.535869  
## final value 20002.339727   
## converged  
## # weights: 9  
## initial value 22185.872181   
## final value 20020.005200   
## converged  
## # weights: 25  
## initial value 22097.375420   
## final value 20020.005200   
## converged  
## # weights: 41  
## initial value 23979.892231   
## final value 20020.005200   
## converged  
## # weights: 9  
## initial value 23730.715539   
## iter 10 value 20025.956937  
## final value 20025.514673   
## converged  
## # weights: 25  
## initial value 23648.659087   
## iter 10 value 20024.358717  
## final value 20023.980592   
## converged  
## # weights: 41  
## initial value 23588.291145   
## iter 10 value 20036.150348  
## iter 20 value 20023.321715  
## final value 20023.321219   
## converged  
## # weights: 9  
## initial value 22134.017125   
## iter 10 value 20030.038249  
## iter 20 value 20020.120873  
## iter 20 value 20020.120827  
## final value 20020.120827   
## converged  
## # weights: 25  
## initial value 22939.781251   
## iter 10 value 20033.920868  
## iter 20 value 20020.165637  
## final value 20020.017931   
## converged  
## # weights: 41  
## initial value 22362.229054   
## iter 10 value 20039.391931  
## iter 20 value 20020.228714  
## final value 20020.017093   
## converged  
## # weights: 9  
## initial value 22438.490262   
## final value 20022.593200   
## converged  
## # weights: 25  
## initial value 22822.519660   
## final value 20022.593200   
## converged  
## # weights: 41  
## initial value 23890.048269   
## final value 20022.593200   
## converged  
## # weights: 9  
## initial value 23225.223335   
## iter 10 value 20030.304392  
## final value 20028.102744   
## converged  
## # weights: 25  
## initial value 23501.555607   
## iter 10 value 20027.828557  
## final value 20026.568631   
## converged  
## # weights: 41  
## initial value 22138.659864   
## iter 10 value 20028.103312  
## iter 20 value 20025.909447  
## iter 20 value 20025.909271  
## iter 20 value 20025.909248  
## final value 20025.909248   
## converged  
## # weights: 9  
## initial value 23314.037365   
## iter 10 value 20033.370284  
## iter 20 value 20022.717451  
## iter 20 value 20022.717402  
## final value 20022.717402   
## converged  
## # weights: 25  
## initial value 23537.487780   
## iter 10 value 20034.421545  
## iter 20 value 20022.729572  
## final value 20022.606637   
## converged  
## # weights: 41  
## initial value 22054.416072   
## iter 10 value 20037.989618  
## iter 20 value 20022.770709  
## final value 20022.604041   
## converged  
## # weights: 9  
## initial value 23438.284418   
## final value 20028.713200   
## converged  
## # weights: 25  
## initial value 23339.897935   
## final value 20028.713200   
## converged  
## # weights: 41  
## initial value 21386.932468   
## final value 20028.713200   
## converged  
## # weights: 9  
## initial value 23057.158332   
## iter 10 value 20034.935099  
## final value 20034.222935   
## converged  
## # weights: 25  
## initial value 22855.266002   
## iter 10 value 20034.164567  
## final value 20032.688775   
## converged  
## # weights: 41  
## initial value 22884.038246   
## iter 10 value 20037.863782  
## iter 20 value 20032.029580  
## final value 20032.029317   
## converged  
## # weights: 9  
## initial value 21630.077777   
## iter 10 value 20036.494905  
## iter 20 value 20028.802917  
## iter 20 value 20028.802881  
## final value 20028.802881   
## converged  
## # weights: 25  
## initial value 23705.930205   
## iter 10 value 20039.753668  
## iter 20 value 20028.840488  
## final value 20028.731647   
## converged  
## # weights: 41  
## initial value 22604.763609   
## iter 10 value 20048.736405  
## iter 20 value 20028.944052  
## final value 20028.729061   
## converged  
## # weights: 9  
## initial value 21916.011647   
## final value 19949.321200   
## converged  
## # weights: 25  
## initial value 22377.242573   
## final value 19949.321200   
## converged  
## # weights: 41  
## initial value 22263.393838   
## final value 19949.321200   
## converged  
## # weights: 9  
## initial value 22413.134082   
## iter 10 value 19954.909419  
## final value 19954.829262   
## converged  
## # weights: 25  
## initial value 22800.687886   
## iter 10 value 19954.590100  
## final value 19953.295766   
## converged  
## # weights: 41  
## initial value 22076.216480   
## iter 10 value 19964.328589  
## iter 20 value 19952.639576  
## final value 19952.636564   
## converged  
## # weights: 9  
## initial value 23361.326599   
## iter 10 value 19958.110771  
## iter 20 value 19949.422537  
## iter 20 value 19949.422496  
## final value 19949.422496   
## converged  
## # weights: 25  
## initial value 22962.306280   
## iter 10 value 19966.680877  
## iter 20 value 19949.521343  
## final value 19949.337849   
## converged  
## # weights: 41  
## initial value 23330.890740   
## iter 10 value 19968.292618  
## iter 20 value 19949.539926  
## final value 19949.334104   
## converged  
## # weights: 9  
## initial value 23156.893787   
## final value 20028.595700   
## converged  
## # weights: 25  
## initial value 21387.630589   
## final value 20028.595700   
## converged  
## # weights: 41  
## initial value 22930.542844   
## final value 20028.595700   
## converged  
## # weights: 9  
## initial value 21783.889699   
## iter 10 value 20034.407937  
## final value 20034.105433   
## converged  
## # weights: 25  
## initial value 22029.188863   
## iter 10 value 20033.422361  
## final value 20032.571298   
## converged  
## # weights: 41  
## initial value 23688.851061   
## iter 10 value 20037.249615  
## iter 20 value 20031.913454  
## final value 20031.911834   
## converged  
## # weights: 9  
## initial value 22408.403398   
## iter 10 value 20038.834800  
## iter 20 value 20028.713749  
## iter 20 value 20028.713702  
## final value 20028.713702   
## converged  
## # weights: 25  
## initial value 22433.148853   
## iter 10 value 20043.531743  
## iter 20 value 20028.767901  
## final value 20028.606449   
## converged  
## # weights: 41  
## initial value 22231.298551   
## iter 10 value 20045.902105  
## iter 20 value 20028.795229  
## final value 20028.606460   
## converged  
## # weights: 9  
## initial value 22602.534160   
## final value 20011.474000   
## converged  
## # weights: 25  
## initial value 23993.715906   
## final value 20011.474000   
## converged  
## # weights: 41  
## initial value 22589.628181   
## final value 20011.474000   
## converged  
## # weights: 9  
## initial value 22675.474782   
## iter 10 value 20018.658337  
## final value 20016.983194   
## converged  
## # weights: 25  
## initial value 22660.424731   
## iter 10 value 20016.267528  
## final value 20015.449210   
## converged  
## # weights: 41  
## initial value 22739.207099   
## iter 10 value 20016.574700  
## iter 20 value 20014.789917  
## iter 20 value 20014.789809  
## iter 20 value 20014.789799  
## final value 20014.789799   
## converged  
## # weights: 9  
## initial value 21589.892381   
## iter 10 value 20018.504795  
## iter 20 value 20011.555060  
## iter 20 value 20011.555027  
## final value 20011.555027   
## converged  
## # weights: 25  
## initial value 23155.863581   
## iter 10 value 20026.332933  
## iter 20 value 20011.645312  
## final value 20011.490849   
## converged  
## # weights: 41  
## initial value 22374.254589   
## iter 10 value 20026.208128  
## iter 20 value 20011.643873  
## final value 20011.486041   
## converged  
## # weights: 9  
## initial value 21974.763147   
## final value 20001.233200   
## converged  
## # weights: 25  
## initial value 22671.933115   
## final value 20001.233200   
## converged  
## # weights: 41  
## initial value 21296.803038   
## final value 20001.233200   
## converged  
## # weights: 9  
## initial value 22374.254013   
## iter 10 value 20007.311715  
## final value 20006.742156   
## converged  
## # weights: 25  
## initial value 23705.343134   
## iter 10 value 20009.867063  
## iter 20 value 20005.210450  
## final value 20005.208239   
## converged  
## # weights: 41  
## initial value 23381.313362   
## iter 10 value 20006.660619  
## iter 20 value 20004.549080  
## iter 20 value 20004.548924  
## iter 20 value 20004.548897  
## final value 20004.548897   
## converged  
## # weights: 9  
## initial value 22515.807990   
## iter 10 value 20010.992330  
## iter 20 value 20001.345715  
## iter 20 value 20001.345670  
## final value 20001.345670   
## converged  
## # weights: 25  
## initial value 23991.638066   
## iter 10 value 20011.664958  
## iter 20 value 20001.353470  
## final value 20001.252203   
## converged  
## # weights: 41  
## initial value 24388.562104   
## iter 10 value 20010.219594  
## iter 20 value 20001.336806  
## final value 20001.248160   
## converged  
## # weights: 9  
## initial value 22070.643885   
## final value 19993.614500   
## converged  
## # weights: 25  
## initial value 22480.298501   
## final value 19993.614500   
## converged  
## # weights: 41  
## initial value 22625.541934   
## final value 19993.614500   
## converged  
## # weights: 9  
## initial value 22130.703073   
## iter 10 value 19999.406951  
## final value 19999.123318   
## converged  
## # weights: 25  
## initial value 23482.351357   
## iter 10 value 19998.294186  
## final value 19997.589496   
## converged  
## # weights: 41  
## initial value 22079.004399   
## iter 10 value 20017.553072  
## iter 20 value 19996.934469  
## final value 19996.930176   
## converged  
## # weights: 9  
## initial value 22349.320101   
## iter 10 value 20003.238208  
## iter 20 value 19993.725454  
## iter 20 value 19993.725409  
## final value 19993.725409   
## converged  
## # weights: 25  
## initial value 22994.550169   
## iter 10 value 20009.853407  
## iter 20 value 19993.801722  
## final value 19993.626378   
## converged  
## # weights: 41  
## initial value 20854.257640   
## iter 10 value 19999.266479  
## iter 20 value 19993.679663  
## final value 19993.623209   
## converged  
## # weights: 9  
## initial value 21793.470471   
## final value 19957.697200   
## converged  
## # weights: 25  
## initial value 23091.809959   
## final value 19957.697200   
## converged  
## # weights: 41  
## initial value 22510.290516   
## final value 19957.697200   
## converged  
## # weights: 9  
## initial value 23106.236537   
## iter 10 value 19965.316497  
## final value 19963.205165   
## converged  
## # weights: 25  
## initial value 23342.527668   
## iter 10 value 19962.820046  
## final value 19961.671544   
## converged  
## # weights: 41  
## initial value 21481.320849   
## iter 10 value 19962.594760  
## iter 20 value 19961.012480  
## iter 20 value 19961.012319  
## iter 20 value 19961.012300  
## final value 19961.012300   
## converged  
## # weights: 9  
## initial value 23292.805107   
## iter 10 value 19967.901097  
## iter 20 value 19957.814843  
## iter 20 value 19957.814796  
## final value 19957.814796   
## converged  
## # weights: 25  
## initial value 21765.743188   
## iter 10 value 19970.070200  
## iter 20 value 19957.839851  
## final value 19957.711240   
## converged  
## # weights: 41  
## initial value 22373.357277   
## iter 10 value 19977.305850  
## iter 20 value 19957.923272  
## final value 19957.708380   
## converged  
## # weights: 9  
## initial value 23335.238879   
## final value 20032.699700   
## converged  
## # weights: 25  
## initial value 23556.096421   
## final value 20032.699700   
## converged  
## # weights: 41  
## initial value 22985.786255   
## final value 20032.699700   
## converged  
## # weights: 9  
## initial value 23183.477627   
## iter 10 value 20038.286916  
## final value 20038.209574   
## converged  
## # weights: 25  
## initial value 21737.811810   
## iter 10 value 20043.777504  
## iter 20 value 20036.683924  
## final value 20036.675389   
## converged  
## # weights: 41  
## initial value 22844.482053   
## iter 10 value 20037.344799  
## final value 20036.015902   
## converged  
## # weights: 9  
## initial value 23837.522975   
## iter 10 value 20041.705665  
## iter 20 value 20032.803532  
## iter 20 value 20032.803490  
## final value 20032.803490   
## converged  
## # weights: 25  
## initial value 23601.849864   
## iter 10 value 20045.045097  
## iter 20 value 20032.842033  
## final value 20032.716573   
## converged  
## # weights: 41  
## initial value 22268.500010   
## iter 10 value 20052.521312  
## iter 20 value 20032.928228  
## final value 20032.711067   
## converged  
## # weights: 9  
## initial value 23706.807105   
## final value 20047.488500   
## converged  
## # weights: 25  
## initial value 21881.896067   
## final value 20047.488500   
## converged  
## # weights: 41  
## initial value 21924.840932   
## final value 20047.488500   
## converged  
## # weights: 9  
## initial value 23288.736351   
## iter 10 value 20056.155908  
## final value 20052.998976   
## converged  
## # weights: 25  
## initial value 22206.059690   
## iter 10 value 20054.212757  
## final value 20051.464601   
## converged  
## # weights: 41  
## initial value 21355.844581   
## iter 10 value 20051.937448  
## iter 20 value 20050.805152  
## iter 20 value 20050.805059  
## iter 20 value 20050.805052  
## final value 20050.805052   
## converged  
## # weights: 9  
## initial value 23561.102868   
## iter 10 value 20057.997775  
## iter 20 value 20047.609664  
## iter 20 value 20047.609615  
## final value 20047.609615   
## converged  
## # weights: 25  
## initial value 23190.689894   
## iter 10 value 20063.982763  
## iter 20 value 20047.678666  
## final value 20047.503114   
## converged  
## # weights: 41  
## initial value 22108.006142   
## iter 10 value 20065.744388  
## iter 20 value 20047.698976  
## final value 20047.497799   
## converged  
## # weights: 9  
## initial value 23235.958343   
## final value 20051.129200   
## converged  
## # weights: 25  
## initial value 21908.377055   
## final value 20051.129200   
## converged  
## # weights: 41  
## initial value 22065.847460   
## final value 20051.129200   
## converged  
## # weights: 9  
## initial value 22508.521624   
## iter 10 value 20072.239719  
## iter 20 value 20056.640517  
## final value 20056.639884   
## converged  
## # weights: 25  
## initial value 24178.451111   
## iter 10 value 20056.734165  
## final value 20055.105434   
## converged  
## # weights: 41  
## initial value 22100.018042   
## iter 10 value 20055.478474  
## iter 20 value 20054.445935  
## iter 20 value 20054.445826  
## iter 20 value 20054.445817  
## final value 20054.445817   
## converged  
## # weights: 9  
## initial value 22670.557822   
## iter 10 value 20061.366422  
## iter 20 value 20051.247227  
## iter 20 value 20051.247180  
## final value 20051.247180   
## converged  
## # weights: 25  
## initial value 23137.678925   
## iter 10 value 20066.729665  
## iter 20 value 20051.309061  
## final value 20051.141564   
## converged  
## # weights: 41  
## initial value 22739.206333   
## iter 10 value 20069.402901  
## iter 20 value 20051.339881  
## final value 20051.139198   
## converged  
## # weights: 9  
## initial value 23803.901161   
## final value 20008.262000   
## converged  
## # weights: 25  
## initial value 22511.415873   
## final value 20008.262000   
## converged  
## # weights: 41  
## initial value 23166.525787   
## final value 20008.262000   
## converged  
## # weights: 9  
## initial value 22153.376344   
## iter 10 value 20017.112020  
## final value 20013.771147   
## converged  
## # weights: 25  
## initial value 23847.267454   
## iter 10 value 20014.453850  
## iter 20 value 20012.237368  
## iter 20 value 20012.237230  
## iter 20 value 20012.237215  
## final value 20012.237215   
## converged  
## # weights: 41  
## initial value 22573.461917   
## iter 10 value 20013.124129  
## iter 20 value 20011.578260  
## final value 20011.577814   
## converged  
## # weights: 9  
## initial value 22795.638486   
## iter 10 value 20019.401661  
## iter 20 value 20008.390432  
## iter 20 value 20008.390380  
## final value 20008.390380   
## converged  
## # weights: 25  
## initial value 21798.480899   
## iter 10 value 20020.441136  
## iter 20 value 20008.402416  
## final value 20008.273554   
## converged  
## # weights: 41  
## initial value 22943.720660   
## iter 10 value 20026.738177  
## iter 20 value 20008.475016  
## final value 20008.273955   
## converged  
## # weights: 9  
## initial value 23567.788177   
## final value 20032.920100   
## converged  
## # weights: 25  
## initial value 22588.331509   
## final value 20032.920100   
## converged  
## # weights: 41  
## initial value 23178.345536   
## final value 20032.920100   
## converged  
## # weights: 9  
## initial value 23592.804259   
## iter 10 value 20039.960670  
## final value 20038.429973   
## converged  
## # weights: 25  
## initial value 22861.739217   
## iter 10 value 20037.839533  
## final value 20036.895740   
## converged  
## # weights: 41  
## initial value 23717.885165   
## iter 10 value 20047.931688  
## iter 20 value 20036.236712  
## final value 20036.236349   
## converged  
## # weights: 9  
## initial value 22065.410235   
## iter 10 value 20043.052011  
## iter 20 value 20033.036913  
## iter 20 value 20033.036866  
## final value 20033.036866   
## converged  
## # weights: 25  
## initial value 23705.924736   
## iter 10 value 20045.247122  
## iter 20 value 20033.062221  
## final value 20032.943002   
## converged  
## # weights: 41  
## initial value 22293.481777   
## iter 10 value 20050.107799  
## iter 20 value 20033.118261  
## final value 20032.931547   
## converged  
## # weights: 9  
## initial value 22393.255982   
## final value 19990.238500   
## converged  
## # weights: 25  
## initial value 23342.228928   
## final value 19990.238500   
## converged  
## # weights: 41  
## initial value 21487.571745   
## final value 19990.238500   
## converged  
## # weights: 9  
## initial value 23043.113285   
## iter 10 value 19996.744503  
## final value 19995.747295   
## converged  
## # weights: 25  
## initial value 23778.030043   
## iter 10 value 19997.066666  
## iter 20 value 19994.213495  
## iter 20 value 19994.213396  
## iter 20 value 19994.213364  
## final value 19994.213364   
## converged  
## # weights: 41  
## initial value 23133.246764   
## iter 10 value 20006.891434  
## iter 20 value 19993.554137  
## iter 20 value 19993.554055  
## iter 20 value 19993.554050  
## final value 19993.554050   
## converged  
## # weights: 9  
## initial value 23008.697649   
## iter 10 value 20000.669606  
## iter 20 value 19990.358762  
## iter 20 value 19990.358714  
## final value 19990.358714   
## converged  
## # weights: 25  
## initial value 22866.799959   
## iter 10 value 20006.340736  
## iter 20 value 19990.424146  
## final value 19990.250939   
## converged  
## # weights: 41  
## initial value 23792.747773   
## iter 10 value 20003.393258  
## iter 20 value 19990.390164  
## final value 19990.251789   
## converged  
## # weights: 9  
## initial value 21893.651564   
## final value 20019.345700   
## converged  
## # weights: 25  
## initial value 22830.004659   
## final value 20019.345700   
## converged  
## # weights: 41  
## initial value 23216.529516   
## final value 20019.345700   
## converged  
## # weights: 9  
## initial value 23458.150720   
## iter 10 value 20026.117062  
## final value 20024.855157   
## converged  
## # weights: 25  
## initial value 21841.602664   
## iter 10 value 20026.179804  
## iter 20 value 20023.321247  
## iter 20 value 20023.321138  
## iter 20 value 20023.321127  
## final value 20023.321127   
## converged  
## # weights: 41  
## initial value 22964.745651   
## iter 10 value 20026.670693  
## final value 20022.661710   
## converged  
## # weights: 9  
## initial value 23457.354191   
## iter 10 value 20029.437718  
## iter 20 value 20019.462053  
## iter 20 value 20019.462007  
## final value 20019.462007   
## converged  
## # weights: 25  
## initial value 23318.343583   
## iter 10 value 20032.727621  
## iter 20 value 20019.499983  
## final value 20019.359132   
## converged  
## # weights: 41  
## initial value 21420.737499   
## iter 10 value 20029.347954  
## iter 20 value 20019.461018  
## final value 20019.355075   
## converged  
## # weights: 9  
## initial value 22640.001119   
## final value 20056.041200   
## converged  
## # weights: 25  
## initial value 23547.903671   
## final value 20056.041200   
## converged  
## # weights: 41  
## initial value 22368.995100   
## final value 20056.041200   
## converged  
## # weights: 9  
## initial value 22972.334739   
## iter 10 value 20062.007610  
## final value 20061.552289   
## converged  
## # weights: 25  
## initial value 21693.025961   
## iter 10 value 20061.091318  
## iter 20 value 20060.017843  
## iter 20 value 20060.017760  
## iter 20 value 20060.017738  
## final value 20060.017738   
## converged  
## # weights: 41  
## initial value 23626.270029   
## iter 10 value 20065.077630  
## iter 20 value 20059.359051  
## final value 20059.358161   
## converged  
## # weights: 9  
## initial value 23652.271277   
## iter 10 value 20065.600404  
## iter 20 value 20056.151410  
## iter 20 value 20056.151366  
## final value 20056.151366   
## converged  
## # weights: 25  
## initial value 22702.967531   
## iter 10 value 20070.133454  
## iter 20 value 20056.203673  
## final value 20056.059658   
## converged  
## # weights: 41  
## initial value 22339.100943   
## iter 10 value 20073.039618  
## iter 20 value 20056.237178  
## final value 20056.051727   
## converged  
## # weights: 9  
## initial value 22101.703484   
## final value 20033.576500   
## converged  
## # weights: 25  
## initial value 21565.787036   
## final value 20033.576500   
## converged  
## # weights: 41  
## initial value 23199.345519   
## final value 20033.576500   
## converged  
## # weights: 9  
## initial value 23194.982495   
## iter 10 value 20042.001747  
## final value 20039.086365   
## converged  
## # weights: 25  
## initial value 22701.122562   
## iter 10 value 20041.924266  
## iter 20 value 20037.552386  
## final value 20037.552131   
## converged  
## # weights: 41  
## initial value 22113.657826   
## iter 10 value 20037.961987  
## iter 20 value 20036.892774  
## iter 20 value 20036.892673  
## iter 20 value 20036.892664  
## final value 20036.892664   
## converged  
## # weights: 9  
## initial value 23335.109369   
## iter 10 value 20043.497469  
## iter 20 value 20033.690881  
## iter 20 value 20033.690835  
## final value 20033.690835   
## converged  
## # weights: 25  
## initial value 23345.530552   
## iter 10 value 20046.196708  
## iter 20 value 20033.722001  
## final value 20033.589626   
## converged  
## # weights: 41  
## initial value 22420.754012   
## iter 10 value 20051.166390  
## iter 20 value 20033.779298  
## final value 20033.589722   
## converged  
## # weights: 9  
## initial value 23269.503347   
## final value 20045.781200   
## converged  
## # weights: 25  
## initial value 22889.786378   
## final value 20045.781200   
## converged  
## # weights: 41  
## initial value 22895.375359   
## final value 20045.781200   
## converged  
## # weights: 9  
## initial value 23678.380678   
## iter 10 value 20052.354262  
## final value 20051.291570   
## converged  
## # weights: 25  
## initial value 22998.263862   
## iter 10 value 20050.897381  
## final value 20049.757162   
## converged  
## # weights: 41  
## initial value 23461.834412   
## iter 10 value 20060.662872  
## final value 20049.097758   
## converged  
## # weights: 9  
## initial value 22012.848089   
## iter 10 value 20054.346713  
## iter 20 value 20045.879954  
## iter 20 value 20045.879914  
## final value 20045.879914   
## converged  
## # weights: 25  
## initial value 21961.290659   
## iter 10 value 20059.141075  
## iter 20 value 20045.935229  
## final value 20045.797681   
## converged  
## # weights: 41  
## initial value 23327.578167   
## iter 10 value 20064.943524  
## iter 20 value 20046.002127  
## final value 20045.796050   
## converged  
## # weights: 9  
## initial value 21819.291635   
## final value 20032.699700   
## converged  
## # weights: 25  
## initial value 22827.682458   
## final value 20032.699700   
## converged  
## # weights: 41  
## initial value 23699.362019   
## final value 20032.699700   
## converged  
## # weights: 9  
## initial value 23666.302959   
## iter 10 value 20038.783029  
## final value 20038.209564   
## converged  
## # weights: 25  
## initial value 22015.571309   
## iter 10 value 20038.786890  
## final value 20036.675408   
## converged  
## # weights: 41  
## initial value 24570.372277   
## iter 10 value 20039.601245  
## iter 20 value 20036.016117  
## iter 20 value 20036.015942  
## iter 20 value 20036.015936  
## final value 20036.015936   
## converged  
## # weights: 9  
## initial value 22191.786980   
## iter 10 value 20043.262993  
## iter 20 value 20032.821486  
## iter 20 value 20032.821438  
## final value 20032.821438   
## converged  
## # weights: 25  
## initial value 22489.740593   
## iter 10 value 20046.223021  
## iter 20 value 20032.855613  
## final value 20032.712617   
## converged  
## # weights: 41  
## initial value 22976.101460   
## iter 10 value 20052.583276  
## iter 20 value 20032.928942  
## final value 20032.710899   
## converged  
## # weights: 9  
## initial value 22431.695686   
## final value 19977.237200   
## converged  
## # weights: 25  
## initial value 22031.905939   
## final value 19977.237200   
## converged  
## # weights: 41  
## initial value 21907.177860   
## final value 19977.237200   
## converged  
## # weights: 9  
## initial value 23010.325818   
## iter 10 value 19982.867613  
## final value 19982.745733   
## converged  
## # weights: 25  
## initial value 23092.725348   
## iter 10 value 19983.353683  
## iter 20 value 19981.212065  
## iter 20 value 19981.211992  
## iter 20 value 19981.211988  
## final value 19981.211988   
## converged  
## # weights: 41  
## initial value 22456.967584   
## iter 10 value 19986.780988  
## iter 20 value 19980.557234  
## final value 19980.552705   
## converged  
## # weights: 9  
## initial value 23288.678386   
## iter 10 value 19986.904893  
## iter 20 value 19977.348661  
## iter 20 value 19977.348616  
## final value 19977.348616   
## converged  
## # weights: 25  
## initial value 23230.938953   
## iter 10 value 19989.393562  
## iter 20 value 19977.377353  
## final value 19977.256489   
## converged  
## # weights: 41  
## initial value 22043.261136   
## iter 10 value 19993.577311  
## iter 20 value 19977.425589  
## final value 19977.246316   
## converged  
## # weights: 9  
## initial value 21470.416607   
## final value 19935.480100   
## converged  
## # weights: 25  
## initial value 21608.853626   
## final value 19935.480100   
## converged  
## # weights: 41  
## initial value 22180.831059   
## final value 19935.480100   
## converged  
## # weights: 9  
## initial value 23183.542381   
## iter 10 value 19942.094721  
## final value 19940.987944   
## converged  
## # weights: 25  
## initial value 22711.522553   
## iter 10 value 19940.219812  
## final value 19939.454545   
## converged  
## # weights: 41  
## initial value 22506.790357   
## iter 10 value 19940.593914  
## iter 20 value 19938.795316  
## iter 20 value 19938.795275  
## iter 20 value 19938.795266  
## final value 19938.795266   
## converged  
## # weights: 9  
## initial value 22816.046389   
## iter 10 value 19945.802281  
## iter 20 value 19935.599107  
## iter 20 value 19935.599059  
## final value 19935.599059   
## converged  
## # weights: 25  
## initial value 22643.599619   
## iter 10 value 19950.424393  
## iter 20 value 19935.652396  
## final value 19935.497043   
## converged  
## # weights: 41  
## initial value 23290.268348   
## iter 10 value 19956.267609  
## iter 20 value 19935.719764  
## final value 19935.492187   
## converged  
## # weights: 9  
## initial value 21645.984612   
## final value 20037.869200   
## converged  
## # weights: 25  
## initial value 23737.985427   
## final value 20037.869200   
## converged  
## # weights: 41  
## initial value 23511.214355   
## final value 20037.869200   
## converged  
## # weights: 9  
## initial value 22729.157022   
## iter 10 value 20043.421994  
## final value 20043.379256   
## converged  
## # weights: 25  
## initial value 23070.342729   
## iter 10 value 20045.857659  
## final value 20041.844963   
## converged  
## # weights: 41  
## initial value 22720.259265   
## iter 10 value 20055.363050  
## iter 20 value 20041.214276  
## final value 20041.185520   
## converged  
## # weights: 9  
## initial value 23400.748461   
## iter 10 value 20048.171841  
## iter 20 value 20037.987981  
## iter 20 value 20037.987934  
## final value 20037.987934   
## converged  
## # weights: 25  
## initial value 23689.439432   
## iter 10 value 20052.374390  
## iter 20 value 20038.036433  
## final value 20037.883703   
## converged  
## # weights: 41  
## initial value 22016.974452   
## iter 10 value 20054.297860  
## iter 20 value 20038.058610  
## iter 30 value 20037.879109  
## iter 30 value 20037.879108  
## iter 30 value 20037.879105  
## final value 20037.879105   
## converged  
## # weights: 9  
## initial value 22631.934115   
## final value 20032.589200   
## converged  
## # weights: 25  
## initial value 23163.126919   
## final value 20032.589200   
## converged  
## # weights: 41  
## initial value 23291.591214   
## final value 20032.589200   
## converged  
## # weights: 9  
## initial value 23320.759501   
## iter 10 value 20038.334960  
## final value 20038.099122   
## converged  
## # weights: 25  
## initial value 23116.198957   
## iter 10 value 20038.807421  
## final value 20036.564904   
## converged  
## # weights: 41  
## initial value 22262.343133   
## iter 10 value 20040.806145  
## iter 20 value 20035.906587  
## final value 20035.905489   
## converged  
## # weights: 9  
## initial value 23769.385774   
## iter 10 value 20041.112800  
## iter 20 value 20032.687470  
## iter 20 value 20032.687431  
## final value 20032.687431   
## converged  
## # weights: 25  
## initial value 23062.043497   
## iter 10 value 20048.829520  
## iter 20 value 20032.776438  
## final value 20032.602958   
## converged  
## # weights: 41  
## initial value 23399.967419   
## iter 10 value 20054.485035  
## iter 20 value 20032.841642  
## final value 20032.600150   
## converged  
## # weights: 9  
## initial value 22703.428480   
## final value 20021.696500   
## converged  
## # weights: 25  
## initial value 23541.080189   
## final value 20021.696500   
## converged  
## # weights: 41  
## initial value 22422.720306   
## final value 20021.696500   
## converged  
## # weights: 9  
## initial value 23810.552092   
## iter 10 value 20027.917955  
## final value 20027.206012   
## converged  
## # weights: 25  
## initial value 23763.946131   
## iter 10 value 20031.784353  
## iter 20 value 20025.672299  
## final value 20025.671930   
## converged  
## # weights: 41  
## initial value 22638.631220   
## iter 10 value 20025.881414  
## final value 20025.012636   
## converged  
## # weights: 9  
## initial value 22402.074819   
## iter 10 value 20033.126600  
## iter 20 value 20021.828280  
## iter 20 value 20021.828227  
## final value 20021.828227   
## converged  
## # weights: 25  
## initial value 21299.941041   
## iter 10 value 20029.859707  
## iter 20 value 20021.790615  
## final value 20021.707532   
## converged  
## # weights: 41  
## initial value 22255.081533   
## iter 10 value 20040.354656  
## iter 20 value 20021.911614  
## final value 20021.706021   
## converged  
## # weights: 9  
## initial value 22136.079934   
## final value 20062.949200   
## converged  
## # weights: 25  
## initial value 22889.530713   
## final value 20062.949200   
## converged  
## # weights: 41  
## initial value 23524.129534   
## final value 20062.949200   
## converged  
## # weights: 9  
## initial value 21734.310347   
## iter 10 value 20068.938312  
## final value 20068.461394   
## converged  
## # weights: 25  
## initial value 22638.767579   
## iter 10 value 20067.095907  
## final value 20066.926425   
## converged  
## # weights: 41  
## initial value 22098.339099   
## iter 10 value 20074.600136  
## iter 20 value 20066.276694  
## final value 20066.266749   
## converged  
## # weights: 9  
## initial value 22072.504043   
## iter 10 value 20071.595269  
## iter 20 value 20063.048882  
## iter 20 value 20063.048843  
## final value 20063.048843   
## converged  
## # weights: 25  
## initial value 23418.851026   
## iter 10 value 20079.876347  
## iter 20 value 20063.144357  
## final value 20062.961528   
## converged  
## # weights: 41  
## initial value 22683.042591   
## iter 10 value 20084.157230  
## iter 20 value 20063.193712  
## final value 20062.959171   
## converged  
## # weights: 9  
## initial value 22428.386268   
## final value 19997.722000   
## converged  
## # weights: 25  
## initial value 22017.826115   
## final value 19997.722000   
## converged  
## # weights: 41  
## initial value 23241.408336   
## final value 19997.722000   
## converged  
## # weights: 9  
## initial value 23271.710380   
## iter 10 value 20003.445507  
## final value 20003.230894   
## converged  
## # weights: 25  
## initial value 23103.180355   
## iter 10 value 20002.081152  
## final value 20001.697033   
## converged  
## # weights: 41  
## initial value 23712.595783   
## iter 10 value 20005.936484  
## iter 20 value 20001.038245  
## final value 20001.037700   
## converged  
## # weights: 9  
## initial value 23007.448007   
## iter 10 value 20009.500246  
## iter 20 value 19997.857794  
## iter 20 value 19997.857740  
## final value 19997.857740   
## converged  
## # weights: 25  
## initial value 21555.036045   
## iter 10 value 20007.808046  
## iter 20 value 19997.838284  
## final value 19997.733663   
## converged  
## # weights: 41  
## initial value 24060.558464   
## iter 10 value 20010.125797  
## iter 20 value 19997.865006  
## final value 19997.737310   
## converged  
## # weights: 9  
## initial value 23046.019413   
## final value 20002.797200   
## converged  
## # weights: 25  
## initial value 21942.877431   
## final value 20002.797200   
## converged  
## # weights: 41  
## initial value 22637.293703   
## final value 20002.797200   
## converged  
## # weights: 9  
## initial value 22881.699327   
## iter 10 value 20008.688175  
## final value 20008.306238   
## converged  
## # weights: 25  
## initial value 21608.170239   
## iter 10 value 20008.003695  
## final value 20006.772400   
## converged  
## # weights: 41  
## initial value 22218.003726   
## iter 10 value 20013.305085  
## iter 20 value 20006.113236  
## iter 20 value 20006.113044  
## iter 20 value 20006.113033  
## final value 20006.113033   
## converged  
## # weights: 9  
## initial value 23263.639267   
## iter 10 value 20014.224099  
## iter 20 value 20002.928943  
## iter 20 value 20002.928890  
## final value 20002.928890   
## converged  
## # weights: 25  
## initial value 22525.875246   
## iter 10 value 20018.250273  
## iter 20 value 20002.975362  
## final value 20002.811104   
## converged  
## # weights: 41  
## initial value 22036.454506   
## iter 10 value 20019.099431  
## iter 20 value 20002.985152  
## final value 20002.807991   
## converged  
## # weights: 9  
## initial value 21916.567828   
## final value 20054.760100   
## converged  
## # weights: 25  
## initial value 22629.592581   
## final value 20054.760100   
## converged  
## # weights: 41  
## initial value 24167.097607   
## final value 20054.760100   
## converged  
## # weights: 9  
## initial value 22223.170763   
## iter 10 value 20079.188457  
## iter 20 value 20060.294202  
## final value 20060.270989   
## converged  
## # weights: 25  
## initial value 23034.424569   
## iter 10 value 20059.962892  
## final value 20058.736464   
## converged  
## # weights: 41  
## initial value 24036.334300   
## iter 10 value 20070.624578  
## iter 20 value 20058.078737  
## final value 20058.076938   
## converged  
## # weights: 9  
## initial value 22257.314660   
## iter 10 value 20064.480098  
## iter 20 value 20054.872164  
## iter 20 value 20054.872119  
## final value 20054.872119   
## converged  
## # weights: 25  
## initial value 23728.095428   
## iter 10 value 20066.337224  
## iter 20 value 20054.893575  
## final value 20054.776458   
## converged  
## # weights: 41  
## initial value 21692.666859   
## iter 10 value 20069.266514  
## iter 20 value 20054.927348  
## final value 20054.769168   
## converged  
## # weights: 9  
## initial value 22560.908373   
## final value 19972.730000   
## converged  
## # weights: 25  
## initial value 22731.678864   
## final value 19972.730000   
## converged  
## # weights: 41  
## initial value 23087.220997   
## final value 19972.730000   
## converged  
## # weights: 9  
## initial value 23128.587140   
## iter 10 value 19980.671343  
## final value 19978.238396   
## converged  
## # weights: 25  
## initial value 22855.608569   
## iter 10 value 19978.391920  
## final value 19976.704734   
## converged  
## # weights: 41  
## initial value 22582.216415   
## iter 10 value 19983.475462  
## iter 20 value 19976.045913  
## final value 19976.045478   
## converged  
## # weights: 9  
## initial value 22951.734366   
## iter 10 value 19984.368520  
## iter 20 value 19972.864183  
## iter 20 value 19972.864129  
## final value 19972.864129   
## converged  
## # weights: 25  
## initial value 23403.163900   
## iter 10 value 19984.804562  
## iter 20 value 19972.869210  
## final value 19972.742585   
## converged  
## # weights: 41  
## initial value 22733.000121   
## iter 10 value 19991.128327  
## iter 20 value 19972.942118  
## final value 19972.739921   
## converged  
## # weights: 9  
## initial value 22443.431962   
## final value 20020.136500   
## converged  
## # weights: 25  
## initial value 22821.878851   
## final value 20020.136500   
## converged  
## # weights: 41  
## initial value 23180.531830   
## final value 20020.136500   
## converged  
## # weights: 9  
## initial value 22064.430535   
## iter 10 value 20026.556122  
## final value 20025.645975   
## converged  
## # weights: 25  
## initial value 22695.679358   
## iter 10 value 20025.800394  
## final value 20024.111927   
## converged  
## # weights: 41  
## initial value 22151.070129   
## iter 10 value 20024.888936  
## final value 20023.452524   
## converged  
## # weights: 9  
## initial value 22490.151773   
## iter 10 value 20030.309989  
## iter 20 value 20020.253792  
## iter 20 value 20020.253745  
## final value 20020.253745   
## converged  
## # weights: 25  
## initial value 21756.844546   
## iter 10 value 20029.506904  
## iter 20 value 20020.244533  
## final value 20020.149148   
## converged  
## # weights: 41  
## initial value 22185.597694   
## iter 10 value 20038.282244  
## iter 20 value 20020.345706  
## final value 20020.147761   
## converged  
## # weights: 9  
## initial value 23672.832368   
## final value 19953.339700   
## converged  
## # weights: 25  
## initial value 21898.581544   
## final value 19953.339700   
## converged  
## # weights: 41  
## initial value 23106.162981   
## final value 19953.339700   
## converged  
## # weights: 9  
## initial value 23668.679788   
## iter 10 value 19960.147895  
## final value 19958.847822   
## converged  
## # weights: 25  
## initial value 22463.311937   
## iter 10 value 19959.023677  
## iter 20 value 19957.333321  
## final value 19957.314294   
## converged  
## # weights: 41  
## initial value 23091.712928   
## iter 10 value 19964.329801  
## iter 20 value 19956.762820  
## final value 19956.655063   
## converged  
## # weights: 9  
## initial value 21761.624099   
## iter 10 value 19961.374137  
## iter 20 value 19953.432331  
## iter 20 value 19953.432294  
## final value 19953.432294   
## converged  
## # weights: 25  
## initial value 22393.594007   
## iter 10 value 19966.834999  
## iter 20 value 19953.495290  
## final value 19953.353372   
## converged  
## # weights: 41  
## initial value 22455.013418   
## iter 10 value 19971.756481  
## iter 20 value 19953.552031  
## final value 19953.350200   
## converged  
## # weights: 9  
## initial value 23581.376759   
## final value 19973.110000   
## converged  
## # weights: 25  
## initial value 22843.847612   
## final value 19973.110000   
## converged  
## # weights: 41  
## initial value 21392.912689   
## final value 19973.110000   
## converged  
## # weights: 9  
## initial value 22941.222952   
## iter 10 value 19979.721299  
## final value 19978.618400   
## converged  
## # weights: 25  
## initial value 22192.537876   
## iter 10 value 19977.721387  
## final value 19977.084690   
## converged  
## # weights: 41  
## initial value 22107.818822   
## iter 10 value 19997.770546  
## iter 20 value 19976.427672  
## final value 19976.425471   
## converged  
## # weights: 9  
## initial value 22915.667838   
## iter 10 value 19983.200484  
## iter 20 value 19973.226335  
## iter 20 value 19973.226289  
## final value 19973.226289   
## converged  
## # weights: 25  
## initial value 23498.131844   
## iter 10 value 19985.687533  
## iter 20 value 19973.255009  
## final value 19973.128673   
## converged  
## # weights: 41  
## initial value 21481.965052   
## iter 10 value 19986.114966  
## iter 20 value 19973.259937  
## final value 19973.119023   
## converged  
## # weights: 9  
## initial value 22974.672590   
## final value 19967.717200   
## converged  
## # weights: 25  
## initial value 23449.633617   
## final value 19967.717200   
## converged  
## # weights: 41  
## initial value 23530.729215   
## final value 19967.717200   
## converged  
## # weights: 9  
## initial value 22729.990952   
## iter 10 value 19973.626457  
## final value 19973.225497   
## converged  
## # weights: 25  
## initial value 22982.190001   
## iter 10 value 19972.669409  
## final value 19971.691869   
## converged  
## # weights: 41  
## initial value 22984.065857   
## iter 10 value 19972.049716  
## final value 19971.032732   
## converged  
## # weights: 9  
## initial value 22102.888913   
## iter 10 value 19976.484727  
## iter 20 value 19967.818283  
## iter 20 value 19967.818242  
## final value 19967.818242   
## converged  
## # weights: 25  
## initial value 23412.687334   
## iter 10 value 19981.843308  
## iter 20 value 19967.880063  
## final value 19967.734769   
## converged  
## # weights: 41  
## initial value 23725.508333   
## iter 10 value 19983.014156  
## iter 20 value 19967.893562  
## final value 19967.732699   
## converged  
## # weights: 9  
## initial value 22847.450898   
## final value 20019.080500   
## converged  
## # weights: 25  
## initial value 22807.486748   
## final value 20019.080500   
## converged  
## # weights: 41  
## initial value 23157.778258   
## final value 20019.080500   
## converged  
## # weights: 9  
## initial value 22214.559476   
## iter 10 value 20037.644160  
## iter 20 value 20024.589985  
## iter 20 value 20024.589958  
## final value 20024.589958   
## converged  
## # weights: 25  
## initial value 23639.387300   
## iter 10 value 20024.488203  
## final value 20023.055862   
## converged  
## # weights: 41  
## initial value 23853.166272   
## iter 10 value 20034.338237  
## iter 20 value 20022.397869  
## final value 20022.396492   
## converged  
## # weights: 9  
## initial value 22462.270778   
## iter 10 value 20029.112261  
## iter 20 value 20019.196158  
## iter 20 value 20019.196112  
## final value 20019.196112   
## converged  
## # weights: 25  
## initial value 22249.587911   
## iter 10 value 20032.068023  
## iter 20 value 20019.230236  
## final value 20019.093847   
## converged  
## # weights: 41  
## initial value 22524.662867   
## iter 10 value 20038.520800  
## iter 20 value 20019.304631  
## final value 20019.093548   
## converged  
## # weights: 9  
## initial value 21582.928336   
## final value 20038.865200   
## converged  
## # weights: 25  
## initial value 23072.133787   
## final value 20038.865200   
## converged  
## # weights: 41  
## initial value 23478.791769   
## final value 20038.865200   
## converged  
## # weights: 9  
## initial value 23838.387363   
## iter 10 value 20046.768958  
## final value 20044.375300   
## converged  
## # weights: 25  
## initial value 23315.220128   
## iter 10 value 20043.773701  
## final value 20042.841062   
## converged  
## # weights: 41  
## initial value 21418.013620   
## iter 10 value 20053.772377  
## iter 20 value 20042.184058  
## final value 20042.181538   
## converged  
## # weights: 9  
## initial value 22485.999084   
## iter 10 value 20048.944641  
## iter 20 value 20038.981408  
## iter 20 value 20038.981362  
## final value 20038.981362   
## converged  
## # weights: 25  
## initial value 22534.972615   
## iter 10 value 20050.533741  
## iter 20 value 20038.999729  
## final value 20038.879594   
## converged  
## # weights: 41  
## initial value 23715.876698   
## iter 10 value 20055.200476  
## iter 20 value 20039.053533  
## final value 20038.876167   
## converged  
## # weights: 9  
## initial value 22287.335709   
## final value 20028.478000   
## converged  
## # weights: 25  
## initial value 22346.527033   
## final value 20028.478000   
## converged  
## # weights: 41  
## initial value 22126.212540   
## final value 20028.478000   
## converged  
## # weights: 9  
## initial value 22370.783936   
## iter 10 value 20035.247512  
## final value 20033.987725   
## converged  
## # weights: 25  
## initial value 23510.712655   
## iter 10 value 20034.261304  
## final value 20032.453700   
## converged  
## # weights: 41  
## initial value 22433.844180   
## iter 10 value 20043.173761  
## iter 20 value 20031.797419  
## final value 20031.794151   
## converged  
## # weights: 9  
## initial value 23029.225044   
## iter 10 value 20039.210294  
## iter 20 value 20028.601735  
## iter 20 value 20028.601685  
## final value 20028.601685   
## converged  
## # weights: 25  
## initial value 22359.350114   
## iter 10 value 20043.207591  
## iter 20 value 20028.647821  
## final value 20028.490883   
## converged  
## # weights: 41  
## initial value 22384.980074   
## iter 10 value 20045.153641  
## iter 20 value 20028.670257  
## final value 20028.489038   
## converged  
## # weights: 9  
## initial value 23685.285992   
## final value 20018.146000   
## converged  
## # weights: 25  
## initial value 22075.125433   
## final value 20018.146000   
## converged  
## # weights: 41  
## initial value 22170.970748   
## final value 20018.146000   
## converged  
## # weights: 9  
## initial value 23463.549290   
## iter 10 value 20024.072662  
## final value 20023.655412   
## converged  
## # weights: 25  
## initial value 23179.000108   
## iter 10 value 20022.632959  
## final value 20022.121371   
## converged  
## # weights: 41  
## initial value 22791.305796   
## iter 10 value 20022.347111  
## final value 20021.461956   
## converged  
## # weights: 9  
## initial value 23800.867831   
## iter 10 value 20026.824765  
## iter 20 value 20018.246059  
## iter 20 value 20018.246019  
## final value 20018.246019   
## converged  
## # weights: 25  
## initial value 22931.900469   
## iter 10 value 20034.068858  
## iter 20 value 20018.329578  
## final value 20018.158961   
## converged  
## # weights: 41  
## initial value 21145.400754   
## iter 10 value 20026.264387  
## iter 20 value 20018.239599  
## final value 20018.155349   
## converged  
## # weights: 9  
## initial value 23937.798737   
## final value 20021.050000   
## converged  
## # weights: 25  
## initial value 22464.449438   
## final value 20021.050000   
## converged  
## # weights: 41  
## initial value 22193.506404   
## final value 20021.050000   
## converged  
## # weights: 9  
## initial value 22909.740508   
## iter 10 value 20026.624868  
## final value 20026.559412   
## converged  
## # weights: 25  
## initial value 23387.267571   
## iter 10 value 20027.115369  
## final value 20025.025389   
## converged  
## # weights: 41  
## initial value 22506.978234   
## iter 10 value 20038.541593  
## iter 20 value 20024.366991  
## final value 20024.365882   
## converged  
## # weights: 9  
## initial value 22702.699728   
## iter 10 value 20031.246776  
## iter 20 value 20021.167561  
## iter 20 value 20021.167514  
## final value 20021.167514   
## converged  
## # weights: 25  
## initial value 22250.726193   
## iter 10 value 20035.108225  
## iter 20 value 20021.212080  
## final value 20021.061797   
## converged  
## # weights: 41  
## initial value 23039.975982   
## iter 10 value 20039.838564  
## iter 20 value 20021.266617  
## final value 20021.060472   
## converged  
## # weights: 9  
## initial value 22883.471738   
## final value 19978.346000   
## converged  
## # weights: 25  
## initial value 22661.339576   
## final value 19978.346000   
## converged  
## # weights: 41  
## initial value 22950.064986   
## final value 19978.346000   
## converged  
## # weights: 9  
## initial value 23013.405442   
## iter 10 value 19983.906746  
## final value 19983.854569   
## converged  
## # weights: 25  
## initial value 22629.583502   
## iter 10 value 20000.756529  
## iter 20 value 19982.483052  
## final value 19982.320789   
## converged  
## # weights: 41  
## initial value 21767.250445   
## iter 10 value 19982.363476  
## final value 19981.661527   
## converged  
## # weights: 9  
## initial value 23467.382185   
## iter 10 value 19989.153857  
## iter 20 value 19978.470606  
## iter 20 value 19978.470556  
## final value 19978.470556   
## converged  
## # weights: 25  
## initial value 23101.084592   
## iter 10 value 19991.136083  
## iter 20 value 19978.493460  
## final value 19978.361846   
## converged  
## # weights: 41  
## initial value 23253.850200   
## iter 10 value 19998.368246  
## iter 20 value 19978.576841  
## final value 19978.358658   
## converged  
## # weights: 9  
## initial value 22326.578054   
## final value 19930.229200   
## converged  
## # weights: 25  
## initial value 22098.254084   
## final value 19930.229200   
## converged  
## # weights: 41  
## initial value 21978.625228   
## final value 19930.229200   
## converged  
## # weights: 9  
## initial value 23461.360490   
## iter 10 value 19936.072691  
## final value 19935.736853   
## converged  
## # weights: 25  
## initial value 23253.454190   
## iter 10 value 19934.791039  
## final value 19934.203438   
## converged  
## # weights: 41  
## initial value 22543.653094   
## iter 10 value 19934.834022  
## final value 19933.544289   
## converged  
## # weights: 9  
## initial value 22248.565546   
## iter 10 value 19939.466237  
## iter 20 value 19930.335696  
## iter 20 value 19930.335653  
## final value 19930.335653   
## converged  
## # weights: 25  
## initial value 21934.353661   
## iter 10 value 19942.345896  
## iter 20 value 19930.368896  
## final value 19930.241353   
## converged  
## # weights: 41  
## initial value 23741.919308   
## iter 10 value 19946.923732  
## iter 20 value 19930.421675  
## final value 19930.241966   
## converged  
## # weights: 9  
## initial value 22770.171572   
## final value 19993.947700   
## converged  
## # weights: 25  
## initial value 22488.612536   
## final value 19993.947700   
## converged  
## # weights: 41  
## initial value 22474.140748   
## final value 19993.947700   
## converged  
## # weights: 9  
## initial value 21828.392628   
## iter 10 value 19999.882836  
## final value 19999.456545   
## converged  
## # weights: 25  
## initial value 23818.573981   
## iter 10 value 19999.126936  
## final value 19997.922695   
## converged  
## # weights: 41  
## initial value 23711.149173   
## iter 10 value 20008.735038  
## iter 20 value 19997.266031  
## final value 19997.263377   
## converged  
## # weights: 9  
## initial value 21634.499541   
## iter 10 value 20002.361345  
## iter 20 value 19994.044703  
## iter 20 value 19994.044664  
## final value 19994.044664   
## converged  
## # weights: 25  
## initial value 22914.365652   
## iter 10 value 20007.070732  
## iter 20 value 19994.098998  
## final value 19993.960353   
## converged  
## # weights: 41  
## initial value 22052.698846   
## iter 10 value 20010.292220  
## iter 20 value 19994.136139  
## final value 19993.958523   
## converged  
## # weights: 9  
## initial value 23283.624724   
## final value 20049.701200   
## converged  
## # weights: 25  
## initial value 23115.648509   
## final value 20049.701200   
## converged  
## # weights: 41  
## initial value 22053.250042   
## final value 20049.701200   
## converged  
## # weights: 9  
## initial value 22869.453815   
## iter 10 value 20055.608305  
## final value 20055.211754   
## converged  
## # weights: 25  
## initial value 22459.052661   
## iter 10 value 20054.521927  
## final value 20053.677324   
## converged  
## # weights: 41  
## initial value 22203.718027   
## iter 10 value 20054.280233  
## final value 20053.017948   
## converged  
## # weights: 9  
## initial value 22940.775293   
## iter 10 value 20059.530002  
## iter 20 value 20049.814518  
## iter 20 value 20049.814473  
## final value 20049.814473   
## converged  
## # weights: 25  
## initial value 23310.551575   
## iter 10 value 20064.686820  
## iter 20 value 20049.873972  
## final value 20049.722077   
## converged  
## # weights: 41  
## initial value 23087.041939   
## iter 10 value 20069.693066  
## iter 20 value 20049.931691  
## final value 20049.711172   
## converged  
## # weights: 9  
## initial value 23211.192094   
## final value 20059.445200   
## converged  
## # weights: 25  
## initial value 21896.768413   
## final value 20059.445200   
## converged  
## # weights: 41  
## initial value 22600.605147   
## final value 20059.445200   
## converged  
## # weights: 9  
## initial value 23188.415376   
## iter 10 value 20067.272067  
## final value 20064.956619   
## converged  
## # weights: 25  
## initial value 23908.613411   
## iter 10 value 20064.898358  
## iter 20 value 20063.427009  
## final value 20063.421984   
## converged  
## # weights: 41  
## initial value 23280.587383   
## iter 10 value 20071.151091  
## iter 20 value 20062.762601  
## iter 20 value 20062.762443  
## iter 20 value 20062.762417  
## final value 20062.762417   
## converged  
## # weights: 9  
## initial value 22897.859177   
## iter 10 value 20069.335388  
## iter 20 value 20059.559226  
## iter 20 value 20059.559180  
## final value 20059.559180   
## converged  
## # weights: 25  
## initial value 22578.323533   
## iter 10 value 20074.254030  
## iter 20 value 20059.615934  
## final value 20059.458803   
## converged  
## # weights: 41  
## initial value 22459.556250   
## iter 10 value 20076.842434  
## iter 20 value 20059.645776  
## final value 20059.455797   
## converged  
## # weights: 9  
## initial value 22027.174304   
## final value 20056.253200   
## converged  
## # weights: 25  
## initial value 23339.997654   
## final value 20056.253200   
## converged  
## # weights: 41  
## initial value 22125.720105   
## final value 20056.253200   
## converged  
## # weights: 9  
## initial value 23615.362630   
## iter 10 value 20061.943327  
## final value 20061.764268   
## converged  
## # weights: 25  
## initial value 22957.533890   
## iter 10 value 20082.090686  
## iter 20 value 20060.234254  
## final value 20060.229712   
## converged  
## # weights: 41  
## initial value 23397.851296   
## iter 10 value 20060.702425  
## final value 20059.570122   
## converged  
## # weights: 9  
## initial value 22873.349186   
## iter 10 value 20067.963196  
## iter 20 value 20056.388207  
## iter 20 value 20056.388153  
## final value 20056.388153   
## converged  
## # weights: 25  
## initial value 22513.803374   
## iter 10 value 20071.973425  
## iter 20 value 20056.434442  
## final value 20056.265878   
## converged  
## # weights: 41  
## initial value 23363.954209   
## iter 10 value 20072.396133  
## iter 20 value 20056.439315  
## final value 20056.267451   
## converged  
## # weights: 9  
## initial value 24088.912767   
## final value 20041.267700   
## converged  
## # weights: 25  
## initial value 22858.241344   
## final value 20041.267700   
## converged  
## # weights: 41  
## initial value 24164.510037   
## final value 20041.267700   
## converged  
## # weights: 9  
## initial value 23162.272209   
## iter 10 value 20048.033855  
## final value 20046.777872   
## converged  
## # weights: 25  
## initial value 23282.975232   
## iter 10 value 20054.110139  
## iter 20 value 20045.244853  
## final value 20045.243537   
## converged  
## # weights: 41  
## initial value 21808.882933   
## iter 10 value 20045.644880  
## final value 20044.584088   
## converged  
## # weights: 9  
## initial value 23566.025643   
## iter 10 value 20050.789107  
## iter 20 value 20041.377474  
## iter 20 value 20041.377430  
## final value 20041.377430   
## converged  
## # weights: 25  
## initial value 22261.002421   
## iter 10 value 20054.200037  
## iter 20 value 20041.416800  
## final value 20041.284701   
## converged  
## # weights: 41  
## initial value 23608.936233   
## iter 10 value 20058.273710  
## iter 20 value 20041.463766  
## final value 20041.278957   
## converged  
## # weights: 9  
## initial value 22281.655194   
## final value 20011.041700   
## converged  
## # weights: 25  
## initial value 22458.624700   
## final value 20011.041700   
## converged  
## # weights: 41  
## initial value 23097.854775   
## final value 20011.041700   
## converged  
## # weights: 9  
## initial value 23386.507516   
## iter 10 value 20017.249788  
## final value 20016.550907   
## converged  
## # weights: 25  
## initial value 23085.686027   
## iter 10 value 20016.500857  
## final value 20015.016903   
## converged  
## # weights: 41  
## initial value 21629.620071   
## iter 10 value 20015.156078  
## final value 20014.357620   
## converged  
## # weights: 9  
## initial value 22602.455402   
## iter 10 value 20022.106866  
## iter 20 value 20011.169273  
## iter 20 value 20011.169222  
## final value 20011.169222   
## converged  
## # weights: 25  
## initial value 22103.383664   
## iter 10 value 20024.137372  
## iter 20 value 20011.192683  
## final value 20011.056473   
## converged  
## # weights: 41  
## initial value 23228.833608   
## iter 10 value 20029.098108  
## iter 20 value 20011.249876  
## final value 20011.052440   
## converged  
## # weights: 9  
## initial value 22091.723351   
## final value 20062.773200   
## converged  
## # weights: 25  
## initial value 22620.459335   
## final value 20062.773200   
## converged  
## # weights: 41  
## initial value 23175.056740   
## final value 20062.773200   
## converged  
## # weights: 9  
## initial value 22817.247022   
## iter 10 value 20068.765842  
## final value 20068.285648   
## converged  
## # weights: 25  
## initial value 22400.632615   
## iter 10 value 20071.312477  
## iter 20 value 20066.751177  
## final value 20066.750782   
## converged  
## # weights: 41  
## initial value 22456.485684   
## iter 10 value 20067.742319  
## final value 20066.091116   
## converged  
## # weights: 9  
## initial value 22159.131313   
## iter 10 value 20071.983741  
## iter 20 value 20062.879390  
## iter 20 value 20062.879348  
## final value 20062.879348   
## converged  
## # weights: 25  
## initial value 22146.075157   
## iter 10 value 20079.172661  
## iter 20 value 20062.962273  
## final value 20062.786527   
## converged  
## # weights: 41  
## initial value 23299.152212   
## iter 10 value 20081.896670  
## iter 20 value 20062.993679  
## final value 20062.783696   
## converged  
## # weights: 9  
## initial value 22350.499834   
## final value 20030.566000   
## converged  
## # weights: 25  
## initial value 23506.316849   
## final value 20030.566000   
## converged  
## # weights: 41  
## initial value 21329.297412   
## final value 20030.566000   
## converged  
## # weights: 9  
## initial value 23299.866325   
## iter 10 value 20040.184883  
## final value 20036.075791   
## converged  
## # weights: 25  
## initial value 23270.573953   
## iter 10 value 20040.940472  
## iter 20 value 20034.541792  
## iter 20 value 20034.541668  
## iter 20 value 20034.541661  
## final value 20034.541661   
## converged  
## # weights: 41  
## initial value 22535.334290   
## iter 10 value 20035.141456  
## final value 20033.882215   
## converged  
## # weights: 9  
## initial value 21527.682638   
## iter 10 value 20037.650932  
## iter 20 value 20030.647684  
## iter 20 value 20030.647651  
## final value 20030.647651   
## converged  
## # weights: 25  
## initial value 21606.863776   
## iter 10 value 20040.797030  
## iter 20 value 20030.683956  
## final value 20030.578863   
## converged  
## # weights: 41  
## initial value 22519.580676   
## iter 10 value 20049.474036  
## iter 20 value 20030.783995  
## final value 20030.576433   
## converged  
## # weights: 9  
## initial value 23164.455099   
## final value 20030.566000   
## converged  
## # weights: 25  
## initial value 23215.743670   
## final value 20030.566000   
## converged  
## # weights: 41  
## initial value 24145.483941   
## final value 20030.566000   
## converged  
## # weights: 9  
## initial value 22399.264095   
## iter 10 value 20038.584427  
## final value 20036.075790   
## converged  
## # weights: 25  
## initial value 24181.970337   
## iter 10 value 20035.133363  
## iter 20 value 20034.541724  
## iter 20 value 20034.541611  
## iter 20 value 20034.541588  
## final value 20034.541588   
## converged  
## # weights: 41  
## initial value 22354.913707   
## iter 10 value 20036.568970  
## final value 20033.882218   
## converged  
## # weights: 9  
## initial value 22489.685178   
## iter 10 value 20040.355314  
## iter 20 value 20030.678863  
## iter 20 value 20030.678818  
## final value 20030.678818   
## converged  
## # weights: 25  
## initial value 22449.970478   
## iter 10 value 20043.842191  
## iter 20 value 20030.719064  
## final value 20030.581370   
## converged  
## # weights: 41  
## initial value 22699.792144   
## iter 10 value 20051.151814  
## iter 20 value 20030.803338  
## final value 20030.579534   
## converged  
## # weights: 9  
## initial value 23346.202257   
## final value 20023.480100   
## converged  
## # weights: 25  
## initial value 24068.052106   
## final value 20023.480100   
## converged  
## # weights: 41  
## initial value 23172.346856   
## final value 20023.480100   
## converged  
## # weights: 9  
## initial value 23171.532179   
## iter 10 value 20029.284741  
## final value 20028.989677   
## converged  
## # weights: 25  
## initial value 23203.024685   
## iter 10 value 20029.665833  
## final value 20027.455632   
## converged  
## # weights: 41  
## initial value 22965.822037   
## iter 10 value 20040.223691  
## iter 20 value 20026.804337  
## final value 20026.796128   
## converged  
## # weights: 9  
## initial value 21969.165221   
## iter 10 value 20032.589928  
## iter 20 value 20023.585129  
## iter 20 value 20023.585087  
## final value 20023.585087   
## converged  
## # weights: 25  
## initial value 23159.414569   
## iter 10 value 20036.984581  
## iter 20 value 20023.635796  
## final value 20023.492782   
## converged  
## # weights: 41  
## initial value 23576.117955   
## iter 10 value 20040.959161  
## iter 20 value 20023.681620  
## final value 20023.492574   
## converged  
## # weights: 9  
## initial value 23597.823314   
## final value 19953.339700   
## converged  
## # weights: 25  
## initial value 21559.295330   
## final value 19953.339700   
## converged  
## # weights: 41  
## initial value 22935.688134   
## final value 19953.339700   
## converged  
## # weights: 9  
## initial value 22091.355981   
## iter 10 value 19959.048728  
## final value 19958.847774   
## converged  
## # weights: 25  
## initial value 22231.768804   
## iter 10 value 19957.726339  
## final value 19957.314190   
## converged  
## # weights: 41  
## initial value 22361.712459   
## iter 10 value 19957.188534  
## final value 19956.654976   
## converged  
## # weights: 9  
## initial value 21542.888761   
## iter 10 value 19959.814073  
## iter 20 value 19953.414344  
## iter 20 value 19953.414315  
## final value 19953.414315   
## converged  
## # weights: 25  
## initial value 22998.518013   
## iter 10 value 19970.259539  
## iter 20 value 19953.534772  
## final value 19953.363556   
## converged  
## # weights: 41  
## initial value 22672.388563   
## iter 10 value 19974.318431  
## iter 20 value 19953.581568  
## final value 19953.352824   
## converged  
## # weights: 9  
## initial value 23198.377759   
## final value 20014.030000   
## converged  
## # weights: 25  
## initial value 22638.061651   
## final value 20014.030000   
## converged  
## # weights: 41  
## initial value 23356.159813   
## final value 20014.030000   
## converged  
## # weights: 9  
## initial value 23432.644670   
## iter 10 value 20020.528239  
## final value 20019.539300   
## converged  
## # weights: 25  
## initial value 21996.824317   
## iter 10 value 20018.821167  
## final value 20018.005262   
## converged  
## # weights: 41  
## initial value 22346.210477   
## iter 10 value 20018.748735  
## iter 20 value 20017.356526  
## final value 20017.345955   
## converged  
## # weights: 9  
## initial value 22835.364787   
## iter 10 value 20025.097232  
## iter 20 value 20014.157596  
## iter 20 value 20014.157545  
## final value 20014.157545   
## converged  
## # weights: 25  
## initial value 23743.305185   
## iter 10 value 20027.063593  
## iter 20 value 20014.180267  
## final value 20014.044721   
## converged  
## # weights: 41  
## initial value 23182.798591   
## iter 10 value 20033.309428  
## iter 20 value 20014.252277  
## final value 20014.040493   
## converged  
## # weights: 9  
## initial value 22348.299894   
## final value 19931.150000   
## converged  
## # weights: 25  
## initial value 23904.450235   
## final value 19931.150000   
## converged  
## # weights: 41  
## initial value 22667.323158   
## final value 19931.150000   
## converged  
## # weights: 9  
## initial value 23179.639914   
## iter 10 value 19937.216364  
## final value 19936.657769   
## converged  
## # weights: 25  
## initial value 22547.314295   
## iter 10 value 19938.162111  
## iter 20 value 19935.124409  
## iter 20 value 19935.124338  
## iter 20 value 19935.124334  
## final value 19935.124334   
## converged  
## # weights: 41  
## initial value 22337.831014   
## iter 10 value 19935.215149  
## final value 19934.465144   
## converged  
## # weights: 9  
## initial value 22180.631536   
## iter 10 value 19940.273408  
## iter 20 value 19931.255186  
## iter 20 value 19931.255144  
## final value 19931.255144   
## converged  
## # weights: 25  
## initial value 23314.953615   
## iter 10 value 19947.193333  
## iter 20 value 19931.334967  
## final value 19931.166110   
## converged  
## # weights: 41  
## initial value 22630.746246   
## iter 10 value 19949.408895  
## iter 20 value 19931.360511  
## final value 19931.160571   
## converged  
## # weights: 9  
## initial value 22854.478197   
## final value 19998.689200   
## converged  
## # weights: 25  
## initial value 23111.982430   
## final value 19998.689200   
## converged  
## # weights: 41  
## initial value 23679.614130   
## final value 19998.689200   
## converged  
## # weights: 9  
## initial value 23193.047568   
## iter 10 value 20007.074196  
## final value 20004.198151   
## converged  
## # weights: 25  
## initial value 21923.548322   
## iter 10 value 20004.213271  
## final value 20002.664263   
## converged  
## # weights: 41  
## initial value 23847.340397   
## iter 10 value 20019.760643  
## iter 20 value 20002.006971  
## final value 20002.004906   
## converged  
## # weights: 9  
## initial value 23355.830920   
## iter 10 value 20008.609899  
## iter 20 value 19998.803578  
## iter 20 value 19998.803532  
## final value 19998.803532   
## converged  
## # weights: 25  
## initial value 22251.032278   
## iter 10 value 20013.197555  
## iter 20 value 19998.856470  
## final value 19998.706189   
## converged  
## # weights: 41  
## initial value 24412.665600   
## iter 10 value 20006.710643  
## iter 20 value 19998.781681  
## final value 19998.704957   
## converged  
## # weights: 9  
## initial value 22203.924852   
## final value 20034.225700   
## converged  
## # weights: 25  
## initial value 23411.152260   
## final value 20034.225700   
## converged  
## # weights: 41  
## initial value 23118.976650   
## final value 20034.225700   
## converged  
## # weights: 9  
## initial value 23262.283896   
## iter 10 value 20041.563865  
## final value 20039.735633   
## converged  
## # weights: 25  
## initial value 23381.623222   
## iter 10 value 20039.302004  
## final value 20038.201397   
## converged  
## # weights: 41  
## initial value 22386.826366   
## iter 10 value 20039.636481  
## final value 20037.542080   
## converged  
## # weights: 9  
## initial value 22120.234482   
## iter 10 value 20043.557192  
## iter 20 value 20034.333285  
## iter 20 value 20034.333242  
## final value 20034.333242   
## converged  
## # weights: 25  
## initial value 21445.854760   
## iter 10 value 20043.734311  
## iter 20 value 20034.335327  
## final value 20034.237407   
## converged  
## # weights: 41  
## initial value 22752.766963   
## iter 10 value 20053.632006  
## iter 20 value 20034.449439  
## final value 20034.236183   
## converged  
## # weights: 9  
## initial value 22814.255651   
## final value 20062.170100   
## converged  
## # weights: 25  
## initial value 23133.292123   
## final value 20062.170100   
## converged  
## # weights: 41  
## initial value 21907.925074   
## final value 20062.170100   
## converged  
## # weights: 9  
## initial value 22950.471827   
## iter 10 value 20067.982362  
## final value 20067.683117   
## converged  
## # weights: 25  
## initial value 22279.939077   
## iter 10 value 20067.523911  
## final value 20066.148248   
## converged  
## # weights: 41  
## initial value 22636.532016   
## iter 10 value 20067.911624  
## iter 20 value 20065.488537  
## iter 20 value 20065.488473  
## iter 20 value 20065.488468  
## final value 20065.488468   
## converged  
## # weights: 9  
## initial value 23352.640511   
## iter 10 value 20071.237920  
## iter 20 value 20062.274645  
## iter 20 value 20062.274603  
## final value 20062.274603   
## converged  
## # weights: 25  
## initial value 21149.718881   
## iter 10 value 20068.069312  
## iter 20 value 20062.238113  
## final value 20062.181087   
## converged  
## # weights: 41  
## initial value 23432.542719   
## iter 10 value 20080.319022  
## iter 20 value 20062.379343  
## final value 20062.181993   
## converged  
## # weights: 9  
## initial value 22405.992291   
## final value 20020.398500   
## converged  
## # weights: 25  
## initial value 21590.657510   
## final value 20020.398500   
## converged  
## # weights: 41  
## initial value 22442.876747   
## final value 20020.398500   
## converged  
## # weights: 9  
## initial value 22750.894702   
## iter 10 value 20026.236204  
## final value 20025.907981   
## converged  
## # weights: 25  
## initial value 21353.347271   
## iter 10 value 20026.469883  
## iter 20 value 20024.374191  
## iter 20 value 20024.374069  
## iter 20 value 20024.374002  
## final value 20024.374002   
## converged  
## # weights: 41  
## initial value 22582.809735   
## iter 10 value 20038.138424  
## iter 20 value 20023.717188  
## final value 20023.714490   
## converged  
## # weights: 9  
## initial value 23736.582495   
## iter 10 value 20029.109364  
## iter 20 value 20020.498929  
## iter 20 value 20020.498889  
## final value 20020.498889   
## converged  
## # weights: 25  
## initial value 23782.193303   
## iter 10 value 20032.711345  
## iter 20 value 20020.540457  
## final value 20020.415593   
## converged  
## # weights: 41  
## initial value 23201.805241   
## iter 10 value 20039.816095  
## iter 20 value 20020.622370  
## final value 20020.412143   
## converged  
## # weights: 9  
## initial value 22258.016331   
## final value 20041.918000   
## converged  
## # weights: 25  
## initial value 23978.265488   
## final value 20041.918000   
## converged  
## # weights: 41  
## initial value 21490.414479   
## final value 20041.918000   
## converged  
## # weights: 9  
## initial value 22192.067156   
## iter 10 value 20047.698904  
## final value 20047.428221   
## converged  
## # weights: 25  
## initial value 24348.690004   
## iter 10 value 20049.415779  
## iter 20 value 20045.894376  
## final value 20045.893944   
## converged  
## # weights: 41  
## initial value 23427.964816   
## iter 10 value 20046.643812  
## iter 20 value 20045.234636  
## iter 20 value 20045.234471  
## iter 20 value 20045.234439  
## final value 20045.234439   
## converged  
## # weights: 9  
## initial value 22887.620116   
## iter 10 value 20052.687622  
## iter 20 value 20042.042165  
## iter 20 value 20042.042116  
## final value 20042.042116   
## converged  
## # weights: 25  
## initial value 21940.307693   
## iter 10 value 20054.225152  
## iter 20 value 20042.059892  
## final value 20041.931997   
## converged  
## # weights: 41  
## initial value 22087.076404   
## iter 10 value 20060.033421  
## iter 20 value 20042.126857  
## final value 20041.927860   
## converged  
## # weights: 9  
## initial value 23222.757133   
## final value 19973.299700   
## converged  
## # weights: 25  
## initial value 22365.531475   
## final value 19973.299700   
## converged  
## # weights: 41  
## initial value 21755.147217   
## final value 19973.299700   
## converged  
## # weights: 9  
## initial value 23747.631748   
## iter 10 value 19979.713943  
## final value 19978.808132   
## converged  
## # weights: 25  
## initial value 23554.344008   
## iter 10 value 19978.498098  
## final value 19977.274491   
## converged  
## # weights: 41  
## initial value 22450.753689   
## iter 10 value 19984.716277  
## iter 20 value 19976.622598  
## final value 19976.615155   
## converged  
## # weights: 9  
## initial value 23456.061869   
## iter 10 value 19982.330126  
## iter 20 value 19973.403814  
## iter 20 value 19973.403772  
## final value 19973.403772   
## converged  
## # weights: 25  
## initial value 21564.300763   
## iter 10 value 19982.649423  
## iter 20 value 19973.407495  
## final value 19973.311834   
## converged  
## # weights: 41  
## initial value 22869.891030   
## iter 10 value 19990.915888  
## iter 20 value 19973.502801  
## final value 19973.310146   
## converged  
## # weights: 9  
## initial value 23104.146466   
## final value 19969.854500   
## converged  
## # weights: 25  
## initial value 22970.738289   
## final value 19969.854500   
## converged  
## # weights: 41  
## initial value 22785.152825   
## final value 19969.854500   
## converged  
## # weights: 9  
## initial value 22057.712574   
## iter 10 value 19977.512194  
## final value 19975.362893   
## converged  
## # weights: 25  
## initial value 22027.904717   
## iter 10 value 19997.667477  
## iter 20 value 19973.994704  
## final value 19973.829285   
## converged  
## # weights: 41  
## initial value 21165.287737   
## iter 10 value 19984.831447  
## iter 20 value 19973.172720  
## final value 19973.170022   
## converged  
## # weights: 9  
## initial value 23335.744042   
## iter 10 value 19978.644085  
## iter 20 value 19969.955837  
## iter 20 value 19969.955796  
## final value 19969.955796   
## converged  
## # weights: 25  
## initial value 23028.169180   
## iter 10 value 19985.704364  
## iter 20 value 19970.037236  
## final value 19969.866903   
## converged  
## # weights: 41  
## initial value 21465.622285   
## iter 10 value 19981.306841  
## iter 20 value 19969.986536  
## final value 19969.864238   
## converged  
## # weights: 9  
## initial value 21575.546019   
## final value 20017.201700   
## converged  
## # weights: 25  
## initial value 22802.686335   
## final value 20017.201700   
## converged  
## # weights: 41  
## initial value 21588.690858   
## final value 20017.201700   
## converged  
## # weights: 9  
## initial value 22425.225829   
## iter 10 value 20023.085117  
## final value 20022.711047   
## converged  
## # weights: 25  
## initial value 23758.163828   
## iter 10 value 20022.430227  
## final value 20021.176975   
## converged  
## # weights: 41  
## initial value 23512.281417   
## iter 10 value 20032.974527  
## iter 20 value 20020.519709  
## final value 20020.517591   
## converged  
## # weights: 9  
## initial value 23643.278183   
## iter 10 value 20027.218666  
## iter 20 value 20017.317188  
## iter 20 value 20017.317142  
## final value 20017.317142   
## converged  
## # weights: 25  
## initial value 22052.219533   
## iter 10 value 20030.647974  
## iter 20 value 20017.356725  
## final value 20017.214012   
## converged  
## # weights: 41  
## initial value 22938.484685   
## iter 10 value 20039.562539  
## iter 20 value 20017.459503  
## final value 20017.211982   
## converged  
## # weights: 9  
## initial value 22066.794247   
## final value 20047.646500   
## converged  
## # weights: 25  
## initial value 23893.337155   
## final value 20047.646500   
## converged  
## # weights: 41  
## initial value 23528.202651   
## final value 20047.646500   
## converged  
## # weights: 9  
## initial value 22629.039857   
## iter 10 value 20055.658776  
## final value 20053.156980   
## converged  
## # weights: 25  
## initial value 22785.263830   
## iter 10 value 20052.721665  
## final value 20051.622586   
## converged  
## # weights: 41  
## initial value 21780.145201   
## iter 10 value 20053.823461  
## final value 20050.963227   
## converged  
## # weights: 9  
## initial value 22756.595092   
## iter 10 value 20058.681523  
## iter 20 value 20047.773725  
## iter 20 value 20047.773674  
## final value 20047.773674   
## converged  
## # weights: 25  
## initial value 22911.915789   
## iter 10 value 20061.899021  
## iter 20 value 20047.810820  
## final value 20047.664845   
## converged  
## # weights: 41  
## initial value 23336.309924   
## iter 10 value 20068.112431  
## iter 20 value 20047.882456  
## final value 20047.659496   
## converged  
## # weights: 9  
## initial value 22960.430475   
## final value 20021.825200   
## converged  
## # weights: 25  
## initial value 24138.269754   
## final value 20021.825200   
## converged  
## # weights: 41  
## initial value 23846.406631   
## final value 20021.825200   
## converged  
## # weights: 9  
## initial value 22686.335712   
## iter 10 value 20028.678774  
## final value 20027.334720   
## converged  
## # weights: 25  
## initial value 22609.469648   
## iter 10 value 20030.563703  
## iter 20 value 20025.801219  
## final value 20025.800622   
## converged  
## # weights: 41  
## initial value 22248.159839   
## iter 10 value 20027.897090  
## iter 20 value 20025.141451  
## iter 20 value 20025.141261  
## iter 20 value 20025.141227  
## final value 20025.141227   
## converged  
## # weights: 9  
## initial value 21932.247414   
## iter 10 value 20029.641214  
## iter 20 value 20021.915313  
## iter 20 value 20021.915276  
## final value 20021.915276   
## converged  
## # weights: 25  
## initial value 23738.694719   
## iter 10 value 20034.861491  
## iter 20 value 20021.975498  
## final value 20021.840958   
## converged  
## # weights: 41  
## initial value 22182.880716   
## iter 10 value 20040.795242  
## iter 20 value 20022.043910  
## final value 20021.836546   
## converged  
## # weights: 9  
## initial value 22227.005055   
## final value 20049.182500   
## converged  
## # weights: 25  
## initial value 22800.195574   
## final value 20049.182500   
## converged  
## # weights: 41  
## initial value 21659.948589   
## final value 20049.182500   
## converged  
## # weights: 9  
## initial value 22822.047627   
## iter 10 value 20056.361508  
## final value 20054.693043   
## converged  
## # weights: 25  
## initial value 22114.415160   
## iter 10 value 20055.363710  
## iter 20 value 20053.158851  
## iter 20 value 20053.158733  
## iter 20 value 20053.158670  
## final value 20053.158670   
## converged  
## # weights: 41  
## initial value 23870.643660   
## iter 10 value 20058.855000  
## iter 20 value 20052.616941  
## final value 20052.499127   
## converged  
## # weights: 9  
## initial value 22019.335984   
## iter 10 value 20057.652465  
## iter 20 value 20049.280152  
## iter 20 value 20049.280113  
## final value 20049.280113   
## converged  
## # weights: 25  
## initial value 23000.382639   
## iter 10 value 20064.455991  
## iter 20 value 20049.358591  
## final value 20049.194632   
## converged  
## # weights: 41  
## initial value 22426.721513   
## iter 10 value 20065.577317  
## iter 20 value 20049.371519  
## final value 20049.192285   
## converged  
## # weights: 9  
## initial value 22153.161050   
## final value 20044.507700   
## converged  
## # weights: 25  
## initial value 23637.680912   
## final value 20044.507700   
## converged  
## # weights: 41  
## initial value 21701.045300   
## final value 20044.507700   
## converged  
## # weights: 9  
## initial value 22191.744147   
## iter 10 value 20050.920454  
## final value 20050.018032   
## converged  
## # weights: 25  
## initial value 24002.263272   
## iter 10 value 20049.417457  
## final value 20048.483672   
## converged  
## # weights: 41  
## initial value 24333.280764   
## iter 10 value 20049.413367  
## iter 20 value 20047.824268  
## iter 20 value 20047.824154  
## iter 20 value 20047.824147  
## final value 20047.824147   
## converged  
## # weights: 9  
## initial value 23018.721738   
## iter 10 value 20056.850125  
## iter 20 value 20044.649998  
## iter 20 value 20044.649942  
## final value 20044.649942   
## converged  
## # weights: 25  
## initial value 23645.729143   
## iter 10 value 20057.178364  
## iter 20 value 20044.653783  
## final value 20044.523256   
## converged  
## # weights: 41  
## initial value 22958.416131   
## iter 10 value 20063.915655  
## iter 20 value 20044.731458  
## final value 20044.518722   
## converged  
## # weights: 9  
## initial value 22836.831216   
## final value 19983.067600   
## converged  
## # weights: 25  
## initial value 22423.548092   
## final value 19983.067600   
## converged  
## # weights: 41  
## initial value 22488.886566   
## final value 19983.067600   
## converged  
## # weights: 9  
## initial value 23282.171388   
## iter 10 value 19991.009695  
## final value 19988.576196   
## converged  
## # weights: 25  
## initial value 21578.037027   
## iter 10 value 19988.264590  
## iter 20 value 19987.042491  
## iter 20 value 19987.042418  
## iter 20 value 19987.042408  
## final value 19987.042408   
## converged  
## # weights: 41  
## initial value 21798.607124   
## iter 10 value 19996.281897  
## iter 20 value 19986.383574  
## final value 19986.383173   
## converged  
## # weights: 9  
## initial value 22421.714067   
## iter 10 value 19994.421190  
## iter 20 value 19983.198498  
## iter 20 value 19983.198446  
## final value 19983.198446   
## converged  
## # weights: 25  
## initial value 21541.115959   
## iter 10 value 19993.731570  
## iter 20 value 19983.190547  
## final value 19983.080531   
## converged  
## # weights: 41  
## initial value 22474.801825   
## iter 10 value 20001.940176  
## iter 20 value 19983.285186  
## final value 19983.077238   
## converged  
## # weights: 9  
## initial value 23007.707393   
## final value 19980.905200   
## converged  
## # weights: 25  
## initial value 23452.471538   
## final value 19980.905200   
## converged  
## # weights: 41  
## initial value 22552.623536   
## final value 19980.905200   
## converged  
## # weights: 9  
## initial value 23169.003097   
## iter 10 value 19986.483110  
## final value 19986.413767   
## converged  
## # weights: 25  
## initial value 23954.207806   
## iter 10 value 19985.579747  
## final value 19984.880056   
## converged  
## # weights: 41  
## initial value 22348.787113   
## iter 10 value 19984.971587  
## final value 19984.220760   
## converged  
## # weights: 9  
## initial value 23672.230628   
## iter 10 value 19989.825104  
## iter 20 value 19981.008039  
## iter 20 value 19981.007998  
## final value 19981.007998   
## converged  
## # weights: 25  
## initial value 23651.056685   
## iter 10 value 19993.654175  
## iter 20 value 19981.052186  
## final value 19980.919246   
## converged  
## # weights: 41  
## initial value 22832.896999   
## iter 10 value 20001.635379  
## iter 20 value 19981.144203  
## final value 19980.917618   
## converged  
## # weights: 9  
## initial value 22391.898406   
## final value 20004.187700   
## converged  
## # weights: 25  
## initial value 21847.191840   
## final value 20004.187700   
## converged  
## # weights: 41  
## initial value 23657.429663   
## final value 20004.187700   
## converged  
## # weights: 9  
## initial value 23773.041203   
## iter 10 value 20010.896892  
## final value 20009.696765   
## converged  
## # weights: 25  
## initial value 22882.218038   
## iter 10 value 20010.117561  
## iter 20 value 20008.162967  
## iter 20 value 20008.162888  
## iter 20 value 20008.162864  
## final value 20008.162864   
## converged  
## # weights: 41  
## initial value 22429.764772   
## iter 10 value 20008.367415  
## final value 20007.503482   
## converged  
## # weights: 9  
## initial value 21805.266335   
## iter 10 value 20012.323808  
## iter 20 value 20004.281503  
## iter 20 value 20004.281465  
## final value 20004.281465   
## converged  
## # weights: 25  
## initial value 23943.147905   
## iter 10 value 20013.286127  
## iter 20 value 20004.292598  
## final value 20004.206660   
## converged  
## # weights: 41  
## initial value 22031.886298   
## iter 10 value 20020.179941  
## iter 20 value 20004.372078  
## final value 20004.198423   
## converged  
## # weights: 9  
## initial value 23067.360140   
## final value 20037.869200   
## converged  
## # weights: 25  
## initial value 23801.135676   
## final value 20037.869200   
## converged  
## # weights: 41  
## initial value 22837.136413   
## final value 20037.869200   
## converged  
## # weights: 9  
## initial value 22923.712283   
## iter 10 value 20044.435341  
## final value 20043.379260   
## converged  
## # weights: 25  
## initial value 23223.682102   
## iter 10 value 20045.009542  
## final value 20041.845006   
## converged  
## # weights: 41  
## initial value 22469.419271   
## iter 10 value 20044.671406  
## iter 20 value 20041.185746  
## iter 20 value 20041.185578  
## iter 20 value 20041.185538  
## final value 20041.185538   
## converged  
## # weights: 9  
## initial value 22517.099139   
## iter 10 value 20047.277343  
## iter 20 value 20037.977669  
## iter 20 value 20037.977625  
## final value 20037.977625   
## converged  
## # weights: 25  
## initial value 24252.646898   
## iter 10 value 20046.960077  
## iter 20 value 20037.974011  
## final value 20037.889708   
## converged  
## # weights: 41  
## initial value 22447.008243   
## iter 10 value 20054.980663  
## iter 20 value 20038.066482  
## final value 20037.881683   
## converged  
## # weights: 9  
## initial value 23381.175090   
## final value 20013.185200   
## converged  
## # weights: 25  
## initial value 23434.414279   
## final value 20013.185200   
## converged  
## # weights: 41  
## initial value 22833.037928   
## final value 20013.185200   
## converged  
## # weights: 9  
## initial value 21639.883578   
## iter 10 value 20018.825919  
## final value 20018.694462   
## converged  
## # weights: 25  
## initial value 23145.173788   
## iter 10 value 20018.305858  
## iter 20 value 20017.161235  
## final value 20017.160523   
## converged  
## # weights: 41  
## initial value 21552.568383   
## iter 10 value 20028.124088  
## iter 20 value 20016.501498  
## final value 20016.501105   
## converged  
## # weights: 9  
## initial value 22809.075826   
## iter 10 value 20024.938954  
## iter 20 value 20013.320712  
## iter 20 value 20013.320657  
## final value 20013.320657   
## converged  
## # weights: 25  
## initial value 22051.405472   
## iter 10 value 20026.833440  
## iter 20 value 20013.342553  
## final value 20013.200346   
## converged  
## # weights: 41  
## initial value 22865.114813   
## iter 10 value 20029.556865  
## iter 20 value 20013.373952  
## final value 20013.196109   
## converged  
## # weights: 9  
## initial value 22960.060688   
## final value 19939.738000   
## converged  
## # weights: 25  
## initial value 22802.311881   
## final value 19939.738000   
## converged  
## # weights: 41  
## initial value 22584.370908   
## final value 19939.738000   
## converged  
## # weights: 9  
## initial value 23059.965418   
## iter 10 value 19946.621523  
## final value 19945.245920   
## converged  
## # weights: 25  
## initial value 23339.639803   
## iter 10 value 19948.370588  
## iter 20 value 19943.717862  
## final value 19943.712457   
## converged  
## # weights: 41  
## initial value 22433.964409   
## iter 10 value 19957.860965  
## iter 20 value 19943.053820  
## final value 19943.053269   
## converged  
## # weights: 9  
## initial value 21998.032355   
## iter 10 value 19948.891212  
## iter 20 value 19939.843529  
## iter 20 value 19939.843487  
## final value 19939.843487   
## converged  
## # weights: 25  
## initial value 22709.192162   
## iter 10 value 19955.486332  
## iter 20 value 19939.919566  
## final value 19939.753036   
## converged  
## # weights: 41  
## initial value 22475.550163   
## iter 10 value 19958.945576  
## iter 20 value 19939.959448  
## final value 19939.748277   
## converged  
## # weights: 9  
## initial value 22893.183052   
## final value 20002.486000   
## converged  
## # weights: 25  
## initial value 23173.587461   
## final value 20002.486000   
## converged  
## # weights: 41  
## initial value 22696.172421   
## final value 20002.486000   
## converged  
## # weights: 9  
## initial value 23289.575307   
## iter 10 value 20010.334564  
## final value 20007.995033   
## converged  
## # weights: 25  
## initial value 22976.512894   
## iter 10 value 20008.119998  
## iter 20 value 20006.461301  
## iter 20 value 20006.461159  
## iter 20 value 20006.461133  
## final value 20006.461133   
## converged  
## # weights: 41  
## initial value 23574.646268   
## iter 10 value 20016.024807  
## iter 20 value 20005.807573  
## final value 20005.801762   
## converged  
## # weights: 9  
## initial value 22578.406240   
## iter 10 value 20012.490256  
## iter 20 value 20002.601341  
## iter 20 value 20002.601295  
## final value 20002.601295   
## converged  
## # weights: 25  
## initial value 22480.189075   
## iter 10 value 20015.742448  
## iter 20 value 20002.638836  
## final value 20002.503166   
## converged  
## # weights: 41  
## initial value 22268.192122   
## iter 10 value 20018.274400  
## iter 20 value 20002.668028  
## final value 20002.496451   
## converged  
## # weights: 9  
## initial value 22241.584967   
## final value 20031.021200   
## converged  
## # weights: 25  
## initial value 24168.451667   
## final value 20031.021200   
## converged  
## # weights: 41  
## initial value 23603.883190   
## final value 20031.021200   
## converged  
## # weights: 9  
## initial value 21543.736938   
## iter 10 value 20037.008042  
## final value 20036.530943   
## converged  
## # weights: 25  
## initial value 23099.667642   
## iter 10 value 20036.638886  
## final value 20034.996789   
## converged  
## # weights: 41  
## initial value 21676.542083   
## iter 10 value 20046.688107  
## iter 20 value 20034.338257  
## final value 20034.337326   
## converged  
## # weights: 9  
## initial value 21758.911302   
## iter 10 value 20039.168813  
## iter 20 value 20031.115136  
## iter 20 value 20031.115098  
## final value 20031.115098   
## converged  
## # weights: 25  
## initial value 23397.569102   
## iter 10 value 20044.767842  
## iter 20 value 20031.179688  
## final value 20031.034288   
## converged  
## # weights: 41  
## initial value 23016.513775   
## iter 10 value 20051.184234  
## iter 20 value 20031.253664  
## final value 20031.032362   
## converged  
## # weights: 9  
## initial value 21991.750233   
## final value 20020.136500   
## converged  
## # weights: 25  
## initial value 21704.562353   
## final value 20020.136500   
## converged  
## # weights: 41  
## initial value 21480.789164   
## final value 20020.136500   
## converged  
## # weights: 9  
## initial value 22753.554079   
## iter 10 value 20027.686807  
## final value 20025.645972   
## converged  
## # weights: 25  
## initial value 23011.122459   
## iter 10 value 20024.660172  
## final value 20024.111946   
## converged  
## # weights: 41  
## initial value 22560.441032   
## iter 10 value 20035.847771  
## iter 20 value 20023.457259  
## final value 20023.452507   
## converged  
## # weights: 9  
## initial value 23642.655673   
## iter 10 value 20029.103286  
## iter 20 value 20020.239880  
## iter 20 value 20020.239839  
## final value 20020.239839   
## converged  
## # weights: 25  
## initial value 23083.933841   
## iter 10 value 20036.371658  
## iter 20 value 20020.323679  
## final value 20020.149366   
## converged  
## # weights: 41  
## initial value 22630.303586   
## iter 10 value 20042.396692  
## iter 20 value 20020.393143  
## final value 20020.145996   
## converged  
## # weights: 9  
## initial value 22750.089885   
## final value 19912.371700   
## converged  
## # weights: 25  
## initial value 23139.565123   
## final value 19912.371700   
## converged  
## # weights: 41  
## initial value 22724.728472   
## final value 19912.371700   
## converged  
## # weights: 9  
## initial value 22468.496995   
## iter 10 value 19918.337207  
## final value 19917.879108   
## converged  
## # weights: 25  
## initial value 23143.948236   
## iter 10 value 19916.852289  
## iter 20 value 19916.346334  
## final value 19916.345790   
## converged  
## # weights: 41  
## initial value 21934.383129   
## iter 10 value 19915.870118  
## final value 19915.686605   
## converged  
## # weights: 9  
## initial value 23580.577883   
## iter 10 value 19920.385045  
## iter 20 value 19912.464088  
## iter 20 value 19912.464051  
## final value 19912.464051   
## converged  
## # weights: 25  
## initial value 24307.997000   
## iter 10 value 19918.528447  
## iter 20 value 19912.442682  
## final value 19912.394219   
## converged  
## # weights: 41  
## initial value 23262.090677   
## iter 10 value 19931.771705  
## iter 20 value 19912.595367  
## final value 19912.384537   
## converged  
## # weights: 9  
## initial value 22097.044820   
## final value 20024.357200   
## converged  
## # weights: 25  
## initial value 22966.854248   
## final value 20024.357200   
## converged  
## # weights: 41  
## initial value 22587.054850   
## final value 20024.357200   
## converged  
## # weights: 9  
## initial value 22588.739239   
## iter 10 value 20030.534469  
## final value 20029.866785   
## converged  
## # weights: 25  
## initial value 22111.311181   
## iter 10 value 20029.227891  
## iter 20 value 20028.333533  
## final value 20028.332788   
## converged  
## # weights: 41  
## initial value 23576.497121   
## iter 10 value 20040.471442  
## iter 20 value 20027.674662  
## final value 20027.673227   
## converged  
## # weights: 9  
## initial value 23119.015789   
## iter 10 value 20034.743051  
## iter 20 value 20024.476941  
## iter 20 value 20024.476893  
## final value 20024.476893   
## converged  
## # weights: 25  
## initial value 22345.103324   
## iter 10 value 20038.679903  
## iter 20 value 20024.522330  
## final value 20024.369246   
## converged  
## # weights: 41  
## initial value 21248.441075   
## iter 10 value 20032.993933  
## iter 20 value 20024.456775  
## final value 20024.366029   
## converged  
## # weights: 9  
## initial value 23257.112457   
## final value 20052.994000   
## converged  
## # weights: 25  
## initial value 22178.616126   
## final value 20052.994000   
## converged  
## # weights: 41  
## initial value 22566.016691   
## final value 20052.994000   
## converged  
## # weights: 9  
## initial value 23045.991217   
## iter 10 value 20074.366582  
## iter 20 value 20058.504952  
## iter 20 value 20058.504801  
## final value 20058.504801   
## converged  
## # weights: 25  
## initial value 23525.369085   
## iter 10 value 20058.202483  
## final value 20056.970257   
## converged  
## # weights: 41  
## initial value 23129.926892   
## iter 10 value 20057.423930  
## iter 20 value 20056.310724  
## iter 20 value 20056.310676  
## iter 20 value 20056.310672  
## final value 20056.310672   
## converged  
## # weights: 9  
## initial value 23504.902032   
## iter 10 value 20063.845627  
## iter 20 value 20053.119111  
## iter 20 value 20053.119061  
## final value 20053.119061   
## converged  
## # weights: 25  
## initial value 24631.963999   
## iter 10 value 20058.874095  
## iter 20 value 20053.061793  
## final value 20053.021237   
## converged  
## # weights: 41  
## initial value 24105.915905   
## iter 10 value 20065.478361  
## iter 20 value 20053.137935  
## final value 20053.006242   
## converged  
## # weights: 9  
## initial value 23355.501753   
## final value 20053.560100   
## converged  
## # weights: 25  
## initial value 22324.685942   
## final value 20053.560100   
## converged  
## # weights: 41  
## initial value 22728.026696   
## final value 20053.560100   
## converged  
## # weights: 9  
## initial value 23673.029091   
## iter 10 value 20059.800022  
## final value 20059.070974   
## converged  
## # weights: 25  
## initial value 23510.853626   
## iter 10 value 20058.536390  
## final value 20057.536484   
## converged  
## # weights: 41  
## initial value 23175.172226   
## iter 10 value 20058.442647  
## iter 20 value 20056.877085  
## iter 20 value 20056.876959  
## iter 20 value 20056.876932  
## final value 20056.876932   
## converged  
## # weights: 9  
## initial value 23946.972259   
## iter 10 value 20061.729990  
## iter 20 value 20053.654292  
## iter 20 value 20053.654255  
## final value 20053.654255   
## converged  
## # weights: 25  
## initial value 21405.271662   
## iter 10 value 20062.063149  
## iter 20 value 20053.658133  
## final value 20053.570714   
## converged  
## # weights: 41  
## initial value 22816.387283   
## iter 10 value 20073.913706  
## iter 20 value 20053.794761  
## final value 20053.570252   
## converged  
## # weights: 9  
## initial value 22643.299664   
## final value 20060.859700   
## converged  
## # weights: 25  
## initial value 22268.222141   
## final value 20060.859700   
## converged  
## # weights: 41  
## initial value 22150.137295   
## final value 20060.859700   
## converged  
## # weights: 9  
## initial value 22245.800720   
## iter 10 value 20068.436005  
## final value 20066.371285   
## converged  
## # weights: 25  
## initial value 21817.892814   
## iter 10 value 20066.750526  
## final value 20064.836685   
## converged  
## # weights: 41  
## initial value 22616.245633   
## iter 10 value 20066.272322  
## final value 20064.177020   
## converged  
## # weights: 9  
## initial value 22718.378169   
## iter 10 value 20071.526819  
## iter 20 value 20060.982684  
## iter 20 value 20060.982634  
## final value 20060.982634   
## converged  
## # weights: 25  
## initial value 21177.761915   
## iter 10 value 20067.038119  
## iter 20 value 20060.930932  
## final value 20060.870383   
## converged  
## # weights: 41  
## initial value 22683.321517   
## iter 10 value 20080.902331  
## iter 20 value 20061.090776  
## final value 20060.871851   
## converged  
## # weights: 9  
## initial value 23710.269323   
## final value 20056.305700   
## converged  
## # weights: 25  
## initial value 22779.369053   
## final value 20056.305700   
## converged  
## # weights: 41  
## initial value 21706.455213   
## final value 20056.305700   
## converged  
## # weights: 9  
## initial value 21886.489624   
## iter 10 value 20063.416685  
## final value 20061.816731   
## converged  
## # weights: 25  
## initial value 23397.704675   
## iter 10 value 20062.205173  
## iter 20 value 20060.282511  
## final value 20060.282143   
## converged  
## # weights: 41  
## initial value 22045.945013   
## iter 10 value 20061.406995  
## iter 20 value 20059.622630  
## iter 20 value 20059.622582  
## iter 20 value 20059.622559  
## final value 20059.622559   
## converged  
## # weights: 9  
## initial value 23552.819675   
## iter 10 value 20066.226382  
## iter 20 value 20056.420078  
## iter 20 value 20056.420032  
## final value 20056.420032   
## converged  
## # weights: 25  
## initial value 24076.800149   
## iter 10 value 20065.360652  
## iter 20 value 20056.410096  
## final value 20056.322276   
## converged  
## # weights: 41  
## initial value 23058.646585   
## iter 10 value 20075.665477  
## iter 20 value 20056.528903  
## final value 20056.319100   
## converged  
## # weights: 9  
## initial value 23129.576310   
## final value 20033.793700   
## converged  
## # weights: 25  
## initial value 21769.665968   
## final value 20033.793700   
## converged  
## # weights: 41  
## initial value 22268.785354   
## final value 20033.793700   
## converged  
## # weights: 9  
## initial value 21659.180435   
## iter 10 value 20040.642485  
## final value 20039.303615   
## converged  
## # weights: 25  
## initial value 23079.294855   
## iter 10 value 20039.230679  
## iter 20 value 20037.769903  
## final value 20037.769447   
## converged  
## # weights: 41  
## initial value 21994.524237   
## iter 10 value 20038.551887  
## iter 20 value 20037.109975  
## iter 20 value 20037.109918  
## iter 20 value 20037.109910  
## final value 20037.109910   
## converged  
## # weights: 9  
## initial value 22134.876468   
## iter 10 value 20043.461672  
## iter 20 value 20033.905164  
## iter 20 value 20033.905120  
## final value 20033.905120   
## converged  
## # weights: 25  
## initial value 21697.136689   
## iter 10 value 20044.534023  
## iter 20 value 20033.917527  
## final value 20033.805061   
## converged  
## # weights: 41  
## initial value 23232.887089   
## iter 10 value 20054.342906  
## iter 20 value 20034.030616  
## final value 20033.803964   
## converged  
## # weights: 9  
## initial value 22527.265297   
## final value 20042.376500   
## converged  
## # weights: 25  
## initial value 22057.283236   
## final value 20042.376500   
## converged  
## # weights: 41  
## initial value 23329.908562   
## final value 20042.376500   
## converged  
## # weights: 9  
## initial value 23388.758196   
## iter 10 value 20048.487995  
## final value 20047.886760   
## converged  
## # weights: 25  
## initial value 23462.232862   
## iter 10 value 20050.151713  
## iter 20 value 20046.352966  
## final value 20046.352451   
## converged  
## # weights: 41  
## initial value 23822.577391   
## iter 10 value 20048.410821  
## iter 20 value 20045.693320  
## final value 20045.692978   
## converged  
## # weights: 9  
## initial value 21787.535911   
## iter 10 value 20049.891615  
## iter 20 value 20042.463143  
## iter 20 value 20042.463109  
## final value 20042.463109   
## converged  
## # weights: 25  
## initial value 22175.088452   
## iter 10 value 20057.076559  
## iter 20 value 20042.545980  
## final value 20042.388654   
## converged  
## # weights: 41  
## initial value 22517.687125   
## iter 10 value 20063.075936  
## iter 20 value 20042.615148  
## final value 20042.387097   
## converged  
## # weights: 9  
## initial value 22609.439422   
## final value 20038.766500   
## converged  
## # weights: 25  
## initial value 23550.715940   
## final value 20038.766500   
## converged  
## # weights: 41  
## initial value 22404.207193   
## final value 20038.766500   
## converged  
## # weights: 9  
## initial value 23393.561777   
## iter 10 value 20046.580392  
## final value 20044.276604   
## converged  
## # weights: 25  
## initial value 24095.146730   
## iter 10 value 20045.003588  
## iter 20 value 20042.743329  
## final value 20042.742336   
## converged  
## # weights: 41  
## initial value 21176.743124   
## iter 10 value 20044.482622  
## final value 20042.083008   
## converged  
## # weights: 9  
## initial value 23430.554315   
## iter 10 value 20049.370902  
## iter 20 value 20038.888760  
## iter 20 value 20038.888712  
## final value 20038.888712   
## converged  
## # weights: 25  
## initial value 22193.408716   
## iter 10 value 20053.637999  
## iter 20 value 20038.937957  
## final value 20038.778682   
## converged  
## # weights: 41  
## initial value 22753.685909   
## iter 10 value 20058.469739  
## iter 20 value 20038.993663  
## final value 20038.782101   
## converged  
## # weights: 9  
## initial value 22994.425480   
## final value 20053.560100   
## converged  
## # weights: 25  
## initial value 23372.895142   
## final value 20053.560100   
## converged  
## # weights: 41  
## initial value 24075.384234   
## final value 20053.560100   
## converged  
## # weights: 9  
## initial value 22101.942159   
## iter 10 value 20059.840530  
## final value 20059.070904   
## converged  
## # weights: 25  
## initial value 23315.387384   
## iter 10 value 20058.837504  
## iter 20 value 20057.536614  
## iter 20 value 20057.536438  
## iter 20 value 20057.536425  
## final value 20057.536425   
## converged  
## # weights: 41  
## initial value 21397.707119   
## iter 10 value 20061.942582  
## iter 20 value 20056.877113  
## final value 20056.876821   
## converged  
## # weights: 9  
## initial value 21965.811505   
## iter 10 value 20062.968828  
## iter 20 value 20053.668575  
## iter 20 value 20053.668532  
## final value 20053.668532   
## converged  
## # weights: 25  
## initial value 22154.034463   
## iter 10 value 20067.718629  
## iter 20 value 20053.723337  
## final value 20053.575211   
## converged  
## # weights: 41  
## initial value 21992.657607   
## iter 10 value 20069.348764  
## iter 20 value 20053.742131  
## iter 30 value 20053.569648  
## iter 30 value 20053.569647  
## iter 30 value 20053.569647  
## final value 20053.569647   
## converged  
## # weights: 9  
## initial value 22775.446696   
## final value 20062.067600   
## converged  
## # weights: 25  
## initial value 23528.035041   
## final value 20062.067600   
## converged  
## # weights: 41  
## initial value 22271.830199   
## final value 20062.067600   
## converged  
## # weights: 9  
## initial value 22095.021588   
## iter 10 value 20067.662766  
## final value 20067.579271   
## converged  
## # weights: 25  
## initial value 22967.919584   
## iter 10 value 20067.200468  
## final value 20066.044494   
## converged  
## # weights: 41  
## initial value 23080.377081   
## iter 10 value 20067.161133  
## final value 20065.384830   
## converged  
## # weights: 9  
## initial value 23161.048753   
## iter 10 value 20073.177766  
## iter 20 value 20062.195691  
## iter 20 value 20062.195640  
## final value 20062.195640   
## converged  
## # weights: 25  
## initial value 22388.900674   
## iter 10 value 20074.854499  
## iter 20 value 20062.215023  
## final value 20062.083776   
## converged  
## # weights: 41  
## initial value 22647.041530   
## iter 10 value 20083.163486  
## iter 20 value 20062.310819  
## final value 20062.078122   
## converged  
## # weights: 9  
## initial value 22307.342164   
## final value 20003.262500   
## converged  
## # weights: 25  
## initial value 23466.570523   
## final value 20003.262500   
## converged  
## # weights: 41  
## initial value 21248.607500   
## final value 20003.262500   
## converged  
## # weights: 9  
## initial value 22261.619268   
## iter 10 value 20013.512870  
## final value 20008.771528   
## converged  
## # weights: 25  
## initial value 22742.298670   
## iter 10 value 20007.662878  
## final value 20007.237630   
## converged  
## # weights: 41  
## initial value 23787.415012   
## iter 10 value 20017.008342  
## iter 20 value 20006.582460  
## final value 20006.578220   
## converged  
## # weights: 9  
## initial value 22985.607664   
## iter 10 value 20012.861173  
## iter 20 value 20003.373165  
## iter 20 value 20003.373121  
## final value 20003.373121   
## converged  
## # weights: 25  
## initial value 22313.085149   
## iter 10 value 20018.770288  
## iter 20 value 20003.441293  
## final value 20003.275856   
## converged  
## # weights: 41  
## initial value 24381.946674   
## iter 10 value 20012.059908  
## iter 20 value 20003.363927  
## final value 20003.276738   
## converged  
## # weights: 9  
## initial value 23818.433804   
## final value 20041.267700   
## converged  
## # weights: 25  
## initial value 22944.468737   
## final value 20041.267700   
## converged  
## # weights: 41  
## initial value 22647.363227   
## final value 20041.267700   
## converged  
## # weights: 9  
## initial value 22996.977794   
## iter 10 value 20050.016965  
## final value 20046.777896   
## converged  
## # weights: 25  
## initial value 23823.314200   
## iter 10 value 20046.382133  
## final value 20045.243653   
## converged  
## # weights: 41  
## initial value 22380.420490   
## iter 10 value 20057.176755  
## iter 20 value 20044.585583  
## final value 20044.584116   
## converged  
## # weights: 9  
## initial value 22296.950334   
## iter 10 value 20050.660631  
## iter 20 value 20041.375993  
## iter 20 value 20041.375950  
## final value 20041.375950   
## converged  
## # weights: 25  
## initial value 23125.208955   
## iter 10 value 20055.848215  
## iter 20 value 20041.435802  
## final value 20041.287225   
## converged  
## # weights: 41  
## initial value 22718.878709   
## iter 10 value 20062.356506  
## iter 20 value 20041.510837  
## final value 20041.276994   
## converged  
## # weights: 9  
## initial value 23035.060612   
## final value 20047.409200   
## converged  
## # weights: 25  
## initial value 22817.553071   
## final value 20047.409200   
## converged  
## # weights: 41  
## initial value 21533.447709   
## final value 20047.409200   
## converged  
## # weights: 9  
## initial value 22184.232709   
## iter 10 value 20057.898800  
## iter 20 value 20052.919716  
## iter 20 value 20052.919710  
## final value 20052.919710   
## converged  
## # weights: 25  
## initial value 22605.487309   
## iter 10 value 20053.267970  
## final value 20051.385306   
## converged  
## # weights: 41  
## initial value 22484.032317   
## iter 10 value 20056.029096  
## iter 20 value 20050.725969  
## iter 20 value 20050.725850  
## iter 20 value 20050.725840  
## final value 20050.725840   
## converged  
## # weights: 9  
## initial value 22963.754236   
## iter 10 value 20057.743559  
## iter 20 value 20047.528347  
## iter 20 value 20047.528299  
## final value 20047.528299   
## converged  
## # weights: 25  
## initial value 22971.048102   
## iter 10 value 20063.168580  
## iter 20 value 20047.590893  
## final value 20047.421482   
## converged  
## # weights: 41  
## initial value 22550.981399   
## iter 10 value 20067.082856  
## iter 20 value 20047.636022  
## final value 20047.419050   
## converged  
## # weights: 9  
## initial value 23280.124533   
## final value 20011.474000   
## converged  
## # weights: 25  
## initial value 22335.306775   
## final value 20011.474000   
## converged  
## # weights: 41  
## initial value 24092.413964   
## final value 20011.474000   
## converged  
## # weights: 9  
## initial value 23748.148510   
## iter 10 value 20017.405584  
## final value 20016.983242   
## converged  
## # weights: 25  
## initial value 21749.127262   
## iter 10 value 20016.347177  
## final value 20015.449265   
## converged  
## # weights: 41  
## initial value 23910.357744   
## iter 10 value 20028.954628  
## iter 20 value 20014.791998  
## final value 20014.789885   
## converged  
## # weights: 9  
## initial value 22563.005098   
## iter 10 value 20023.083907  
## iter 20 value 20011.607853  
## iter 20 value 20011.607800  
## final value 20011.607800   
## converged  
## # weights: 25  
## initial value 22828.733422   
## iter 10 value 20025.996939  
## iter 20 value 20011.641438  
## final value 20011.487544   
## converged  
## # weights: 41  
## initial value 23162.405524   
## iter 10 value 20031.374162  
## iter 20 value 20011.703433  
## final value 20011.483928   
## converged  
## # weights: 9  
## initial value 22301.020771   
## final value 20017.201700   
## converged  
## # weights: 25  
## initial value 21891.636151   
## final value 20017.201700   
## converged  
## # weights: 41  
## initial value 22450.844664   
## final value 20017.201700   
## converged  
## # weights: 9  
## initial value 23803.650481   
## iter 10 value 20023.652504  
## final value 20022.711052   
## converged  
## # weights: 25  
## initial value 23420.160563   
## iter 10 value 20022.605849  
## final value 20021.177005   
## converged  
## # weights: 41  
## initial value 23686.228456   
## iter 10 value 20021.640291  
## final value 20020.517628   
## converged  
## # weights: 9  
## initial value 22325.740141   
## iter 10 value 20027.608634  
## iter 20 value 20017.321684  
## iter 20 value 20017.321636  
## final value 20017.321636   
## converged  
## # weights: 25  
## initial value 23866.133991   
## iter 10 value 20027.324339  
## iter 20 value 20017.318406  
## final value 20017.217274   
## converged  
## # weights: 41  
## initial value 22797.943240   
## iter 10 value 20035.412636  
## iter 20 value 20017.411658  
## final value 20017.211090   
## converged  
## # weights: 9  
## initial value 23206.407624   
## final value 20059.089700   
## converged  
## # weights: 25  
## initial value 22364.359888   
## final value 20059.089700   
## converged  
## # weights: 41  
## initial value 21425.413333   
## final value 20059.089700   
## converged  
## # weights: 9  
## initial value 23746.750986   
## iter 10 value 20065.096531  
## final value 20064.600843   
## converged  
## # weights: 25  
## initial value 21771.685383   
## iter 10 value 20065.531607  
## final value 20063.066192   
## converged  
## # weights: 41  
## initial value 22524.069362   
## iter 10 value 20063.241150  
## iter 20 value 20062.406618  
## iter 20 value 20062.406552  
## iter 20 value 20062.406548  
## final value 20062.406548   
## converged  
## # weights: 9  
## initial value 22628.837067   
## iter 10 value 20069.232954  
## iter 20 value 20059.206644  
## iter 20 value 20059.206597  
## final value 20059.206597   
## converged  
## # weights: 25  
## initial value 22251.321952   
## iter 10 value 20073.480564  
## iter 20 value 20059.255615  
## final value 20059.101291   
## converged  
## # weights: 41  
## initial value 23979.801241   
## iter 10 value 20072.459277  
## iter 20 value 20059.243841  
## final value 20059.106484   
## converged  
## # weights: 9  
## initial value 22060.645697   
## final value 20051.880500   
## converged  
## # weights: 25  
## initial value 21507.377075   
## final value 20051.880500   
## converged  
## # weights: 41  
## initial value 22346.313836   
## final value 20051.880500   
## converged  
## # weights: 9  
## initial value 23726.212635   
## iter 10 value 20059.411217  
## final value 20057.391219   
## converged  
## # weights: 25  
## initial value 22188.970128   
## iter 10 value 20056.278389  
## final value 20055.856765   
## converged  
## # weights: 41  
## initial value 20753.017702   
## iter 10 value 20062.248372  
## final value 20055.197226   
## converged  
## # weights: 9  
## initial value 22996.847096   
## iter 10 value 20062.330218  
## iter 20 value 20052.000977  
## iter 20 value 20052.000929  
## final value 20052.000929   
## converged  
## # weights: 25  
## initial value 23394.173414   
## iter 10 value 20065.513688  
## iter 20 value 20052.037680  
## final value 20051.892742   
## converged  
## # weights: 41  
## initial value 23126.731688   
## iter 10 value 20070.607839  
## iter 20 value 20052.096412  
## final value 20051.891137   
## converged  
## # weights: 9  
## initial value 22615.855568   
## final value 19992.778000   
## converged  
## # weights: 25  
## initial value 22365.878851   
## final value 19992.778000   
## converged  
## # weights: 41  
## initial value 23662.992784   
## final value 19992.778000   
## converged  
## # weights: 9  
## initial value 23475.528288   
## iter 10 value 19998.609113  
## final value 19998.286830   
## converged  
## # weights: 25  
## initial value 22276.764679   
## iter 10 value 19999.387041  
## iter 20 value 19996.753516  
## final value 19996.752993   
## converged  
## # weights: 41  
## initial value 21767.913439   
## iter 10 value 20000.018517  
## iter 20 value 19996.095035  
## final value 19996.093710   
## converged  
## # weights: 9  
## initial value 22216.042788   
## iter 10 value 20002.264233  
## iter 20 value 19992.887369  
## iter 20 value 19992.887325  
## final value 19992.887325   
## converged  
## # weights: 25  
## initial value 23482.620882   
## iter 10 value 20005.061411  
## iter 20 value 19992.919618  
## final value 19992.791210   
## converged  
## # weights: 41  
## initial value 23703.947354   
## iter 10 value 20007.686369  
## iter 20 value 19992.949882  
## final value 19992.788852   
## converged  
## # weights: 9  
## initial value 22520.890895   
## final value 19941.288500   
## converged  
## # weights: 25  
## initial value 21467.985668   
## final value 19941.288500   
## converged  
## # weights: 41  
## initial value 23034.452174   
## final value 19941.288500   
## converged  
## # weights: 9  
## initial value 21650.600340   
## iter 10 value 19947.049459  
## final value 19946.796416   
## converged  
## # weights: 25  
## initial value 22350.794303   
## iter 10 value 19947.011910  
## final value 19945.262923   
## converged  
## # weights: 41  
## initial value 22946.632860   
## iter 10 value 19950.827912  
## iter 20 value 19944.609383  
## final value 19944.603733   
## converged  
## # weights: 9  
## initial value 23697.321286   
## iter 10 value 19949.014532  
## iter 20 value 19941.377575  
## iter 20 value 19941.377539  
## final value 19941.377539   
## converged  
## # weights: 25  
## initial value 23417.266108   
## iter 10 value 19956.694269  
## iter 20 value 19941.466116  
## final value 19941.304026   
## converged  
## # weights: 41  
## initial value 21954.432187   
## iter 10 value 19959.864267  
## iter 20 value 19941.502664  
## final value 19941.299010   
## converged  
## # weights: 9  
## initial value 22452.849034   
## final value 20010.897200   
## converged  
## # weights: 25  
## initial value 23071.033137   
## final value 20010.897200   
## converged  
## # weights: 41  
## initial value 21980.279283   
## final value 20010.897200   
## converged  
## # weights: 9  
## initial value 23373.673296   
## iter 10 value 20018.105771  
## final value 20016.406417   
## converged  
## # weights: 25  
## initial value 22395.016421   
## iter 10 value 20026.919324  
## iter 20 value 20014.877069  
## final value 20014.872398   
## converged  
## # weights: 41  
## initial value 22344.205720   
## iter 10 value 20015.289144  
## iter 20 value 20014.221423  
## final value 20014.213045   
## converged  
## # weights: 9  
## initial value 22325.502727   
## iter 10 value 20020.583529  
## iter 20 value 20011.008876  
## iter 20 value 20011.008831  
## final value 20011.008831   
## converged  
## # weights: 25  
## initial value 22786.246614   
## iter 10 value 20026.709570  
## iter 20 value 20011.079504  
## final value 20010.914957   
## converged  
## # weights: 41  
## initial value 21892.848109   
## iter 10 value 20026.548788  
## iter 20 value 20011.077651  
## final value 20010.907560   
## converged  
## # weights: 9  
## initial value 22748.679321   
## final value 20048.501200   
## converged  
## # weights: 25  
## initial value 22015.757855   
## final value 20048.501200   
## converged  
## # weights: 41  
## initial value 23328.780823   
## final value 20048.501200   
## converged  
## # weights: 9  
## initial value 22942.823585   
## iter 10 value 20055.663855  
## final value 20054.011713   
## converged  
## # weights: 25  
## initial value 22926.989764   
## iter 10 value 20060.522864  
## iter 20 value 20052.492862  
## final value 20052.477301   
## converged  
## # weights: 41  
## initial value 22711.729150   
## iter 10 value 20052.608856  
## final value 20051.817760   
## converged  
## # weights: 9  
## initial value 22451.888065   
## iter 10 value 20059.603120  
## iter 20 value 20048.629196  
## iter 20 value 20048.629145  
## final value 20048.629145   
## converged  
## # weights: 25  
## initial value 22481.895188   
## iter 10 value 20062.899616  
## iter 20 value 20048.667202  
## final value 20048.514175   
## converged  
## # weights: 41  
## initial value 22260.724344   
## iter 10 value 20066.165926  
## iter 20 value 20048.704860  
## final value 20048.510736   
## converged  
## # weights: 9  
## initial value 24006.533975   
## final value 20061.374500   
## converged  
## # weights: 25  
## initial value 22797.208715   
## final value 20061.374500   
## converged  
## # weights: 41  
## initial value 22832.427800   
## final value 20061.374500   
## converged  
## # weights: 9  
## initial value 23630.663692   
## iter 10 value 20067.690547  
## final value 20066.886003   
## converged  
## # weights: 25  
## initial value 22133.516626   
## iter 10 value 20066.519061  
## final value 20065.351308   
## converged  
## # weights: 41  
## initial value 23173.409495   
## iter 10 value 20067.211337  
## final value 20064.691752   
## converged  
## # weights: 9  
## initial value 22242.872388   
## iter 10 value 20071.544364  
## iter 20 value 20061.491751  
## iter 20 value 20061.491704  
## final value 20061.491704   
## converged  
## # weights: 25  
## initial value 22318.174062   
## iter 10 value 20077.095289  
## iter 20 value 20061.555748  
## final value 20061.389865   
## converged  
## # weights: 41  
## initial value 22279.870711   
## iter 10 value 20078.715262  
## iter 20 value 20061.574425  
## final value 20061.388040   
## converged  
## # weights: 9  
## initial value 23749.466505   
## final value 20040.797200   
## converged  
## # weights: 25  
## initial value 22420.855545   
## final value 20040.797200   
## converged  
## # weights: 41  
## initial value 23536.794199   
## final value 20040.797200   
## converged  
## # weights: 9  
## initial value 22028.513781   
## iter 10 value 20047.318602  
## final value 20046.307387   
## converged  
## # weights: 25  
## initial value 23453.774027   
## iter 10 value 20053.312118  
## iter 20 value 20044.774805  
## final value 20044.773134   
## converged  
## # weights: 41  
## initial value 21752.846879   
## iter 10 value 20046.566577  
## final value 20044.113646   
## converged  
## # weights: 9  
## initial value 22453.317243   
## iter 10 value 20050.989788  
## iter 20 value 20040.914713  
## iter 20 value 20040.914666  
## final value 20040.914666   
## converged  
## # weights: 25  
## initial value 23476.933520   
## iter 10 value 20053.169768  
## iter 20 value 20040.939846  
## final value 20040.810863   
## converged  
## # weights: 41  
## initial value 23219.394384   
## iter 10 value 20058.520230  
## iter 20 value 20041.001533  
## final value 20040.811234   
## converged  
## # weights: 9  
## initial value 22530.852369   
## final value 20052.014500   
## converged  
## # weights: 25  
## initial value 23258.111986   
## final value 20052.014500   
## converged  
## # weights: 41  
## initial value 21529.210613   
## final value 20052.014500   
## converged  
## # weights: 9  
## initial value 23646.377348   
## iter 10 value 20058.858772  
## final value 20057.525249   
## converged  
## # weights: 25  
## initial value 23315.679031   
## iter 10 value 20064.078723  
## iter 20 value 20055.992370  
## final value 20055.990774   
## converged  
## # weights: 41  
## initial value 24316.517705   
## iter 10 value 20066.774384  
## iter 20 value 20055.331856  
## final value 20055.331227   
## converged  
## # weights: 9  
## initial value 22327.175138   
## iter 10 value 20061.622119  
## iter 20 value 20052.125268  
## iter 20 value 20052.125224  
## final value 20052.125224   
## converged  
## # weights: 25  
## initial value 23398.572518   
## iter 10 value 20064.952391  
## iter 20 value 20052.163664  
## final value 20052.030513   
## converged  
## # weights: 41  
## initial value 22788.495934   
## iter 10 value 20071.999968  
## iter 20 value 20052.244917  
## final value 20052.023840   
## converged  
## # weights: 9  
## initial value 22217.433870   
## final value 19987.480100   
## converged  
## # weights: 25  
## initial value 23192.418970   
## final value 19987.480100   
## converged  
## # weights: 41  
## initial value 22010.192319   
## final value 19987.480100   
## converged  
## # weights: 9  
## initial value 22983.996776   
## iter 10 value 19994.452083  
## final value 19992.988811   
## converged  
## # weights: 25  
## initial value 21886.434078   
## iter 10 value 19992.218737  
## final value 19991.455020   
## converged  
## # weights: 41  
## initial value 22040.650679   
## iter 10 value 20002.161813  
## iter 20 value 19990.797235  
## final value 19990.795719   
## converged  
## # weights: 9  
## initial value 22409.627402   
## iter 10 value 19999.184250  
## iter 20 value 19987.615040  
## iter 20 value 19987.614986  
## final value 19987.614986   
## converged  
## # weights: 25  
## initial value 22189.582883   
## iter 10 value 19999.564637  
## iter 20 value 19987.619425  
## final value 19987.493463   
## converged  
## # weights: 41  
## initial value 22219.040662   
## iter 10 value 20005.307740  
## iter 20 value 19987.685639  
## final value 19987.490882   
## converged  
## # weights: 9  
## initial value 22935.274956   
## final value 19970.625700   
## converged  
## # weights: 25  
## initial value 23160.709614   
## final value 19970.625700   
## converged  
## # weights: 41  
## initial value 22634.489013   
## final value 19970.625700   
## converged  
## # weights: 9  
## initial value 23320.647874   
## iter 10 value 19978.800649  
## final value 19976.134078   
## converged  
## # weights: 25  
## initial value 22061.054412   
## iter 10 value 19975.219896  
## final value 19974.600500   
## converged  
## # weights: 41  
## initial value 22398.484732   
## iter 10 value 19974.719582  
## final value 19973.941170   
## converged  
## # weights: 9  
## initial value 23709.063735   
## iter 10 value 19979.846226  
## iter 20 value 19970.732005  
## iter 20 value 19970.731963  
## final value 19970.731963   
## converged  
## # weights: 25  
## initial value 22835.459113   
## iter 10 value 19984.852500  
## iter 20 value 19970.789724  
## final value 19970.643204   
## converged  
## # weights: 41  
## initial value 22818.367195   
## iter 10 value 19986.624559  
## iter 20 value 19970.810154  
## final value 19970.638592   
## converged  
## # weights: 9  
## initial value 22315.201568   
## final value 19971.202000   
## converged  
## # weights: 25  
## initial value 22711.682183   
## final value 19971.202000   
## converged  
## # weights: 41  
## initial value 22064.234773   
## final value 19971.202000   
## converged  
## # weights: 9  
## initial value 22139.088161   
## iter 10 value 19979.410667  
## final value 19976.710415   
## converged  
## # weights: 25  
## initial value 23943.099561   
## iter 10 value 19976.789411  
## final value 19975.176752   
## converged  
## # weights: 41  
## initial value 21727.190590   
## iter 10 value 19975.254451  
## final value 19974.517487   
## converged  
## # weights: 9  
## initial value 22985.513787   
## iter 10 value 19981.332850  
## iter 20 value 19971.318801  
## iter 20 value 19971.318754  
## final value 19971.318754   
## converged  
## # weights: 25  
## initial value 23106.221566   
## iter 10 value 19987.199880  
## iter 20 value 19971.386443  
## final value 19971.224426   
## converged  
## # weights: 41  
## initial value 22251.464479   
## iter 10 value 19989.556532  
## iter 20 value 19971.413613  
## final value 19971.211873   
## converged  
## # weights: 9  
## initial value 21928.496048   
## final value 20033.685200   
## converged  
## # weights: 25  
## initial value 23634.489628   
## final value 20033.685200   
## converged  
## # weights: 41  
## initial value 23845.064368   
## final value 20033.685200   
## converged  
## # weights: 9  
## initial value 23177.011822   
## iter 10 value 20039.499943  
## final value 20039.195108   
## converged  
## # weights: 25  
## initial value 23193.508659   
## iter 10 value 20038.404361  
## final value 20037.660939   
## converged  
## # weights: 41  
## initial value 22222.399944   
## iter 10 value 20038.162293  
## iter 20 value 20037.001741  
## final value 20037.001398   
## converged  
## # weights: 9  
## initial value 22192.450934   
## iter 10 value 20042.775315  
## iter 20 value 20033.790002  
## iter 20 value 20033.789960  
## final value 20033.789960   
## converged  
## # weights: 25  
## initial value 23233.843701   
## iter 10 value 20049.772952  
## iter 20 value 20033.870679  
## final value 20033.697777   
## converged  
## # weights: 41  
## initial value 23984.571335   
## iter 10 value 20048.295159  
## iter 20 value 20033.853641  
## final value 20033.700641   
## converged  
## # weights: 9  
## initial value 22504.938433   
## final value 20021.050000   
## converged  
## # weights: 25  
## initial value 23756.117624   
## final value 20021.050000   
## converged  
## # weights: 41  
## initial value 23815.635886   
## final value 20021.050000   
## converged  
## # weights: 9  
## initial value 22782.248552   
## iter 10 value 20027.515489  
## final value 20026.559496   
## converged  
## # weights: 25  
## initial value 21645.153262   
## iter 10 value 20025.596231  
## final value 20025.025431   
## converged  
## # weights: 41  
## initial value 22511.622533   
## iter 10 value 20037.208930  
## iter 20 value 20024.368109  
## final value 20024.366058   
## converged  
## # weights: 9  
## initial value 22177.844710   
## iter 10 value 20030.580435  
## iter 20 value 20021.159878  
## iter 20 value 20021.159834  
## final value 20021.159834   
## converged  
## # weights: 25  
## initial value 22161.327957   
## iter 10 value 20035.131940  
## iter 20 value 20021.212354  
## final value 20021.060697   
## converged  
## # weights: 41  
## initial value 22393.532855   
## iter 10 value 20039.533881  
## iter 20 value 20021.263105  
## final value 20021.060090   
## converged  
## # weights: 9  
## initial value 23936.660435   
## final value 20057.167600   
## converged  
## # weights: 25  
## initial value 22016.768058   
## final value 20057.167600   
## converged  
## # weights: 41  
## initial value 22131.838388   
## final value 20057.167600   
## converged  
## # weights: 9  
## initial value 23504.471236   
## iter 10 value 20063.008671  
## final value 20062.678669   
## converged  
## # weights: 25  
## initial value 22808.902557   
## iter 10 value 20061.543543  
## iter 20 value 20061.144213  
## iter 20 value 20061.144122  
## iter 20 value 20061.144095  
## final value 20061.144095   
## converged  
## # weights: 41  
## initial value 23454.984881   
## iter 10 value 20076.193769  
## iter 20 value 20060.485964  
## final value 20060.484474   
## converged  
## # weights: 9  
## initial value 22527.554440   
## iter 10 value 20066.903781  
## iter 20 value 20057.279851  
## iter 20 value 20057.279806  
## final value 20057.279806   
## converged  
## # weights: 25  
## initial value 21765.617288   
## iter 10 value 20067.894744  
## iter 20 value 20057.291276  
## final value 20057.181059   
## converged  
## # weights: 41  
## initial value 21757.735354   
## iter 10 value 20070.571628  
## iter 20 value 20057.322138  
## final value 20057.178075   
## converged  
## # weights: 9  
## initial value 21926.606243   
## final value 20053.560100   
## converged  
## # weights: 25  
## initial value 23749.903681   
## final value 20053.560100   
## converged  
## # weights: 41  
## initial value 23086.044198   
## final value 20053.560100   
## converged  
## # weights: 9  
## initial value 22065.474280   
## iter 10 value 20061.209680  
## final value 20059.070951   
## converged  
## # weights: 25  
## initial value 22120.577474   
## iter 10 value 20058.788114  
## final value 20057.536501   
## converged  
## # weights: 41  
## initial value 22780.965344   
## iter 10 value 20058.248585  
## iter 20 value 20056.877032  
## iter 20 value 20056.876896  
## iter 20 value 20056.876882  
## final value 20056.876882   
## converged  
## # weights: 9  
## initial value 23543.029212   
## iter 10 value 20063.953147  
## iter 20 value 20053.679924  
## iter 20 value 20053.679876  
## final value 20053.679876   
## converged  
## # weights: 25  
## initial value 22514.020367   
## iter 10 value 20071.159521  
## iter 20 value 20053.763008  
## final value 20053.576615   
## converged  
## # weights: 41  
## initial value 21470.870816   
## iter 10 value 20065.225525  
## iter 20 value 20053.694593  
## final value 20053.569962   
## converged  
## # weights: 9  
## initial value 22036.242441   
## final value 20030.907700   
## converged  
## # weights: 25  
## initial value 24103.916035   
## final value 20030.907700   
## converged  
## # weights: 41  
## initial value 23918.209653   
## final value 20030.907700   
## converged  
## # weights: 9  
## initial value 22998.789051   
## iter 10 value 20036.513984  
## final value 20036.417505   
## converged  
## # weights: 25  
## initial value 22355.319427   
## iter 10 value 20035.418789  
## final value 20034.883297   
## converged  
## # weights: 41  
## initial value 23303.054260   
## iter 10 value 20035.037489  
## final value 20034.223826   
## converged  
## # weights: 9  
## initial value 22194.661921   
## iter 10 value 20041.437310  
## iter 20 value 20031.029098  
## iter 20 value 20031.029050  
## final value 20031.029050   
## converged  
## # weights: 25  
## initial value 21903.556526   
## iter 10 value 20042.906902  
## iter 20 value 20031.046041  
## final value 20030.920165   
## converged  
## # weights: 41  
## initial value 22204.764570   
## iter 10 value 20045.832839  
## iter 20 value 20031.079775  
## final value 20030.919723   
## converged  
## # weights: 9  
## initial value 23574.356831   
## final value 20016.930100   
## converged  
## # weights: 25  
## initial value 23580.332762   
## final value 20016.930100   
## converged  
## # weights: 41  
## initial value 23123.179480   
## final value 20016.930100   
## converged  
## # weights: 9  
## initial value 21590.640294   
## iter 10 value 20022.962855  
## final value 20022.439456   
## converged  
## # weights: 25  
## initial value 22623.877942   
## iter 10 value 20021.825304  
## final value 20020.905387   
## converged  
## # weights: 41  
## initial value 22655.603780   
## iter 10 value 20021.417157  
## final value 20020.246083   
## converged  
## # weights: 9  
## initial value 21379.042824   
## iter 10 value 20023.464413  
## iter 20 value 20017.005435  
## iter 20 value 20017.005405  
## final value 20017.005405   
## converged  
## # weights: 25  
## initial value 23938.525884   
## iter 10 value 20027.377906  
## iter 20 value 20017.050555  
## final value 20016.946494   
## converged  
## # weights: 41  
## initial value 21707.669737   
## iter 10 value 20030.249039  
## iter 20 value 20017.083657  
## final value 20016.940480   
## converged  
## # weights: 9  
## initial value 22941.144604   
## final value 20004.034000   
## converged  
## # weights: 25  
## initial value 23259.509703   
## final value 20004.034000   
## converged  
## # weights: 41  
## initial value 23602.395446   
## final value 20004.034000   
## converged  
## # weights: 9  
## initial value 21520.138710   
## iter 10 value 20009.885357  
## final value 20009.543070   
## converged  
## # weights: 25  
## initial value 23180.559012   
## iter 10 value 20009.552071  
## final value 20008.009204   
## converged  
## # weights: 41  
## initial value 22757.417531   
## iter 10 value 20023.959821  
## iter 20 value 20007.350433  
## final value 20007.349879   
## converged  
## # weights: 9  
## initial value 22731.302305   
## iter 10 value 20015.393424  
## iter 20 value 20004.164965  
## iter 20 value 20004.164913  
## final value 20004.164913   
## converged  
## # weights: 25  
## initial value 22809.892048   
## iter 10 value 20018.823334  
## iter 20 value 20004.204509  
## final value 20004.050715   
## converged  
## # weights: 41  
## initial value 22262.144164   
## iter 10 value 20023.088380  
## iter 20 value 20004.253682  
## final value 20004.045178   
## converged  
## # weights: 9  
## initial value 22296.183798   
## final value 20043.810100   
## converged  
## # weights: 25  
## initial value 23111.940790   
## final value 20043.810100   
## converged  
## # weights: 41  
## initial value 22541.770915   
## final value 20043.810100   
## converged  
## # weights: 9  
## initial value 23766.299123   
## iter 10 value 20050.019493  
## final value 20049.320384   
## converged  
## # weights: 25  
## initial value 21711.328565   
## iter 10 value 20048.486059  
## final value 20047.786057   
## converged  
## # weights: 41  
## initial value 22555.499424   
## iter 10 value 20048.143058  
## final value 20047.126556   
## converged  
## # weights: 9  
## initial value 21785.282268   
## iter 10 value 20052.945590  
## iter 20 value 20043.915425  
## iter 20 value 20043.915383  
## final value 20043.915383   
## converged  
## # weights: 25  
## initial value 21946.979656   
## iter 10 value 20056.288527  
## iter 20 value 20043.953966  
## final value 20043.823926   
## converged  
## # weights: 41  
## initial value 20720.568280   
## iter 10 value 20047.825956  
## iter 20 value 20043.856400  
## final value 20043.818697   
## converged  
## # weights: 9  
## initial value 22030.133330   
## final value 19959.334000   
## converged  
## # weights: 25  
## initial value 22473.118243   
## final value 19959.334000   
## converged  
## # weights: 41  
## initial value 24016.471923   
## final value 19959.334000   
## converged  
## # weights: 9  
## initial value 23365.288375   
## iter 10 value 19965.382131  
## final value 19964.842207   
## converged  
## # weights: 25  
## initial value 24154.771035   
## iter 10 value 19963.985334  
## final value 19963.308599   
## converged  
## # weights: 41  
## initial value 22982.287141   
## iter 10 value 19963.912493  
## final value 19962.649386   
## converged  
## # weights: 9  
## initial value 22143.314411   
## iter 10 value 19969.292861  
## iter 20 value 19959.448818  
## iter 20 value 19959.448772  
## final value 19959.448772   
## converged  
## # weights: 25  
## initial value 22563.070527   
## iter 10 value 19973.902166  
## iter 20 value 19959.501960  
## final value 19959.348270   
## converged  
## # weights: 41  
## initial value 24271.950506   
## iter 10 value 19969.337983  
## iter 20 value 19959.449338  
## final value 19959.349721   
## converged  
## # weights: 9  
## initial value 23104.506359   
## final value 20045.864500   
## converged  
## # weights: 25  
## initial value 23094.242069   
## final value 20045.864500   
## converged  
## # weights: 41  
## initial value 23059.027655   
## final value 20045.864500   
## converged  
## # weights: 9  
## initial value 22602.588882   
## iter 10 value 20053.684878  
## final value 20051.374878   
## converged  
## # weights: 25  
## initial value 22920.024869   
## iter 10 value 20050.890550  
## final value 20049.840487   
## converged  
## # weights: 41  
## initial value 23299.818045   
## iter 10 value 20058.398807  
## iter 20 value 20049.182668  
## final value 20049.180955   
## converged  
## # weights: 9  
## initial value 22349.189351   
## iter 10 value 20057.149924  
## iter 20 value 20045.994612  
## iter 20 value 20045.994560  
## final value 20045.994560   
## converged  
## # weights: 25  
## initial value 23030.362135   
## iter 10 value 20059.690583  
## iter 20 value 20046.023904  
## final value 20045.876215   
## converged  
## # weights: 41  
## initial value 23630.421809   
## iter 10 value 20064.129826  
## iter 20 value 20046.075085  
## final value 20045.876340   
## converged  
## # weights: 9  
## initial value 22307.311640   
## final value 20012.902000   
## converged  
## # weights: 25  
## initial value 22043.688787   
## final value 20012.902000   
## converged  
## # weights: 41  
## initial value 22568.253378   
## final value 20012.902000   
## converged  
## # weights: 9  
## initial value 22140.708908   
## iter 10 value 20020.144887  
## final value 20018.411278   
## converged  
## # weights: 25  
## initial value 22530.659284   
## iter 10 value 20017.552200  
## final value 20016.877309   
## converged  
## # weights: 41  
## initial value 22833.013421   
## iter 10 value 20032.724320  
## iter 20 value 20016.261485  
## final value 20016.217917   
## converged  
## # weights: 9  
## initial value 23104.760397   
## iter 10 value 20023.938545  
## iter 20 value 20013.029243  
## iter 20 value 20013.029192  
## final value 20013.029192   
## converged  
## # weights: 25  
## initial value 24087.192522   
## iter 10 value 20021.637571  
## iter 20 value 20013.002714  
## final value 20012.921229   
## converged  
## # weights: 41  
## initial value 22310.599326   
## iter 10 value 20029.415385  
## iter 20 value 20013.092386  
## final value 20012.912252   
## converged  
## # weights: 9  
## initial value 22409.494938   
## final value 19915.790500   
## converged  
## # weights: 25  
## initial value 23316.294777   
## final value 19915.790500   
## converged  
## # weights: 41  
## initial value 23559.535407   
## final value 19915.790500   
## converged  
## # weights: 9  
## initial value 22195.510358   
## iter 10 value 19922.581932  
## final value 19921.297948   
## converged  
## # weights: 25  
## initial value 22510.065557   
## iter 10 value 19927.810949  
## iter 20 value 19919.764864  
## final value 19919.764584   
## converged  
## # weights: 41  
## initial value 22322.221984   
## iter 10 value 19932.954159  
## iter 20 value 19919.106688  
## final value 19919.105417   
## converged  
## # weights: 9  
## initial value 22043.870112   
## iter 10 value 19925.801495  
## iter 20 value 19915.905919  
## iter 20 value 19915.905873  
## final value 19915.905873   
## converged  
## # weights: 25  
## initial value 21980.986066   
## iter 10 value 19929.469612  
## iter 20 value 19915.948209  
## final value 19915.803745   
## converged  
## # weights: 41  
## initial value 22080.132601   
## iter 10 value 19932.909616  
## iter 20 value 19915.987870  
## final value 19915.801138   
## converged  
## # weights: 9  
## initial value 22123.787897   
## final value 20004.647600   
## converged  
## # weights: 25  
## initial value 23176.718087   
## final value 20004.647600   
## converged  
## # weights: 41  
## initial value 23475.372353   
## final value 20004.647600   
## converged  
## # weights: 9  
## initial value 22048.879887   
## iter 10 value 20027.744695  
## iter 20 value 20010.168277  
## final value 20010.156679   
## converged  
## # weights: 25  
## initial value 23146.264633   
## iter 10 value 20010.759421  
## iter 20 value 20008.623062  
## final value 20008.622755   
## converged  
## # weights: 41  
## initial value 23353.726380   
## iter 10 value 20019.917270  
## iter 20 value 20007.963539  
## iter 20 value 20007.963442  
## iter 20 value 20007.963414  
## final value 20007.963414   
## converged  
## # weights: 9  
## initial value 22763.640743   
## iter 10 value 20015.767566  
## iter 20 value 20004.775804  
## iter 20 value 20004.775753  
## final value 20004.775753   
## converged  
## # weights: 25  
## initial value 23293.685995   
## iter 10 value 20019.209961  
## iter 20 value 20004.815493  
## final value 20004.665007   
## converged  
## # weights: 41  
## initial value 23046.335821   
## iter 10 value 20025.650477  
## iter 20 value 20004.889747  
## final value 20004.658076   
## converged  
## # weights: 9  
## initial value 21907.577101   
## final value 19992.105200   
## converged  
## # weights: 25  
## initial value 23279.555148   
## final value 19992.105200   
## converged  
## # weights: 41  
## initial value 23067.760095   
## final value 19992.105200   
## converged  
## # weights: 9  
## initial value 22060.943361   
## iter 10 value 19997.953214  
## final value 19997.613956   
## converged  
## # weights: 25  
## initial value 23266.942465   
## iter 10 value 19999.812510  
## iter 20 value 19996.081056  
## final value 19996.080153   
## converged  
## # weights: 41  
## initial value 22414.415928   
## iter 10 value 19996.371155  
## iter 20 value 19995.422330  
## final value 19995.420861   
## converged  
## # weights: 9  
## initial value 23380.833081   
## iter 10 value 20002.991930  
## iter 20 value 19992.230715  
## iter 20 value 19992.230665  
## final value 19992.230665   
## converged  
## # weights: 25  
## initial value 22495.445317   
## iter 10 value 20006.946981  
## iter 20 value 19992.276314  
## final value 19992.119178   
## converged  
## # weights: 41  
## initial value 21435.295452   
## iter 10 value 20004.970988  
## iter 20 value 19992.253532  
## final value 19992.114729   
## converged  
## # weights: 9  
## initial value 23118.571708   
## final value 20042.649200   
## converged  
## # weights: 25  
## initial value 23250.395203   
## final value 20042.649200   
## converged  
## # weights: 41  
## initial value 22810.531827   
## final value 20042.649200   
## converged  
## # weights: 9  
## initial value 23576.448856   
## iter 10 value 20048.553212  
## final value 20048.159462   
## converged  
## # weights: 25  
## initial value 22099.335149   
## iter 10 value 20047.542889  
## final value 20046.625170   
## converged  
## # weights: 41  
## initial value 22899.204679   
## iter 10 value 20064.253485  
## iter 20 value 20045.972507  
## final value 20045.965660   
## converged  
## # weights: 9  
## initial value 22832.508848   
## iter 10 value 20053.431643  
## iter 20 value 20042.773513  
## iter 20 value 20042.773463  
## final value 20042.773463   
## converged  
## # weights: 25  
## initial value 23119.213157   
## iter 10 value 20058.404612  
## iter 20 value 20042.830848  
## final value 20042.662684   
## converged  
## # weights: 41  
## initial value 21739.715228   
## iter 10 value 20057.126364  
## iter 20 value 20042.816110  
## final value 20042.658750   
## converged  
## # weights: 9  
## initial value 22721.019597   
## final value 19993.947700   
## converged  
## # weights: 25  
## initial value 22300.518296   
## final value 19993.947700   
## converged  
## # weights: 41  
## initial value 22892.329396   
## final value 19993.947700   
## converged  
## # weights: 9  
## initial value 22635.789673   
## iter 10 value 20086.984147  
## iter 20 value 19999.622088  
## final value 19999.456527   
## converged  
## # weights: 25  
## initial value 22879.709053   
## iter 10 value 19998.758546  
## final value 19997.922659   
## converged  
## # weights: 41  
## initial value 23992.635828   
## iter 10 value 20012.085673  
## iter 20 value 19997.265531  
## final value 19997.263339   
## converged  
## # weights: 9  
## initial value 22220.250547   
## iter 10 value 20003.227249  
## iter 20 value 19994.054686  
## iter 20 value 19994.054643  
## final value 19994.054643   
## converged  
## # weights: 25  
## initial value 23167.358857   
## iter 10 value 20005.937591  
## iter 20 value 19994.085934  
## final value 19993.964543   
## converged  
## # weights: 41  
## initial value 23302.803619   
## iter 10 value 20011.684580  
## iter 20 value 19994.152192  
## final value 19993.957909   
## converged  
## # weights: 9  
## initial value 23485.535945   
## final value 19988.865700   
## converged  
## # weights: 25  
## initial value 22682.161822   
## final value 19988.865700   
## converged  
## # weights: 41  
## initial value 21452.710484   
## final value 19988.865700   
## converged  
## # weights: 9  
## initial value 23601.371175   
## iter 10 value 19996.231526  
## final value 19994.374352   
## converged  
## # weights: 25  
## initial value 21955.121680   
## iter 10 value 19993.925638  
## iter 20 value 19992.841050  
## final value 19992.840586   
## converged  
## # weights: 41  
## initial value 23577.876830   
## iter 10 value 20006.732862  
## iter 20 value 19992.181735  
## final value 19992.181279   
## converged  
## # weights: 9  
## initial value 22770.592416   
## iter 10 value 19998.860123  
## iter 20 value 19988.980928  
## iter 20 value 19988.980882  
## final value 19988.980882   
## converged  
## # weights: 25  
## initial value 23192.549749   
## iter 10 value 20003.922165  
## iter 20 value 19989.039289  
## final value 19988.883107   
## converged  
## # weights: 41  
## initial value 22589.391240   
## iter 10 value 20005.555376  
## iter 20 value 19989.058119  
## final value 19988.875921   
## converged  
## # weights: 9  
## initial value 22561.627476   
## final value 20022.720500   
## converged  
## # weights: 25  
## initial value 22790.351060   
## final value 20022.720500   
## converged  
## # weights: 41  
## initial value 23473.601605   
## final value 20022.720500   
## converged  
## # weights: 9  
## initial value 22212.387254   
## iter 10 value 20028.430939  
## final value 20028.229981   
## converged  
## # weights: 25  
## initial value 22560.930372   
## iter 10 value 20027.080634  
## final value 20026.695860   
## converged  
## # weights: 41  
## initial value 23244.656644   
## iter 10 value 20026.472676  
## iter 20 value 20026.043993  
## final value 20026.036444   
## converged  
## # weights: 9  
## initial value 21709.084992   
## iter 10 value 20030.290525  
## iter 20 value 20022.807776  
## iter 20 value 20022.807742  
## final value 20022.807742   
## converged  
## # weights: 25  
## initial value 22977.535467   
## iter 10 value 20039.132709  
## iter 20 value 20022.909720  
## final value 20022.734978   
## converged  
## # weights: 41  
## initial value 22302.749822   
## iter 10 value 20038.433080  
## iter 20 value 20022.901654  
## final value 20022.730929   
## converged  
## # weights: 9  
## initial value 22887.830466   
## final value 20054.818000   
## converged  
## # weights: 25  
## initial value 23381.182449   
## final value 20054.818000   
## converged  
## # weights: 41  
## initial value 22814.248896   
## final value 20054.818000   
## converged  
## # weights: 9  
## initial value 22201.553118   
## iter 10 value 20061.811267  
## final value 20060.328901   
## converged  
## # weights: 25  
## initial value 23634.810726   
## iter 10 value 20059.775306  
## iter 20 value 20058.795139  
## final value 20058.794357   
## converged  
## # weights: 41  
## initial value 23392.820567   
## iter 10 value 20066.932982  
## iter 20 value 20058.135763  
## final value 20058.134791   
## converged  
## # weights: 9  
## initial value 23635.110265   
## iter 10 value 20063.141998  
## iter 20 value 20054.913969  
## iter 20 value 20054.913931  
## final value 20054.913931   
## converged  
## # weights: 25  
## initial value 22187.438061   
## iter 10 value 20068.878193  
## iter 20 value 20054.980103  
## final value 20054.829698   
## converged  
## # weights: 41  
## initial value 23404.972051   
## iter 10 value 20073.674492  
## iter 20 value 20055.035401  
## final value 20054.829567   
## converged  
## # weights: 9  
## initial value 23021.408422   
## final value 19976.494000   
## converged  
## # weights: 25  
## initial value 22130.803541   
## final value 19976.494000   
## converged  
## # weights: 41  
## initial value 22948.152682   
## final value 19976.494000   
## converged  
## # weights: 9  
## initial value 22411.388250   
## iter 10 value 19984.324036  
## final value 19982.002482   
## converged  
## # weights: 25  
## initial value 23483.462505   
## iter 10 value 20002.030197  
## iter 20 value 19980.486375  
## final value 19980.468706   
## converged  
## # weights: 41  
## initial value 22723.793159   
## iter 10 value 19983.321379  
## iter 20 value 19979.809884  
## final value 19979.809437   
## converged  
## # weights: 9  
## initial value 22182.147138   
## iter 10 value 19985.940973  
## iter 20 value 19976.602916  
## iter 20 value 19976.602873  
## final value 19976.602873   
## converged  
## # weights: 25  
## initial value 23052.775763   
## iter 10 value 19991.591524  
## iter 20 value 19976.668063  
## final value 19976.506739   
## converged  
## # weights: 41  
## initial value 23001.283304   
## iter 10 value 19994.648294  
## iter 20 value 19976.703305  
## final value 19976.505902   
## converged  
## # weights: 9  
## initial value 21499.983903   
## final value 19941.950000   
## converged  
## # weights: 25  
## initial value 23459.760671   
## final value 19941.950000   
## converged  
## # weights: 41  
## initial value 22557.553610   
## final value 19941.950000   
## converged  
## # weights: 9  
## initial value 23187.457361   
## iter 10 value 19947.590245  
## final value 19947.457890   
## converged  
## # weights: 25  
## initial value 22568.141867   
## iter 10 value 19947.808284  
## final value 19945.924402   
## converged  
## # weights: 41  
## initial value 23289.989563   
## iter 10 value 19945.796402  
## final value 19945.265167   
## converged  
## # weights: 9  
## initial value 22993.177900   
## iter 10 value 19953.411782  
## iter 20 value 19942.082145  
## iter 20 value 19942.082093  
## final value 19942.082093   
## converged  
## # weights: 25  
## initial value 22515.718734   
## iter 10 value 19956.724699  
## iter 20 value 19942.120341  
## final value 19941.960879   
## converged  
## # weights: 41  
## initial value 22615.098924   
## iter 10 value 19961.025762  
## iter 20 value 19942.169929  
## final value 19941.962007   
## converged  
## # weights: 9  
## initial value 22553.764713   
## final value 20049.627700   
## converged  
## # weights: 25  
## initial value 22792.442404   
## final value 20049.627700   
## converged  
## # weights: 41  
## initial value 23657.411082   
## final value 20049.627700   
## converged  
## # weights: 9  
## initial value 22914.523041   
## iter 10 value 20125.785843  
## iter 20 value 20055.249728  
## final value 20055.138322   
## converged  
## # weights: 25  
## initial value 22821.591323   
## iter 10 value 20054.508541  
## final value 20053.603896   
## converged  
## # weights: 41  
## initial value 21875.938082   
## iter 10 value 20054.218737  
## iter 20 value 20052.944594  
## iter 20 value 20052.944397  
## iter 20 value 20052.944359  
## final value 20052.944359   
## converged  
## # weights: 9  
## initial value 22801.128106   
## iter 10 value 20060.440147  
## iter 20 value 20049.752359  
## iter 20 value 20049.752309  
## final value 20049.752309   
## converged  
## # weights: 25  
## initial value 23404.613243   
## iter 10 value 20064.568992  
## iter 20 value 20049.799961  
## final value 20049.642842   
## converged  
## # weights: 41  
## initial value 21388.282627   
## iter 10 value 20060.306000  
## iter 20 value 20049.750812  
## final value 20049.637447   
## converged  
## # weights: 9  
## initial value 22630.665583   
## final value 20016.657700   
## converged  
## # weights: 25  
## initial value 23161.034993   
## final value 20016.657700   
## converged  
## # weights: 41  
## initial value 21746.967907   
## final value 20016.657700   
## converged  
## # weights: 9  
## initial value 23420.790661   
## iter 10 value 20022.946923  
## final value 20022.167088   
## converged  
## # weights: 25  
## initial value 22351.097694   
## iter 10 value 20022.858498  
## iter 20 value 20020.633076  
## iter 20 value 20020.633040  
## iter 20 value 20020.633034  
## final value 20020.633034   
## converged  
## # weights: 41  
## initial value 22560.887624   
## iter 10 value 20020.994095  
## final value 20019.973647   
## converged  
## # weights: 9  
## initial value 22284.501917   
## iter 10 value 20026.067633  
## iter 20 value 20016.766189  
## iter 20 value 20016.766146  
## final value 20016.766146   
## converged  
## # weights: 25  
## initial value 23158.112696   
## iter 10 value 20031.638912  
## iter 20 value 20016.830422  
## final value 20016.671401   
## converged  
## # weights: 41  
## initial value 21351.472228   
## iter 10 value 20026.336558  
## iter 20 value 20016.769290  
## final value 20016.667242   
## converged  
## # weights: 9  
## initial value 22467.439190   
## final value 20002.641700   
## converged  
## # weights: 25  
## initial value 23419.958980   
## final value 20002.641700   
## converged  
## # weights: 41  
## initial value 21848.301863   
## final value 20002.641700   
## converged  
## # weights: 9  
## initial value 22431.266386   
## iter 10 value 20008.161399  
## final value 20008.150748   
## converged  
## # weights: 25  
## initial value 21833.353513   
## iter 10 value 20009.070936  
## iter 20 value 20006.617973  
## final value 20006.616889   
## converged  
## # weights: 41  
## initial value 23968.163209   
## iter 10 value 20007.742443  
## iter 20 value 20005.957517  
## iter 20 value 20005.957458  
## iter 20 value 20005.957453  
## final value 20005.957453   
## converged  
## # weights: 9  
## initial value 21537.710481   
## iter 10 value 20008.852335  
## iter 20 value 20002.713304  
## iter 20 value 20002.713275  
## final value 20002.713275   
## converged  
## # weights: 25  
## initial value 21968.106558   
## iter 10 value 20016.441141  
## iter 20 value 20002.800797  
## final value 20002.655140   
## converged  
## # weights: 41  
## initial value 22708.626004   
## iter 10 value 20022.042012  
## iter 20 value 20002.865370  
## final value 20002.652268   
## converged  
## # weights: 9  
## initial value 23226.087092   
## final value 19982.170100   
## converged  
## # weights: 25  
## initial value 23812.078269   
## final value 19982.170100   
## converged  
## # weights: 41  
## initial value 21900.964810   
## final value 19982.170100   
## converged  
## # weights: 9  
## initial value 23402.584539   
## iter 10 value 19988.146770  
## final value 19987.678673   
## converged  
## # weights: 25  
## initial value 22595.446187   
## iter 10 value 19988.993066  
## iter 20 value 19986.145163  
## iter 20 value 19986.145060  
## iter 20 value 19986.145010  
## final value 19986.145010   
## converged  
## # weights: 41  
## initial value 22126.862324   
## iter 10 value 19986.850986  
## final value 19985.485660   
## converged  
## # weights: 9  
## initial value 22233.682226   
## iter 10 value 19992.595314  
## iter 20 value 19982.290295  
## iter 20 value 19982.290246  
## final value 19982.290246   
## converged  
## # weights: 25  
## initial value 22674.749272   
## iter 10 value 19995.525077  
## iter 20 value 19982.324072  
## final value 19982.190124   
## converged  
## # weights: 41  
## initial value 22740.575481   
## iter 10 value 20000.159053  
## iter 20 value 19982.377499  
## final value 19982.180724   
## converged  
## # weights: 9  
## initial value 22753.654046   
## final value 20028.360100   
## converged  
## # weights: 25  
## initial value 23155.002514   
## final value 20028.360100   
## converged  
## # weights: 41  
## initial value 23131.438136   
## final value 20028.360100   
## converged  
## # weights: 9  
## initial value 22153.371575   
## iter 10 value 20035.681365  
## final value 20033.869791   
## converged  
## # weights: 25  
## initial value 21656.354496   
## iter 10 value 20032.635799  
## final value 20032.335659   
## converged  
## # weights: 41  
## initial value 22940.196748   
## iter 10 value 20046.774026  
## iter 20 value 20031.679664  
## final value 20031.676222   
## converged  
## # weights: 9  
## initial value 22287.208825   
## iter 10 value 20037.882496  
## iter 20 value 20028.469886  
## iter 20 value 20028.469842  
## final value 20028.469842   
## converged  
## # weights: 25  
## initial value 22020.093014   
## iter 10 value 20040.243425  
## iter 20 value 20028.497105  
## final value 20028.375538   
## converged  
## # weights: 41  
## initial value 23102.003275   
## iter 10 value 20048.735940  
## iter 20 value 20028.595017  
## final value 20028.372386   
## converged  
## # weights: 9  
## initial value 23192.253908   
## final value 20046.848500   
## converged  
## # weights: 25  
## initial value 21533.100425   
## final value 20046.848500   
## converged  
## # weights: 41  
## initial value 21642.824372   
## final value 20046.848500   
## converged  
## # weights: 9  
## initial value 22054.504816   
## iter 10 value 20056.517070  
## final value 20052.358953   
## converged  
## # weights: 25  
## initial value 22022.467441   
## iter 10 value 20051.283268  
## final value 20050.824556   
## converged  
## # weights: 41  
## initial value 22941.596945   
## iter 10 value 20052.789614  
## iter 20 value 20050.165290  
## iter 20 value 20050.165097  
## iter 20 value 20050.165062  
## final value 20050.165062   
## converged  
## # weights: 9  
## initial value 23072.798141   
## iter 10 value 20057.323571  
## iter 20 value 20046.969269  
## iter 20 value 20046.969221  
## final value 20046.969221   
## converged  
## # weights: 25  
## initial value 22503.868998   
## iter 10 value 20060.419670  
## iter 20 value 20047.004965  
## final value 20046.859772   
## converged  
## # weights: 41  
## initial value 23625.126587   
## iter 10 value 20062.882576  
## iter 20 value 20047.033360  
## final value 20046.859138   
## converged  
## # weights: 9  
## initial value 24099.575405   
## final value 20044.160500   
## converged  
## # weights: 25  
## initial value 23794.957586   
## final value 20044.160500   
## converged  
## # weights: 41  
## initial value 22882.835822   
## final value 20044.160500   
## converged  
## # weights: 9  
## initial value 22908.722902   
## iter 10 value 20052.803956  
## final value 20049.670852   
## converged  
## # weights: 25  
## initial value 21627.270545   
## iter 10 value 20050.393532  
## iter 20 value 20048.136575  
## iter 20 value 20048.136472  
## iter 20 value 20048.136458  
## final value 20048.136458   
## converged  
## # weights: 41  
## initial value 22217.399855   
## iter 10 value 20052.541669  
## iter 20 value 20047.477292  
## final value 20047.476939   
## converged  
## # weights: 9  
## initial value 22260.787312   
## iter 10 value 20054.442706  
## iter 20 value 20044.279046  
## iter 20 value 20044.278998  
## final value 20044.278998   
## converged  
## # weights: 25  
## initial value 23701.873750   
## iter 10 value 20054.772938  
## iter 20 value 20044.282853  
## final value 20044.177353   
## converged  
## # weights: 41  
## initial value 23520.119545   
## iter 10 value 20061.063429  
## iter 20 value 20044.355377  
## final value 20044.170978   
## converged  
## # weights: 9  
## initial value 22609.389615   
## final value 20046.767600   
## converged  
## # weights: 25  
## initial value 23101.478547   
## final value 20046.767600   
## converged  
## # weights: 41  
## initial value 22428.772378   
## final value 20046.767600   
## converged  
## # weights: 9  
## initial value 21905.655664   
## iter 10 value 20052.730615  
## final value 20052.278055   
## converged  
## # weights: 25  
## initial value 22317.035859   
## iter 10 value 20056.534120  
## iter 20 value 20050.744490  
## final value 20050.743663   
## converged  
## # weights: 41  
## initial value 22553.891627   
## iter 10 value 20050.661524  
## final value 20050.084192   
## converged  
## # weights: 9  
## initial value 22592.514549   
## iter 10 value 20057.785456  
## iter 20 value 20046.894627  
## iter 20 value 20046.894576  
## final value 20046.894576   
## converged  
## # weights: 25  
## initial value 21384.107593   
## iter 10 value 20055.004700  
## iter 20 value 20046.862567  
## final value 20046.778758   
## converged  
## # weights: 41  
## initial value 22027.434164   
## iter 10 value 20061.444273  
## iter 20 value 20046.936811  
## final value 20046.778216   
## converged  
## # weights: 9  
## initial value 23096.048189   
## final value 19996.584500   
## converged  
## # weights: 25  
## initial value 22196.982280   
## final value 19996.584500   
## converged  
## # weights: 41  
## initial value 22918.022562   
## final value 19996.584500   
## converged  
## # weights: 9  
## initial value 23229.770710   
## iter 10 value 20002.455734  
## final value 20002.093256   
## converged  
## # weights: 25  
## initial value 22373.761022   
## iter 10 value 20001.112801  
## final value 20000.559341   
## converged  
## # weights: 41  
## initial value 21117.986546   
## iter 10 value 20008.824722  
## iter 20 value 19999.900198  
## iter 20 value 19999.900085  
## iter 20 value 19999.900056  
## final value 19999.900056   
## converged  
## # weights: 9  
## initial value 21499.704662   
## iter 10 value 20002.727012  
## iter 20 value 19996.655318  
## iter 20 value 19996.655290  
## final value 19996.655290   
## converged  
## # weights: 25  
## initial value 22458.852081   
## iter 10 value 20013.685660  
## iter 20 value 19996.781663  
## final value 19996.597945   
## converged  
## # weights: 41  
## initial value 21696.611563   
## iter 10 value 20010.189842  
## iter 20 value 19996.741359  
## final value 19996.593723   
## converged  
## # weights: 9  
## initial value 22686.991982   
## final value 20055.771700   
## converged  
## # weights: 25  
## initial value 22818.821505   
## final value 20055.771700   
## converged  
## # weights: 41  
## initial value 23343.613209   
## final value 20055.771700   
## converged  
## # weights: 9  
## initial value 23742.583087   
## iter 10 value 20061.812370  
## final value 20061.282666   
## converged  
## # weights: 25  
## initial value 22112.451050   
## iter 10 value 20061.547815  
## iter 20 value 20059.749046  
## final value 20059.748098   
## converged  
## # weights: 41  
## initial value 22157.610201   
## iter 10 value 20060.158588  
## final value 20059.088551   
## converged  
## # weights: 9  
## initial value 21561.726817   
## iter 10 value 20062.408040  
## iter 20 value 20055.848212  
## iter 20 value 20055.848181  
## final value 20055.848181   
## converged  
## # weights: 25  
## initial value 23047.404211   
## iter 10 value 20070.106079  
## iter 20 value 20055.936964  
## final value 20055.784940   
## converged  
## # weights: 41  
## initial value 22611.348009   
## iter 10 value 20073.340068  
## iter 20 value 20055.974249  
## final value 20055.783108   
## converged  
## # weights: 9  
## initial value 23021.046517   
## final value 20009.734000   
## converged  
## # weights: 25  
## initial value 21938.846028   
## final value 20009.734000   
## converged  
## # weights: 41  
## initial value 24098.065836   
## final value 20009.734000   
## converged  
## # weights: 9  
## initial value 22234.087272   
## iter 10 value 20017.575523  
## final value 20015.243216   
## converged  
## # weights: 25  
## initial value 23371.017115   
## iter 10 value 20015.135059  
## final value 20013.709253   
## converged  
## # weights: 41  
## initial value 24157.861365   
## iter 10 value 20014.565082  
## iter 20 value 20013.050200  
## final value 20013.049875   
## converged  
## # weights: 9  
## initial value 22821.476837   
## iter 10 value 20021.721384  
## iter 20 value 20009.872205  
## iter 20 value 20009.872150  
## final value 20009.872150   
## converged  
## # weights: 25  
## initial value 22621.483034   
## iter 10 value 20024.106506  
## iter 20 value 20009.899704  
## final value 20009.751539   
## converged  
## # weights: 41  
## initial value 23119.979793   
## iter 10 value 20027.139772  
## iter 20 value 20009.934675  
## final value 20009.743648   
## converged  
## # weights: 9  
## initial value 23800.625544   
## final value 20041.640500   
## converged  
## # weights: 25  
## initial value 22592.339527   
## final value 20041.640500   
## converged  
## # weights: 41  
## initial value 21563.067836   
## final value 20041.640500   
## converged  
## # weights: 9  
## initial value 23465.070944   
## iter 10 value 20048.356585  
## final value 20047.150721   
## converged  
## # weights: 25  
## initial value 22800.386231   
## iter 10 value 20050.323896  
## iter 20 value 20045.619502  
## final value 20045.616389   
## converged  
## # weights: 41  
## initial value 22849.244296   
## iter 10 value 20052.494532  
## iter 20 value 20044.986591  
## final value 20044.956989   
## converged  
## # weights: 9  
## initial value 22892.549016   
## iter 10 value 20052.407307  
## iter 20 value 20041.764633  
## iter 20 value 20041.764583  
## final value 20041.764583   
## converged  
## # weights: 25  
## initial value 23066.280058   
## iter 10 value 20056.237964  
## iter 20 value 20041.808797  
## final value 20041.653337   
## converged  
## # weights: 41  
## initial value 22794.765620   
## iter 10 value 20063.164993  
## iter 20 value 20041.888661  
## final value 20041.654653   
## converged  
## # weights: 9  
## initial value 22515.420278   
## final value 19989.553700   
## converged  
## # weights: 25  
## initial value 22135.673460   
## final value 19989.553700   
## converged  
## # weights: 41  
## initial value 23082.145665   
## final value 19989.553700   
## converged  
## # weights: 9  
## initial value 21819.119247   
## iter 10 value 19995.839426  
## final value 19995.062515   
## converged  
## # weights: 25  
## initial value 23024.323018   
## iter 10 value 19993.693665  
## final value 19993.528634   
## converged  
## # weights: 41  
## initial value 21829.215130   
## iter 10 value 19993.789563  
## final value 19992.869444   
## converged  
## # weights: 9  
## initial value 23849.906707   
## iter 10 value 19998.040328  
## iter 20 value 19989.651544  
## iter 20 value 19989.651505  
## final value 19989.651505   
## converged  
## # weights: 25  
## initial value 23525.796944   
## iter 10 value 20003.780877  
## iter 20 value 19989.717728  
## final value 19989.567084   
## converged  
## # weights: 41  
## initial value 23115.087937   
## iter 10 value 20009.021938  
## iter 20 value 19989.778153  
## final value 19989.564112   
## converged  
## # weights: 9  
## initial value 22781.887435   
## final value 20018.146000   
## converged  
## # weights: 25  
## initial value 23907.092648   
## final value 20018.146000   
## converged  
## # weights: 41  
## initial value 23193.119362   
## final value 20018.146000   
## converged  
## # weights: 9  
## initial value 23492.743288   
## iter 10 value 20024.180567  
## final value 20023.655415   
## converged  
## # weights: 25  
## initial value 22873.962910   
## iter 10 value 20022.879662  
## final value 20022.121422   
## converged  
## # weights: 41  
## initial value 23049.008046   
## iter 10 value 20023.815710  
## iter 20 value 20021.462001  
## iter 20 value 20021.461956  
## iter 20 value 20021.461939  
## final value 20021.461939   
## converged  
## # weights: 9  
## initial value 22291.530711   
## iter 10 value 20029.345425  
## iter 20 value 20018.275121  
## iter 20 value 20018.275069  
## final value 20018.275069   
## converged  
## # weights: 25  
## initial value 22009.276416   
## iter 10 value 20031.051164  
## iter 20 value 20018.294786  
## final value 20018.157545   
## converged  
## # weights: 41  
## initial value 21299.002829   
## iter 10 value 20027.450575  
## iter 20 value 20018.253274  
## final value 20018.154941   
## converged  
## # weights: 9  
## initial value 22671.364790   
## final value 20052.930100   
## converged  
## # weights: 25  
## initial value 22850.773403   
## final value 20052.930100   
## converged  
## # weights: 41  
## initial value 22118.887737   
## final value 20052.930100   
## converged  
## # weights: 9  
## initial value 22460.922275   
## iter 10 value 20058.963033  
## final value 20058.440954   
## converged  
## # weights: 25  
## initial value 22494.734889   
## iter 10 value 20058.336163  
## final value 20056.906533   
## converged  
## # weights: 41  
## initial value 22261.970529   
## iter 10 value 20057.106926  
## iter 20 value 20056.247025  
## iter 20 value 20056.246912  
## iter 20 value 20056.246891  
## final value 20056.246891   
## converged  
## # weights: 9  
## initial value 22001.079702   
## iter 10 value 20062.077839  
## iter 20 value 20053.035566  
## iter 20 value 20053.035524  
## final value 20053.035524   
## converged  
## # weights: 25  
## initial value 22917.416548   
## iter 10 value 20070.356179  
## iter 20 value 20053.131009  
## final value 20052.944188   
## converged  
## # weights: 41  
## initial value 22899.827305   
## iter 10 value 20074.177434  
## iter 20 value 20053.175065  
## final value 20052.939871   
## converged  
## # weights: 9  
## initial value 23780.113744   
## final value 20004.341200   
## converged  
## # weights: 25  
## initial value 22599.497344   
## final value 20004.341200   
## converged  
## # weights: 41  
## initial value 22490.111499   
## final value 20004.341200   
## converged  
## # weights: 9  
## initial value 22288.949874   
## iter 10 value 20010.014822  
## final value 20009.850250   
## converged  
## # weights: 25  
## initial value 23447.816210   
## iter 10 value 20018.999886  
## iter 20 value 20008.318371  
## final value 20008.316422   
## converged  
## # weights: 41  
## initial value 22906.460452   
## iter 10 value 20016.549354  
## iter 20 value 20007.658047  
## final value 20007.656957   
## converged  
## # weights: 9  
## initial value 22372.560993   
## iter 10 value 20015.081148  
## iter 20 value 20004.465023  
## iter 20 value 20004.464974  
## final value 20004.464974   
## converged  
## # weights: 25  
## initial value 23861.302924   
## iter 10 value 20015.269297  
## iter 20 value 20004.467192  
## final value 20004.365670   
## converged  
## # weights: 41  
## initial value 23659.763677   
## iter 10 value 20017.651782  
## iter 20 value 20004.494661  
## final value 20004.356488   
## converged  
## # weights: 9  
## initial value 22367.930929   
## final value 20057.069200   
## converged  
## # weights: 25  
## initial value 22884.293244   
## final value 20057.069200   
## converged  
## # weights: 41  
## initial value 22898.906801   
## final value 20057.069200   
## converged  
## # weights: 9  
## initial value 22623.955907   
## iter 10 value 20064.165015  
## final value 20062.580210   
## converged  
## # weights: 25  
## initial value 21608.771782   
## iter 10 value 20061.694086  
## final value 20061.045687   
## converged  
## # weights: 41  
## initial value 21939.527278   
## iter 10 value 20072.383945  
## iter 20 value 20060.387728  
## final value 20060.386023   
## converged  
## # weights: 9  
## initial value 23689.525734   
## iter 10 value 20065.672290  
## iter 20 value 20057.168387  
## iter 20 value 20057.168347  
## final value 20057.168347   
## converged  
## # weights: 25  
## initial value 21940.950874   
## iter 10 value 20068.365385  
## iter 20 value 20057.199436  
## final value 20057.082056   
## converged  
## # weights: 41  
## initial value 22470.749974   
## iter 10 value 20077.770970  
## iter 20 value 20057.307875  
## final value 20057.080261   
## converged  
## # weights: 9  
## initial value 22871.669629   
## final value 20046.195700   
## converged  
## # weights: 25  
## initial value 23524.194634   
## final value 20046.195700   
## converged  
## # weights: 41  
## initial value 22744.386105   
## final value 20046.195700   
## converged  
## # weights: 9  
## initial value 23513.441904   
## iter 10 value 20055.610523  
## final value 20051.706088   
## converged  
## # weights: 25  
## initial value 22881.940128   
## iter 10 value 20051.195572  
## final value 20050.171751   
## converged  
## # weights: 41  
## initial value 23365.118480   
## iter 10 value 20063.237863  
## iter 20 value 20049.518388  
## final value 20049.512218   
## converged  
## # weights: 9  
## initial value 23328.167329   
## iter 10 value 20057.279156  
## iter 20 value 20046.323484  
## iter 20 value 20046.323432  
## final value 20046.323432   
## converged  
## # weights: 25  
## initial value 22103.185813   
## iter 10 value 20058.675025  
## iter 20 value 20046.339577  
## final value 20046.207995   
## converged  
## # weights: 41  
## initial value 22403.138587   
## iter 10 value 20063.268706  
## iter 20 value 20046.392538  
## final value 20046.205130   
## converged  
## # weights: 9  
## initial value 22421.786151   
## final value 20018.681200   
## converged  
## # weights: 25  
## initial value 22694.069518   
## final value 20018.681200   
## converged  
## # weights: 41  
## initial value 23713.522217   
## final value 20018.681200   
## converged  
## # weights: 9  
## initial value 23225.626734   
## iter 10 value 20024.765840  
## final value 20024.190616   
## converged  
## # weights: 25  
## initial value 22011.302085   
## iter 10 value 20023.435175  
## final value 20022.656558   
## converged  
## # weights: 41  
## initial value 23995.998848   
## iter 10 value 20023.640645  
## final value 20021.997229   
## converged  
## # weights: 9  
## initial value 22438.945155   
## iter 10 value 20028.146255  
## iter 20 value 20018.790325  
## iter 20 value 20018.790281  
## final value 20018.790281   
## converged  
## # weights: 25  
## initial value 21747.050474   
## iter 10 value 20029.863601  
## iter 20 value 20018.810124  
## final value 20018.692978   
## converged  
## # weights: 41  
## initial value 22814.465967   
## iter 10 value 20034.969901  
## iter 20 value 20018.868996  
## final value 20018.691446   
## converged  
## # weights: 9  
## initial value 22390.292359   
## final value 20040.986000   
## converged  
## # weights: 25  
## initial value 23483.746489   
## final value 20040.986000   
## converged  
## # weights: 41  
## initial value 22745.645352   
## final value 20040.986000   
## converged  
## # weights: 9  
## initial value 22411.769423   
## iter 10 value 20048.460225  
## final value 20046.496188   
## converged  
## # weights: 25  
## initial value 21611.597401   
## iter 10 value 20047.649415  
## iter 20 value 20044.961952  
## iter 20 value 20044.961878  
## iter 20 value 20044.961863  
## final value 20044.961863   
## converged  
## # weights: 41  
## initial value 21870.562502   
## iter 10 value 20047.935955  
## iter 20 value 20044.302780  
## final value 20044.302382   
## converged  
## # weights: 9  
## initial value 23116.159697   
## iter 10 value 20051.399446  
## iter 20 value 20041.106059  
## iter 20 value 20041.106011  
## final value 20041.106011   
## converged  
## # weights: 25  
## initial value 23887.327935   
## iter 10 value 20051.037950  
## iter 20 value 20041.101891  
## final value 20041.004945   
## converged  
## # weights: 41  
## initial value 23291.142469   
## iter 10 value 20060.016836  
## iter 20 value 20041.205411  
## final value 20040.996551   
## converged  
## # weights: 9  
## initial value 22418.733643   
## final value 20034.333200   
## converged  
## # weights: 25  
## initial value 21983.174805   
## final value 20034.333200   
## converged  
## # weights: 41  
## initial value 22362.415173   
## final value 20034.333200   
## converged  
## # weights: 9  
## initial value 23019.753773   
## iter 10 value 20040.196033  
## final value 20039.843117   
## converged  
## # weights: 25  
## initial value 21803.412279   
## iter 10 value 20039.198971  
## final value 20038.308934   
## converged  
## # weights: 41  
## initial value 24032.213886   
## iter 10 value 20042.646894  
## iter 20 value 20037.661436  
## final value 20037.649491   
## converged  
## # weights: 9  
## initial value 22765.226189   
## iter 10 value 20044.720417  
## iter 20 value 20034.452956  
## iter 20 value 20034.452909  
## final value 20034.452909   
## converged  
## # weights: 25  
## initial value 23209.499032   
## iter 10 value 20048.353285  
## iter 20 value 20034.494841  
## final value 20034.345643   
## converged  
## # weights: 41  
## initial value 22877.859612   
## iter 10 value 20053.983821  
## iter 20 value 20034.559756  
## final value 20034.343728   
## converged  
## # weights: 9  
## initial value 23351.714871   
## final value 20017.337200   
## converged  
## # weights: 25  
## initial value 23331.290752   
## final value 20017.337200   
## converged  
## # weights: 41  
## initial value 22718.077920   
## final value 20017.337200   
## converged  
## # weights: 9  
## initial value 22742.936748   
## iter 10 value 20023.292242  
## final value 20022.846597   
## converged  
## # weights: 25  
## initial value 22919.848383   
## iter 10 value 20022.082233  
## final value 20021.312536   
## converged  
## # weights: 41  
## initial value 21865.724726   
## iter 10 value 20021.703605  
## final value 20020.653135   
## converged  
## # weights: 9  
## initial value 22885.218741   
## iter 10 value 20027.212012  
## iter 20 value 20017.451049  
## iter 20 value 20017.451003  
## final value 20017.451003   
## converged  
## # weights: 25  
## initial value 22340.831318   
## iter 10 value 20034.215628  
## iter 20 value 20017.531795  
## final value 20017.349657   
## converged  
## # weights: 41  
## initial value 22185.236257   
## iter 10 value 20034.136543  
## iter 20 value 20017.530883  
## final value 20017.346689   
## converged  
## # weights: 9  
## initial value 23265.861650   
## final value 20027.767600   
## converged  
## # weights: 25  
## initial value 23104.403140   
## final value 20027.767600   
## converged  
## # weights: 41  
## initial value 23613.936654   
## final value 20027.767600   
## converged  
## # weights: 9  
## initial value 23890.813126   
## iter 10 value 20035.002521  
## final value 20033.277277   
## converged  
## # weights: 25  
## initial value 23678.458664   
## iter 10 value 20035.137085  
## iter 20 value 20031.744024  
## final value 20031.743190   
## converged  
## # weights: 41  
## initial value 22912.884400   
## iter 10 value 20033.099230  
## iter 20 value 20031.083778  
## iter 20 value 20031.083715  
## iter 20 value 20031.083707  
## final value 20031.083707   
## converged  
## # weights: 9  
## initial value 22334.949764   
## iter 10 value 20037.323372  
## iter 20 value 20027.877771  
## iter 20 value 20027.877726  
## final value 20027.877726   
## converged  
## # weights: 25  
## initial value 21880.944718   
## iter 10 value 20039.123150  
## iter 20 value 20027.898521  
## final value 20027.779655   
## converged  
## # weights: 41  
## initial value 22426.003342   
## iter 10 value 20046.429713  
## iter 20 value 20027.982760  
## final value 20027.780299   
## converged  
## # weights: 9  
## initial value 22669.624896   
## final value 20044.594000   
## converged  
## # weights: 25  
## initial value 23483.947937   
## final value 20044.594000   
## converged  
## # weights: 41  
## initial value 23026.322881   
## final value 20044.594000   
## converged  
## # weights: 9  
## initial value 21751.080356   
## iter 10 value 20051.163297  
## final value 20050.104326   
## converged  
## # weights: 25  
## initial value 23268.388322   
## iter 10 value 20055.410350  
## final value 20048.570030   
## converged  
## # weights: 41  
## initial value 22292.442519   
## iter 10 value 20048.840554  
## iter 20 value 20047.910695  
## iter 20 value 20047.910540  
## iter 20 value 20047.910496  
## final value 20047.910496   
## converged  
## # weights: 9  
## initial value 22162.608331   
## iter 10 value 20053.480195  
## iter 20 value 20044.696451  
## iter 20 value 20044.696410  
## final value 20044.696410   
## converged  
## # weights: 25  
## initial value 22697.895275   
## iter 10 value 20059.119043  
## iter 20 value 20044.761462  
## final value 20044.609165   
## converged  
## # weights: 41  
## initial value 22204.241527   
## iter 10 value 20063.448598  
## iter 20 value 20044.811379  
## final value 20044.604155   
## converged  
## # weights: 9  
## initial value 22861.948527   
## final value 19997.560100   
## converged  
## # weights: 25  
## initial value 21453.724358   
## final value 19997.560100   
## converged  
## # weights: 41  
## initial value 21880.897229   
## final value 19997.560100   
## converged  
## # weights: 9  
## initial value 23192.752255   
## iter 10 value 20003.260075  
## final value 20003.069027   
## converged  
## # weights: 25  
## initial value 22832.080631   
## iter 10 value 20002.604720  
## final value 20001.535110   
## converged  
## # weights: 41  
## initial value 21920.086836   
## iter 10 value 20002.089874  
## iter 20 value 20000.875933  
## iter 20 value 20000.875860  
## iter 20 value 20000.875833  
## final value 20000.875833   
## converged  
## # weights: 9  
## initial value 22470.557267   
## iter 10 value 20008.333307  
## iter 20 value 19997.684307  
## iter 20 value 19997.684257  
## final value 19997.684257   
## converged  
## # weights: 25  
## initial value 22544.042743   
## iter 10 value 20012.034988  
## iter 20 value 19997.726984  
## final value 19997.574058   
## converged  
## # weights: 41  
## initial value 23872.484445   
## iter 10 value 20012.508644  
## iter 20 value 19997.732445  
## final value 19997.575872   
## converged  
## # weights: 9  
## initial value 23238.923125   
## final value 20039.841200   
## converged  
## # weights: 25  
## initial value 22619.264679   
## final value 20039.841200   
## converged  
## # weights: 41  
## initial value 21744.078896   
## final value 20039.841200   
## converged  
## # weights: 9  
## initial value 22558.096670   
## iter 10 value 20045.660988  
## final value 20045.351315   
## converged  
## # weights: 25  
## initial value 21711.179209   
## iter 10 value 20045.051449  
## final value 20043.817065   
## converged  
## # weights: 41  
## initial value 22997.671803   
## iter 10 value 20056.716825  
## iter 20 value 20043.158628  
## final value 20043.157518   
## converged  
## # weights: 9  
## initial value 23458.692523   
## iter 10 value 20050.726517  
## iter 20 value 20039.966699  
## iter 20 value 20039.966649  
## final value 20039.966649   
## converged  
## # weights: 25  
## initial value 22470.819001   
## iter 10 value 20054.435486  
## iter 20 value 20040.009461  
## final value 20039.851903   
## converged  
## # weights: 41  
## initial value 23839.876693   
## iter 10 value 20055.012939  
## iter 20 value 20040.016118  
## final value 20039.852966   
## converged  
## # weights: 9  
## initial value 22000.123886   
## final value 20032.589200   
## converged  
## # weights: 25  
## initial value 24099.851660   
## final value 20032.589200   
## converged  
## # weights: 41  
## initial value 21675.954893   
## final value 20032.589200   
## converged  
## # weights: 9  
## initial value 23717.401398   
## iter 10 value 20040.102081  
## final value 20038.099054   
## converged  
## # weights: 25  
## initial value 22950.687846   
## iter 10 value 20037.537481  
## final value 20036.564944   
## converged  
## # weights: 41  
## initial value 22661.726856   
## iter 10 value 20040.326329  
## iter 20 value 20035.905910  
## final value 20035.905408   
## converged  
## # weights: 9  
## initial value 23448.858507   
## iter 10 value 20042.864514  
## iter 20 value 20032.707666  
## iter 20 value 20032.707619  
## final value 20032.707619   
## converged  
## # weights: 25  
## initial value 22948.317342   
## iter 10 value 20047.178281  
## iter 20 value 20032.757401  
## final value 20032.607885   
## converged  
## # weights: 41  
## initial value 22047.046294   
## iter 10 value 20048.024974  
## iter 20 value 20032.767162  
## iter 30 value 20032.598327  
## iter 30 value 20032.598323  
## iter 30 value 20032.598321  
## final value 20032.598321   
## converged  
## # weights: 9  
## initial value 22786.442015   
## final value 20047.090000   
## converged  
## # weights: 25  
## initial value 22428.899644   
## final value 20047.090000   
## converged  
## # weights: 41  
## initial value 22673.289065   
## final value 20047.090000   
## converged  
## # weights: 9  
## initial value 23598.852128   
## iter 10 value 20053.149499  
## final value 20052.600488   
## converged  
## # weights: 25  
## initial value 22868.232938   
## iter 10 value 20051.561497  
## final value 20051.066094   
## converged  
## # weights: 41  
## initial value 24089.432991   
## iter 10 value 20053.077217  
## iter 20 value 20050.406908  
## final value 20050.406581   
## converged  
## # weights: 9  
## initial value 22902.906320   
## iter 10 value 20057.860932  
## iter 20 value 20047.214180  
## iter 20 value 20047.214131  
## final value 20047.214131   
## converged  
## # weights: 25  
## initial value 23006.276412   
## iter 10 value 20062.776388  
## iter 20 value 20047.270852  
## final value 20047.102279   
## converged  
## # weights: 41  
## initial value 23654.089261   
## iter 10 value 20063.165866  
## iter 20 value 20047.275342  
## final value 20047.105632   
## converged  
## # weights: 9  
## initial value 22592.047688   
## final value 19942.390000   
## converged  
## # weights: 25  
## initial value 21554.303981   
## final value 19942.390000   
## converged  
## # weights: 41  
## initial value 23289.436328   
## final value 19942.390000   
## converged  
## # weights: 9  
## initial value 22712.763762   
## iter 10 value 19950.333601  
## final value 19947.897936   
## converged  
## # weights: 25  
## initial value 23079.626564   
## iter 10 value 19947.213545  
## final value 19946.364451   
## converged  
## # weights: 41  
## initial value 21486.278781   
## iter 10 value 19958.685006  
## iter 20 value 19945.705335  
## iter 20 value 19945.705263  
## iter 20 value 19945.705226  
## final value 19945.705226   
## converged  
## # weights: 9  
## initial value 23581.129998   
## iter 10 value 19952.152294  
## iter 20 value 19942.502552  
## iter 20 value 19942.502507  
## final value 19942.502507   
## converged  
## # weights: 25  
## initial value 23111.329225   
## iter 10 value 19955.790449  
## iter 20 value 19942.544497  
## final value 19942.401799   
## converged  
## # weights: 41  
## initial value 23386.047872   
## iter 10 value 19961.791898  
## iter 20 value 19942.613689  
## final value 19942.401656   
## converged  
## # weights: 9  
## initial value 23224.513545   
## final value 20050.567600   
## converged  
## # weights: 25  
## initial value 22450.181188   
## final value 20050.567600   
## converged  
## # weights: 41  
## initial value 23467.652200   
## final value 20050.567600   
## converged  
## # weights: 9  
## initial value 23252.176554   
## iter 10 value 20058.215254  
## final value 20056.078255   
## converged  
## # weights: 25  
## initial value 24119.791709   
## iter 10 value 20055.210455  
## final value 20054.543782   
## converged  
## # weights: 41  
## initial value 22038.945439   
## iter 10 value 20064.579781  
## iter 20 value 20053.886065  
## final value 20053.884286   
## converged  
## # weights: 9  
## initial value 22485.285692   
## iter 10 value 20060.282976  
## iter 20 value 20050.679611  
## iter 20 value 20050.679566  
## final value 20050.679566   
## converged  
## # weights: 25  
## initial value 22011.627695   
## iter 10 value 20063.789890  
## iter 20 value 20050.720043  
## final value 20050.581827   
## converged  
## # weights: 41  
## initial value 21975.287575   
## iter 10 value 20064.914750  
## iter 20 value 20050.733011  
## final value 20050.577184   
## converged  
## # weights: 9  
## initial value 23455.219620   
## final value 19919.649700   
## converged  
## # weights: 25  
## initial value 22691.205010   
## final value 19919.649700   
## converged  
## # weights: 41  
## initial value 22413.678475   
## final value 19919.649700   
## converged  
## # weights: 9  
## initial value 22479.173545   
## iter 10 value 19928.054151  
## final value 19925.157291   
## converged  
## # weights: 25  
## initial value 21876.186755   
## iter 10 value 19924.314816  
## final value 19923.623929   
## converged  
## # weights: 41  
## initial value 21888.853796   
## iter 10 value 19936.859038  
## iter 20 value 19922.965135  
## final value 19922.964785   
## converged  
## # weights: 9  
## initial value 23029.665979   
## iter 10 value 19929.690737  
## iter 20 value 19919.765465  
## iter 20 value 19919.765419  
## final value 19919.765419   
## converged  
## # weights: 25  
## initial value 21416.237030   
## iter 10 value 19929.039928  
## iter 20 value 19919.757962  
## final value 19919.662597   
## converged  
## # weights: 41  
## initial value 21930.821716   
## iter 10 value 19935.082568  
## iter 20 value 19919.827629  
## final value 19919.660785   
## converged  
## # weights: 9  
## initial value 22383.920502   
## final value 19981.448500   
## converged  
## # weights: 25  
## initial value 23769.695399   
## final value 19981.448500   
## converged  
## # weights: 41  
## initial value 22136.363878   
## final value 19981.448500   
## converged  
## # weights: 9  
## initial value 22803.526232   
## iter 10 value 19987.020065  
## final value 19986.957100   
## converged  
## # weights: 25  
## initial value 22764.778330   
## iter 10 value 19986.297259  
## final value 19985.423390   
## converged  
## # weights: 41  
## initial value 22162.010006   
## iter 10 value 19985.498920  
## iter 20 value 19984.764090  
## iter 20 value 19984.764031  
## iter 20 value 19984.764024  
## final value 19984.764024   
## converged  
## # weights: 9  
## initial value 22834.899084   
## iter 10 value 19992.156712  
## iter 20 value 19981.571957  
## iter 20 value 19981.571908  
## final value 19981.571908   
## converged  
## # weights: 25  
## initial value 22431.860992   
## iter 10 value 19995.362678  
## iter 20 value 19981.608920  
## final value 19981.461614   
## converged  
## # weights: 41  
## initial value 21975.998819   
## iter 10 value 19999.120240  
## iter 20 value 19981.652241  
## final value 19981.458464   
## converged  
## # weights: 9  
## initial value 22790.140053   
## final value 20024.481700   
## converged  
## # weights: 25  
## initial value 22850.558812   
## final value 20024.481700   
## converged  
## # weights: 41  
## initial value 21622.518032   
## final value 20024.481700   
## converged  
## # weights: 9  
## initial value 23383.205145   
## iter 10 value 20031.815995  
## final value 20029.991302   
## converged  
## # weights: 25  
## initial value 23902.557106   
## iter 10 value 20030.305898  
## iter 20 value 20028.457464  
## final value 20028.457179   
## converged  
## # weights: 41  
## initial value 22834.533739   
## iter 10 value 20034.258332  
## iter 20 value 20027.798485  
## final value 20027.797745   
## converged  
## # weights: 9  
## initial value 23203.801759   
## iter 10 value 20034.504613  
## iter 20 value 20024.597256  
## iter 20 value 20024.597210  
## final value 20024.597210   
## converged  
## # weights: 25  
## initial value 23006.274780   
## iter 10 value 20042.367802  
## iter 20 value 20024.687913  
## final value 20024.504939   
## converged  
## # weights: 41  
## initial value 22720.055867   
## iter 10 value 20043.460387  
## iter 20 value 20024.700509  
## final value 20024.492225   
## converged  
## # weights: 9  
## initial value 22504.703115   
## final value 20031.021200   
## converged  
## # weights: 25  
## initial value 23124.948224   
## final value 20031.021200   
## converged  
## # weights: 41  
## initial value 24036.386735   
## final value 20031.021200   
## converged  
## # weights: 9  
## initial value 23112.894238   
## iter 10 value 20041.110513  
## final value 20036.531005   
## converged  
## # weights: 25  
## initial value 23910.868871   
## iter 10 value 20036.358222  
## final value 20034.996828   
## converged  
## # weights: 41  
## initial value 22847.132037   
## iter 10 value 20046.540986  
## iter 20 value 20034.337603  
## iter 20 value 20034.337460  
## iter 20 value 20034.337448  
## final value 20034.337448   
## converged  
## # weights: 9  
## initial value 22658.338593   
## iter 10 value 20041.016298  
## iter 20 value 20031.136436  
## iter 20 value 20031.136390  
## final value 20031.136390   
## converged  
## # weights: 25  
## initial value 21434.378128   
## iter 10 value 20039.915290  
## iter 20 value 20031.123742  
## final value 20031.032386   
## converged  
## # weights: 41  
## initial value 22661.591996   
## iter 10 value 20053.591481  
## iter 20 value 20031.281418  
## final value 20031.031212   
## converged  
## # weights: 9  
## initial value 23080.478195   
## final value 20028.005200   
## converged  
## # weights: 25  
## initial value 24395.618970   
## final value 20028.005200   
## converged  
## # weights: 41  
## initial value 23687.133186   
## final value 20028.005200   
## converged  
## # weights: 9  
## initial value 22894.792003   
## iter 10 value 20034.014785  
## final value 20033.514912   
## converged  
## # weights: 25  
## initial value 22951.412088   
## iter 10 value 20032.400739  
## final value 20031.980762   
## converged  
## # weights: 41  
## initial value 22516.835764   
## iter 10 value 20044.204561  
## iter 20 value 20031.326928  
## final value 20031.321376   
## converged  
## # weights: 9  
## initial value 23967.356079   
## iter 10 value 20035.430179  
## iter 20 value 20028.090804  
## iter 20 value 20028.090770  
## final value 20028.090770   
## converged  
## # weights: 25  
## initial value 21935.169712   
## iter 10 value 20042.145546  
## iter 20 value 20028.168227  
## final value 20028.017821   
## converged  
## # weights: 41  
## initial value 23473.944264   
## iter 10 value 20045.887347  
## iter 20 value 20028.211367  
## final value 20028.016346   
## converged  
## # weights: 9  
## initial value 23577.462851   
## final value 20016.930100   
## converged  
## # weights: 25  
## initial value 22459.127596   
## final value 20016.930100   
## converged  
## # weights: 41  
## initial value 21609.060596   
## final value 20016.930100   
## converged  
## # weights: 9  
## initial value 22992.809725   
## iter 10 value 20025.120686  
## final value 20022.439487   
## converged  
## # weights: 25  
## initial value 22696.513724   
## iter 10 value 20021.993567  
## final value 20020.905439   
## converged  
## # weights: 41  
## initial value 22458.083022   
## iter 10 value 20021.956295  
## iter 20 value 20020.246983  
## final value 20020.246042   
## converged  
## # weights: 9  
## initial value 22462.260638   
## iter 10 value 20027.749083  
## iter 20 value 20017.054834  
## iter 20 value 20017.054784  
## final value 20017.054784   
## converged  
## # weights: 25  
## initial value 23446.211970   
## iter 10 value 20030.603850  
## iter 20 value 20017.087748  
## final value 20016.945653   
## converged  
## # weights: 41  
## initial value 21784.919176   
## iter 10 value 20031.051843  
## iter 20 value 20017.092913  
## final value 20016.939508   
## converged  
## # weights: 9  
## initial value 23437.096197   
## final value 20024.481700   
## converged  
## # weights: 25  
## initial value 24076.966587   
## final value 20024.481700   
## converged  
## # weights: 41  
## initial value 23275.794247   
## final value 20024.481700   
## converged  
## # weights: 9  
## initial value 23540.234274   
## iter 10 value 20034.556204  
## final value 20029.991286   
## converged  
## # weights: 25  
## initial value 22513.559520   
## iter 10 value 20032.966712  
## iter 20 value 20028.457939  
## final value 20028.457213   
## converged  
## # weights: 41  
## initial value 22404.177861   
## iter 10 value 20046.889529  
## iter 20 value 20027.811465  
## final value 20027.797815   
## converged  
## # weights: 9  
## initial value 23191.017494   
## iter 10 value 20035.996480  
## iter 20 value 20024.614456  
## iter 20 value 20024.614403  
## final value 20024.614403   
## converged  
## # weights: 25  
## initial value 23305.371339   
## iter 10 value 20039.672072  
## iter 20 value 20024.656833  
## final value 20024.501735   
## converged  
## # weights: 41  
## initial value 22273.292108   
## iter 10 value 20043.422075  
## iter 20 value 20024.700068  
## final value 20024.492184   
## converged  
## # weights: 9  
## initial value 22926.191122   
## final value 20057.313700   
## converged  
## # weights: 25  
## initial value 23525.806691   
## final value 20057.313700   
## converged  
## # weights: 41  
## initial value 22527.506334   
## final value 20057.313700   
## converged  
## # weights: 9  
## initial value 22106.082759   
## iter 10 value 20062.963890  
## final value 20062.824844   
## converged  
## # weights: 25  
## initial value 22233.053141   
## iter 10 value 20063.055054  
## iter 20 value 20061.290421  
## iter 20 value 20061.290333  
## iter 20 value 20061.290298  
## final value 20061.290298   
## converged  
## # weights: 41  
## initial value 21077.605337   
## iter 10 value 20070.474591  
## iter 20 value 20060.633201  
## final value 20060.630676   
## converged  
## # weights: 9  
## initial value 23715.362125   
## iter 10 value 20065.423625  
## iter 20 value 20057.407201  
## iter 20 value 20057.407164  
## final value 20057.407164   
## converged  
## # weights: 25  
## initial value 22560.182454   
## iter 10 value 20073.659857  
## iter 20 value 20057.502158  
## final value 20057.328575   
## converged  
## # weights: 41  
## initial value 22839.773086   
## iter 10 value 20076.511430  
## iter 20 value 20057.535035  
## final value 20057.324434   
## converged  
## # weights: 9  
## initial value 22530.118501   
## final value 20059.710500   
## converged  
## # weights: 25  
## initial value 22903.635256   
## final value 20059.710500   
## converged  
## # weights: 41  
## initial value 22105.240939   
## final value 20059.710500   
## converged  
## # weights: 9  
## initial value 22572.291923   
## iter 10 value 20067.270917  
## final value 20065.221834   
## converged  
## # weights: 25  
## initial value 23292.624408   
## iter 10 value 20064.850508  
## final value 20063.687120   
## converged  
## # weights: 41  
## initial value 22717.247628   
## iter 10 value 20064.433575  
## iter 20 value 20063.027762  
## iter 20 value 20063.027578  
## iter 20 value 20063.027512  
## final value 20063.027512   
## converged  
## # weights: 9  
## initial value 21867.183547   
## iter 10 value 20068.010362  
## iter 20 value 20059.806191  
## iter 20 value 20059.806153  
## final value 20059.806153   
## converged  
## # weights: 25  
## initial value 22157.422686   
## iter 10 value 20070.983088  
## iter 20 value 20059.840464  
## final value 20059.724163   
## converged  
## # weights: 41  
## initial value 22151.198489   
## iter 10 value 20076.494364  
## iter 20 value 20059.904005  
## final value 20059.720792   
## converged  
## # weights: 9  
## initial value 22514.433515   
## final value 19959.334000   
## converged  
## # weights: 25  
## initial value 22635.018894   
## final value 19959.334000   
## converged  
## # weights: 41  
## initial value 22604.099639   
## final value 19959.334000   
## converged  
## # weights: 9  
## initial value 22812.268693   
## iter 10 value 19965.133962  
## final value 19964.842165   
## converged  
## # weights: 25  
## initial value 23042.979497   
## iter 10 value 19965.208872  
## iter 20 value 19963.309273  
## final value 19963.308556   
## converged  
## # weights: 41  
## initial value 23778.685425   
## iter 10 value 19973.726415  
## iter 20 value 19962.650083  
## final value 19962.649337   
## converged  
## # weights: 9  
## initial value 22758.130830   
## iter 10 value 19971.161866  
## iter 20 value 19959.470366  
## iter 20 value 19959.470311  
## final value 19959.470311   
## converged  
## # weights: 25  
## initial value 21318.254996   
## iter 10 value 19967.111386  
## iter 20 value 19959.423667  
## final value 19959.345529   
## converged  
## # weights: 41  
## initial value 23054.912027   
## iter 10 value 19976.821718  
## iter 20 value 19959.535620  
## final value 19959.348516   
## converged  
## # weights: 9  
## initial value 21590.323754   
## final value 20017.742500   
## converged  
## # weights: 25  
## initial value 22633.447689   
## final value 20017.742500   
## converged  
## # weights: 41  
## initial value 21703.200463   
## final value 20017.742500   
## converged  
## # weights: 9  
## initial value 22904.811912   
## iter 10 value 20023.662334  
## final value 20023.251832   
## converged  
## # weights: 25  
## initial value 23887.620509   
## iter 10 value 20027.454309  
## iter 20 value 20021.720571  
## final value 20021.717807   
## converged  
## # weights: 41  
## initial value 24007.301759   
## iter 10 value 20035.398233  
## iter 20 value 20021.070661  
## final value 20021.058343   
## converged  
## # weights: 9  
## initial value 22896.686246   
## iter 10 value 20027.688298  
## iter 20 value 20017.857167  
## iter 20 value 20017.857121  
## final value 20017.857121   
## converged  
## # weights: 25  
## initial value 23275.913543   
## iter 10 value 20029.826614  
## iter 20 value 20017.881820  
## final value 20017.756520   
## converged  
## # weights: 41  
## initial value 21837.905748   
## iter 10 value 20033.821842  
## iter 20 value 20017.927882  
## final value 20017.751406   
## converged  
## # weights: 9  
## initial value 23619.054821   
## final value 20044.160500   
## converged  
## # weights: 25  
## initial value 22466.420458   
## final value 20044.160500   
## converged  
## # weights: 41  
## initial value 21906.935735   
## final value 20044.160500   
## converged  
## # weights: 9  
## initial value 23006.409281   
## iter 10 value 20049.932613  
## final value 20049.670835   
## converged  
## # weights: 25  
## initial value 23266.239984   
## iter 10 value 20054.211955  
## iter 20 value 20048.138804  
## final value 20048.136467   
## converged  
## # weights: 41  
## initial value 22508.036073   
## iter 10 value 20049.743547  
## iter 20 value 20047.477435  
## iter 20 value 20047.477245  
## iter 20 value 20047.477156  
## final value 20047.477156   
## converged  
## # weights: 9  
## initial value 22560.314976   
## iter 10 value 20053.875486  
## iter 20 value 20044.272506  
## iter 20 value 20044.272461  
## final value 20044.272461   
## converged  
## # weights: 25  
## initial value 22391.850522   
## iter 10 value 20058.365869  
## iter 20 value 20044.324277  
## final value 20044.171753   
## converged  
## # weights: 41  
## initial value 21145.618970   
## iter 10 value 20052.748890  
## iter 20 value 20044.259517  
## final value 20044.169231   
## converged  
## # weights: 9  
## initial value 22081.268084   
## final value 20027.529200   
## converged  
## # weights: 25  
## initial value 23912.790631   
## final value 20027.529200   
## converged  
## # weights: 41  
## initial value 23016.062885   
## final value 20027.529200   
## converged  
## # weights: 9  
## initial value 22790.037870   
## iter 10 value 20035.424880  
## final value 20033.038893   
## converged  
## # weights: 25  
## initial value 23850.830311   
## iter 10 value 20032.274854  
## iter 20 value 20031.505075  
## final value 20031.504729   
## converged  
## # weights: 41  
## initial value 22623.544499   
## iter 10 value 20044.585915  
## iter 20 value 20030.846121  
## final value 20030.845312   
## converged  
## # weights: 9  
## initial value 22598.662836   
## iter 10 value 20037.564405  
## iter 20 value 20027.644898  
## iter 20 value 20027.644852  
## final value 20027.644852   
## converged  
## # weights: 25  
## initial value 23236.775449   
## iter 10 value 20043.020140  
## iter 20 value 20027.707798  
## final value 20027.542579   
## converged  
## # weights: 41  
## initial value 22440.328878   
## iter 10 value 20046.728171  
## iter 20 value 20027.750549  
## final value 20027.539890   
## converged  
## # weights: 9  
## initial value 23273.875099   
## final value 20019.610100   
## converged  
## # weights: 25  
## initial value 23785.644072   
## final value 20019.610100   
## converged  
## # weights: 41  
## initial value 23077.279917   
## final value 20019.610100   
## converged  
## # weights: 9  
## initial value 23701.132276   
## iter 10 value 20025.307088  
## final value 20025.119562   
## converged  
## # weights: 25  
## initial value 21973.074763   
## iter 10 value 20024.320514  
## final value 20023.585518   
## converged  
## # weights: 41  
## initial value 22216.628496   
## iter 10 value 20033.979068  
## iter 20 value 20022.926814  
## final value 20022.926064   
## converged  
## # weights: 9  
## initial value 22331.933244   
## iter 10 value 20029.442186  
## iter 20 value 20019.723456  
## iter 20 value 20019.723411  
## final value 20019.723411   
## converged  
## # weights: 25  
## initial value 23034.547099   
## iter 10 value 20033.664477  
## iter 20 value 20019.772136  
## final value 20019.622785   
## converged  
## # weights: 41  
## initial value 23821.978267   
## iter 10 value 20035.354535  
## iter 20 value 20019.791621  
## final value 20019.624920   
## converged  
## # weights: 9  
## initial value 22320.168346   
## final value 20020.529200   
## converged  
## # weights: 25  
## initial value 23116.899034   
## final value 20020.529200   
## converged  
## # weights: 41  
## initial value 23370.736917   
## final value 20020.529200   
## converged  
## # weights: 9  
## initial value 21762.463966   
## iter 10 value 20028.319057  
## final value 20026.038688   
## converged  
## # weights: 25  
## initial value 21800.495287   
## iter 10 value 20026.005013  
## final value 20024.504610   
## converged  
## # weights: 41  
## initial value 23110.721910   
## iter 10 value 20024.623244  
## final value 20023.845240   
## converged  
## # weights: 9  
## initial value 21864.161088   
## iter 10 value 20028.573085  
## iter 20 value 20020.621940  
## iter 20 value 20020.621903  
## final value 20020.621903   
## converged  
## # weights: 25  
## initial value 22168.884862   
## iter 10 value 20032.827962  
## iter 20 value 20020.670995  
## final value 20020.545450   
## converged  
## # weights: 41  
## initial value 23702.681494   
## iter 10 value 20035.303942  
## iter 20 value 20020.699541  
## final value 20020.542340   
## converged  
## # weights: 9  
## initial value 22348.040971   
## final value 20028.595700   
## converged  
## # weights: 25  
## initial value 22424.847889   
## final value 20028.595700   
## converged  
## # weights: 41  
## initial value 21761.753498   
## final value 20028.595700   
## converged  
## # weights: 9  
## initial value 23825.476404   
## iter 10 value 20036.486308  
## final value 20034.105385   
## converged  
## # weights: 25  
## initial value 23152.626366   
## iter 10 value 20033.207943  
## final value 20032.571267   
## converged  
## # weights: 41  
## initial value 21577.058820   
## iter 10 value 20040.152782  
## iter 20 value 20031.916700  
## final value 20031.911815   
## converged  
## # weights: 9  
## initial value 23759.530018   
## iter 10 value 20037.924760  
## iter 20 value 20028.703257  
## iter 20 value 20028.703214  
## final value 20028.703214   
## converged  
## # weights: 25  
## initial value 21742.337496   
## iter 10 value 20039.078785  
## iter 20 value 20028.716562  
## final value 20028.609342   
## converged  
## # weights: 41  
## initial value 21424.173164   
## iter 10 value 20038.176447  
## iter 20 value 20028.706158  
## final value 20028.604957   
## converged  
## # weights: 9  
## initial value 21867.470047   
## final value 20027.409700   
## converged  
## # weights: 25  
## initial value 21899.812068   
## final value 20027.409700   
## converged  
## # weights: 41  
## initial value 22310.549341   
## final value 20027.409700   
## converged  
## # weights: 9  
## initial value 22218.575735   
## iter 10 value 20032.962216  
## final value 20032.919389   
## converged  
## # weights: 25  
## initial value 23451.816583   
## iter 10 value 20033.373388  
## iter 20 value 20031.385384  
## iter 20 value 20031.385256  
## iter 20 value 20031.385235  
## final value 20031.385235   
## converged  
## # weights: 41  
## initial value 22338.489478   
## iter 10 value 20032.149078  
## iter 20 value 20030.725960  
## iter 20 value 20030.725826  
## iter 20 value 20030.725816  
## final value 20030.725816   
## converged  
## # weights: 9  
## initial value 22535.415296   
## iter 10 value 20037.000130  
## iter 20 value 20027.520270  
## iter 20 value 20027.520226  
## final value 20027.520226   
## converged  
## # weights: 25  
## initial value 23705.436048   
## iter 10 value 20037.766530  
## iter 20 value 20027.529106  
## final value 20027.425722   
## converged  
## # weights: 41  
## initial value 21890.116599   
## iter 10 value 20042.207876  
## iter 20 value 20027.580311  
## final value 20027.420332   
## converged  
## # weights: 9  
## initial value 21672.887803   
## final value 20003.107600   
## converged  
## # weights: 25  
## initial value 22433.661655   
## final value 20003.107600   
## converged  
## # weights: 41  
## initial value 23067.851627   
## final value 20003.107600   
## converged  
## # weights: 9  
## initial value 22516.554006   
## iter 10 value 20008.765057  
## final value 20008.616642   
## converged  
## # weights: 25  
## initial value 21992.558977   
## iter 10 value 20007.907977  
## final value 20007.082724   
## converged  
## # weights: 41  
## initial value 23969.236148   
## iter 10 value 20016.037555  
## iter 20 value 20006.427808  
## final value 20006.423359   
## converged  
## # weights: 9  
## initial value 22476.082930   
## iter 10 value 20013.946475  
## iter 20 value 20003.232564  
## iter 20 value 20003.232514  
## final value 20003.232514   
## converged  
## # weights: 25  
## initial value 23535.563449   
## iter 10 value 20016.586320  
## iter 20 value 20003.262999  
## final value 20003.127403   
## converged  
## # weights: 41  
## initial value 22444.185629   
## iter 10 value 20021.683623  
## iter 20 value 20003.321767  
## final value 20003.117561   
## converged  
## # weights: 9  
## initial value 22301.746276   
## final value 19991.090000   
## converged  
## # weights: 25  
## initial value 21322.916980   
## final value 19991.090000   
## converged  
## # weights: 41  
## initial value 24479.352013   
## final value 19991.090000   
## converged  
## # weights: 9  
## initial value 21847.516251   
## iter 10 value 19997.273568  
## final value 19996.598792   
## converged  
## # weights: 25  
## initial value 23778.508312   
## iter 10 value 19996.104157  
## final value 19995.064962   
## converged  
## # weights: 41  
## initial value 22653.169052   
## iter 10 value 19995.150602  
## final value 19994.405765   
## converged  
## # weights: 9  
## initial value 21818.632483   
## iter 10 value 19998.864732  
## iter 20 value 19991.179637  
## iter 20 value 19991.179601  
## final value 19991.179601   
## converged  
## # weights: 25  
## initial value 23499.068641   
## iter 10 value 20004.442163  
## iter 20 value 19991.243940  
## final value 19991.109931   
## converged  
## # weights: 41  
## initial value 22092.243924   
## iter 10 value 20006.511611  
## iter 20 value 19991.267799  
## final value 19991.100670   
## converged  
## # weights: 9  
## initial value 22977.672625   
## final value 20031.360500   
## converged  
## # weights: 25  
## initial value 21659.553476   
## final value 20031.360500   
## converged  
## # weights: 41  
## initial value 23445.623400   
## final value 20031.360500   
## converged  
## # weights: 9  
## initial value 23677.840387   
## iter 10 value 20037.219710  
## final value 20036.870295   
## converged  
## # weights: 25  
## initial value 24224.359500   
## iter 10 value 20036.613410  
## final value 20035.336097   
## converged  
## # weights: 41  
## initial value 23066.452658   
## iter 10 value 20063.664435  
## iter 20 value 20034.717735  
## final value 20034.676719   
## converged  
## # weights: 9  
## initial value 21815.465906   
## iter 10 value 20039.121618  
## iter 20 value 20031.449980  
## iter 20 value 20031.449944  
## final value 20031.449944   
## converged  
## # weights: 25  
## initial value 22403.185152   
## iter 10 value 20046.199561  
## iter 20 value 20031.531583  
## final value 20031.374048   
## converged  
## # weights: 41  
## initial value 22309.892557   
## iter 10 value 20050.337819  
## iter 20 value 20031.579294  
## final value 20031.369683   
## converged  
## # weights: 9  
## initial value 22911.739357   
## final value 19946.097700   
## converged  
## # weights: 25  
## initial value 23904.470325   
## final value 19946.097700   
## converged  
## # weights: 41  
## initial value 23804.206482   
## final value 19946.097700   
## converged  
## # weights: 9  
## initial value 23152.988301   
## iter 10 value 19951.748577  
## final value 19951.605768   
## converged  
## # weights: 25  
## initial value 22341.157250   
## iter 10 value 19951.004847  
## final value 19950.072238   
## converged  
## # weights: 41  
## initial value 23522.295198   
## iter 10 value 19950.989121  
## final value 19949.413031   
## converged  
## # weights: 9  
## initial value 23055.107840   
## iter 10 value 19955.946788  
## iter 20 value 19946.211252  
## iter 20 value 19946.211207  
## final value 19946.211207   
## converged  
## # weights: 25  
## initial value 22636.774755   
## iter 10 value 19961.951720  
## iter 20 value 19946.280484  
## final value 19946.113256   
## converged  
## # weights: 41  
## initial value 22275.592647   
## iter 10 value 19963.450147  
## iter 20 value 19946.297760  
## final value 19946.107351   
## converged  
## # weights: 9  
## initial value 22564.511851   
## final value 19957.491700   
## converged  
## # weights: 25  
## initial value 22102.834731   
## final value 19957.491700   
## converged  
## # weights: 41  
## initial value 22422.558072   
## final value 19957.491700   
## converged  
## # weights: 9  
## initial value 23155.813597   
## iter 10 value 19965.809227  
## final value 19962.999821   
## converged  
## # weights: 25  
## initial value 23919.564235   
## iter 10 value 19962.310014  
## final value 19961.466263   
## converged  
## # weights: 41  
## initial value 21751.872510   
## iter 10 value 19965.598285  
## iter 20 value 19960.807312  
## final value 19960.806995   
## converged  
## # weights: 9  
## initial value 22760.575599   
## iter 10 value 19967.402395  
## iter 20 value 19957.605963  
## iter 20 value 19957.605917  
## final value 19957.605917   
## converged  
## # weights: 25  
## initial value 22987.926577   
## iter 10 value 19971.137218  
## iter 20 value 19957.649022  
## final value 19957.509821   
## converged  
## # weights: 41  
## initial value 21796.077342   
## iter 10 value 19973.348135  
## iter 20 value 19957.674512  
## final value 19957.501899   
## converged  
## # weights: 9  
## initial value 22919.148582   
## final value 19927.214500   
## converged  
## # weights: 25  
## initial value 22507.254695   
## final value 19927.214500   
## converged  
## # weights: 41  
## initial value 24296.091398   
## final value 19927.214500   
## converged  
## # weights: 9  
## initial value 22436.667360   
## iter 10 value 19933.371792  
## final value 19932.722097   
## converged  
## # weights: 25  
## initial value 22869.676732   
## iter 10 value 19931.990579  
## final value 19931.188678   
## converged  
## # weights: 41  
## initial value 21927.222326   
## iter 10 value 19944.107384  
## iter 20 value 19930.533940  
## final value 19930.529489   
## converged  
## # weights: 9  
## initial value 23842.703447   
## iter 10 value 19935.679429  
## iter 20 value 19927.312094  
## iter 20 value 19927.312055  
## final value 19927.312055   
## converged  
## # weights: 25  
## initial value 21630.887945   
## iter 10 value 19938.295879  
## iter 20 value 19927.342260  
## final value 19927.225651   
## converged  
## # weights: 41  
## initial value 22463.997826   
## iter 10 value 19946.718596  
## iter 20 value 19927.439367  
## final value 19927.226244   
## converged  
## # weights: 9  
## initial value 23137.058096   
## final value 20052.866000   
## converged  
## # weights: 25  
## initial value 22520.757510   
## final value 20052.866000   
## converged  
## # weights: 41  
## initial value 22409.071650   
## final value 20052.866000   
## converged  
## # weights: 9  
## initial value 22462.212230   
## iter 10 value 20059.498570  
## final value 20058.376800   
## converged  
## # weights: 25  
## initial value 22541.634211   
## iter 10 value 20058.268063  
## final value 20056.842360   
## converged  
## # weights: 41  
## initial value 22436.982006   
## iter 10 value 20056.963593  
## final value 20056.182784   
## converged  
## # weights: 9  
## initial value 22860.207656   
## iter 10 value 20063.727980  
## iter 20 value 20052.991230  
## iter 20 value 20052.991180  
## final value 20052.991180   
## converged  
## # weights: 25  
## initial value 21234.597698   
## iter 10 value 20059.295021  
## iter 20 value 20052.940122  
## final value 20052.876729   
## converged  
## # weights: 41  
## initial value 23779.941303   
## iter 10 value 20066.539496  
## iter 20 value 20053.023645  
## final value 20052.877057   
## converged  
## # weights: 9  
## initial value 22775.965768   
## final value 20011.186000   
## converged  
## # weights: 25  
## initial value 22081.310982   
## final value 20011.186000   
## converged  
## # weights: 41  
## initial value 22969.176135   
## final value 20011.186000   
## converged  
## # weights: 9  
## initial value 23308.494033   
## iter 10 value 20016.889422  
## final value 20016.695223   
## converged  
## # weights: 25  
## initial value 21930.706704   
## iter 10 value 20015.695922  
## final value 20015.161261   
## converged  
## # weights: 41  
## initial value 21453.838430   
## iter 10 value 20015.927433  
## final value 20014.501940   
## converged  
## # weights: 9  
## initial value 22824.981910   
## iter 10 value 20022.874094  
## iter 20 value 20011.320755  
## iter 20 value 20011.320701  
## final value 20011.320701   
## converged  
## # weights: 25  
## initial value 23485.062091   
## iter 10 value 20027.051766  
## iter 20 value 20011.368920  
## final value 20011.198844   
## converged  
## # weights: 41  
## initial value 22568.648407   
## iter 10 value 20031.154507  
## iter 20 value 20011.416221  
## final value 20011.195372   
## converged  
## # weights: 9  
## initial value 22956.714333   
## final value 20058.885200   
## converged  
## # weights: 25  
## initial value 22869.432348   
## final value 20058.885200   
## converged  
## # weights: 41  
## initial value 21729.321009   
## final value 20058.885200   
## converged  
## # weights: 9  
## initial value 23282.977107   
## iter 10 value 20069.441360  
## final value 20064.396341   
## converged  
## # weights: 25  
## initial value 22856.750990   
## iter 10 value 20066.487997  
## iter 20 value 20062.861932  
## iter 20 value 20062.861783  
## iter 20 value 20062.861732  
## final value 20062.861732   
## converged  
## # weights: 41  
## initial value 24191.165310   
## iter 10 value 20071.144851  
## iter 20 value 20062.203542  
## final value 20062.202036   
## converged  
## # weights: 9  
## initial value 22580.965688   
## iter 10 value 20070.278080  
## iter 20 value 20059.016551  
## iter 20 value 20059.016498  
## final value 20059.016498   
## converged  
## # weights: 25  
## initial value 22274.733144   
## iter 10 value 20070.662128  
## iter 20 value 20059.020979  
## final value 20058.900605   
## converged  
## # weights: 41  
## initial value 24023.214111   
## iter 10 value 20073.026598  
## iter 20 value 20059.048239  
## final value 20058.897818   
## converged  
## # weights: 9  
## initial value 23319.772229   
## final value 19963.569700   
## converged  
## # weights: 25  
## initial value 22286.953535   
## final value 19963.569700   
## converged  
## # weights: 41  
## initial value 22519.280378   
## final value 19963.569700   
## converged  
## # weights: 9  
## initial value 22813.417441   
## iter 10 value 19969.728117  
## final value 19969.077724   
## converged  
## # weights: 25  
## initial value 22008.762976   
## iter 10 value 19969.077856  
## final value 19967.544077   
## converged  
## # weights: 41  
## initial value 22362.737855   
## iter 10 value 19972.025932  
## iter 20 value 19966.887972  
## final value 19966.884822   
## converged  
## # weights: 9  
## initial value 23257.835809   
## iter 10 value 19973.410341  
## iter 20 value 19963.683155  
## iter 20 value 19963.683109  
## final value 19963.683109   
## converged  
## # weights: 25  
## initial value 23475.295665   
## iter 10 value 19976.585354  
## iter 20 value 19963.719760  
## final value 19963.582521   
## converged  
## # weights: 41  
## initial value 22126.058967   
## iter 10 value 19983.608543  
## iter 20 value 19963.800732  
## final value 19963.581129   
## converged  
## # weights: 9  
## initial value 23166.933701   
## final value 19992.610100   
## converged  
## # weights: 25  
## initial value 22577.527285   
## final value 19992.610100   
## converged  
## # weights: 41  
## initial value 21797.343395   
## final value 19992.610100   
## converged  
## # weights: 9  
## initial value 22520.709298   
## iter 10 value 19998.986898  
## final value 19998.118923   
## converged  
## # weights: 25  
## initial value 23577.711850   
## iter 10 value 20002.162172  
## iter 20 value 19996.585681  
## final value 19996.585115   
## converged  
## # weights: 41  
## initial value 22469.855590   
## iter 10 value 19996.936984  
## final value 19995.925752   
## converged  
## # weights: 9  
## initial value 22742.419160   
## iter 10 value 20003.663990  
## iter 20 value 19992.737543  
## iter 20 value 19992.737492  
## final value 19992.737492   
## converged  
## # weights: 25  
## initial value 21774.706221   
## iter 10 value 20003.916953  
## iter 20 value 19992.740459  
## final value 19992.621919   
## converged  
## # weights: 41  
## initial value 22862.891345   
## iter 10 value 20011.292320  
## iter 20 value 19992.825491  
## final value 19992.624924   
## converged  
## # weights: 9  
## initial value 23003.987554   
## final value 20005.865200   
## converged  
## # weights: 25  
## initial value 22406.759761   
## final value 20005.865200   
## converged  
## # weights: 41  
## initial value 21286.903396   
## final value 20005.865200   
## converged  
## # weights: 9  
## initial value 22092.870585   
## iter 10 value 20012.540642  
## final value 20011.374309   
## converged  
## # weights: 25  
## initial value 23789.297966   
## iter 10 value 20011.468034  
## iter 20 value 20009.840498  
## iter 20 value 20009.840374  
## iter 20 value 20009.840368  
## final value 20009.840368   
## converged  
## # weights: 41  
## initial value 21714.575137   
## iter 10 value 20010.621963  
## final value 20009.180986   
## converged  
## # weights: 9  
## initial value 23224.943528   
## iter 10 value 20017.123672  
## iter 20 value 20005.995001  
## iter 20 value 20005.994949  
## final value 20005.994949   
## converged  
## # weights: 25  
## initial value 23320.890923   
## iter 10 value 20018.363526  
## iter 20 value 20006.009296  
## final value 20005.882866   
## converged  
## # weights: 41  
## initial value 21227.600800   
## iter 10 value 20015.072325  
## iter 20 value 20005.971351  
## final value 20005.873977   
## converged  
## # weights: 9  
## initial value 23565.825801   
## final value 20022.082000   
## converged  
## # weights: 25  
## initial value 22471.297814   
## final value 20022.082000   
## converged  
## # weights: 41  
## initial value 22744.389083   
## final value 20022.082000   
## converged  
## # weights: 9  
## initial value 23668.257009   
## iter 10 value 20029.091511  
## final value 20027.591643   
## converged  
## # weights: 25  
## initial value 22189.701018   
## iter 10 value 20027.214517  
## final value 20026.057422   
## converged  
## # weights: 41  
## initial value 23940.762111   
## iter 10 value 20027.099597  
## iter 20 value 20025.398306  
## final value 20025.398003   
## converged  
## # weights: 9  
## initial value 22261.557741   
## iter 10 value 20031.275955  
## iter 20 value 20022.187999  
## iter 20 value 20022.187957  
## final value 20022.187957   
## converged  
## # weights: 25  
## initial value 22305.700386   
## iter 10 value 20036.570605  
## iter 20 value 20022.249042  
## final value 20022.096022   
## converged  
## # weights: 41  
## initial value 22801.751500   
## iter 10 value 20042.955254  
## iter 20 value 20022.322652  
## final value 20022.091829   
## converged  
## # weights: 9  
## initial value 22842.119137   
## final value 20044.851700   
## converged  
## # weights: 25  
## initial value 21536.801864   
## final value 20044.851700   
## converged  
## # weights: 41  
## initial value 24071.700704   
## final value 20044.851700   
## converged  
## # weights: 9  
## initial value 23174.202845   
## iter 10 value 20050.781052  
## final value 20050.362024   
## converged  
## # weights: 25  
## initial value 22928.812939   
## iter 10 value 20050.168749  
## iter 20 value 20048.829271  
## final value 20048.827645   
## converged  
## # weights: 41  
## initial value 22362.817886   
## iter 10 value 20051.983393  
## iter 20 value 20048.168801  
## final value 20048.168167   
## converged  
## # weights: 9  
## initial value 21869.605631   
## iter 10 value 20053.228631  
## iter 20 value 20044.948279  
## iter 20 value 20044.948241  
## final value 20044.948241   
## converged  
## # weights: 25  
## initial value 22203.868829   
## iter 10 value 20058.695757  
## iter 20 value 20045.011311  
## final value 20044.864238   
## converged  
## # weights: 41  
## initial value 21934.029881   
## iter 10 value 20057.670217  
## iter 20 value 20044.999487  
## final value 20044.861256   
## converged  
## # weights: 9  
## initial value 22391.006910   
## final value 19981.990000   
## converged  
## # weights: 25  
## initial value 23803.743080   
## final value 19981.990000   
## converged  
## # weights: 41  
## initial value 23004.571029   
## final value 19981.990000   
## converged  
## # weights: 9  
## initial value 23207.406873   
## iter 10 value 19988.411128  
## final value 19987.498612   
## converged  
## # weights: 25  
## initial value 23528.832968   
## iter 10 value 19989.078853  
## iter 20 value 19985.965089  
## iter 20 value 19985.964948  
## iter 20 value 19985.964925  
## final value 19985.964925   
## converged  
## # weights: 41  
## initial value 22913.883480   
## iter 10 value 20000.498495  
## iter 20 value 19985.334497  
## final value 19985.305578   
## converged  
## # weights: 9  
## initial value 23128.744231   
## iter 10 value 19991.339377  
## iter 20 value 19982.097791  
## iter 20 value 19982.097748  
## final value 19982.097748   
## converged  
## # weights: 25  
## initial value 22261.691738   
## iter 10 value 19994.239472  
## iter 20 value 19982.131227  
## final value 19982.001820   
## converged  
## # weights: 41  
## initial value 23583.543356   
## iter 10 value 19997.778246  
## iter 20 value 19982.172026  
## final value 19982.003010   
## converged  
## # weights: 9  
## initial value 23591.764663   
## final value 19943.705200   
## converged  
## # weights: 25  
## initial value 22294.564140   
## final value 19943.705200   
## converged  
## # weights: 41  
## initial value 23045.610594   
## final value 19943.705200   
## converged  
## # weights: 9  
## initial value 22401.650156   
## iter 10 value 19949.879678  
## final value 19949.213102   
## converged  
## # weights: 25  
## initial value 23915.462797   
## iter 10 value 19949.552647  
## final value 19947.679607   
## converged  
## # weights: 41  
## initial value 21969.626765   
## iter 10 value 19959.010016  
## iter 20 value 19947.021161  
## final value 19947.020405   
## converged  
## # weights: 9  
## initial value 22497.478818   
## iter 10 value 19954.697105  
## iter 20 value 19943.831928  
## iter 20 value 19943.831877  
## final value 19943.831877   
## converged  
## # weights: 25  
## initial value 22907.820112   
## iter 10 value 19956.999716  
## iter 20 value 19943.858475  
## final value 19943.719086   
## converged  
## # weights: 41  
## initial value 22637.328061   
## iter 10 value 19961.527436  
## iter 20 value 19943.910676  
## final value 19943.716210   
## converged  
## # weights: 9  
## initial value 23649.533180   
## final value 20013.749200   
## converged  
## # weights: 25  
## initial value 23273.093080   
## final value 20013.749200   
## converged  
## # weights: 41  
## initial value 23295.123337   
## final value 20013.749200   
## converged  
## # weights: 9  
## initial value 21753.927689   
## iter 10 value 20021.777446  
## final value 20019.258503   
## converged  
## # weights: 25  
## initial value 23578.759619   
## iter 10 value 20018.267876  
## final value 20017.724462   
## converged  
## # weights: 41  
## initial value 24254.642511   
## iter 10 value 20030.349110  
## iter 20 value 20017.065905  
## final value 20017.065117   
## converged  
## # weights: 9  
## initial value 23081.669070   
## iter 10 value 20023.941586  
## iter 20 value 20013.866710  
## iter 20 value 20013.866663  
## final value 20013.866663   
## converged  
## # weights: 25  
## initial value 21850.184790   
## iter 10 value 20026.190336  
## iter 20 value 20013.892637  
## final value 20013.760863   
## converged  
## # weights: 41  
## initial value 22136.831053   
## iter 10 value 20031.537532  
## iter 20 value 20013.954286  
## final value 20013.758585   
## converged  
## # weights: 9  
## initial value 22391.894016   
## final value 20048.881700   
## converged  
## # weights: 25  
## initial value 22707.755042   
## final value 20048.881700   
## converged  
## # weights: 41  
## initial value 23415.165048   
## final value 20048.881700   
## converged  
## # weights: 9  
## initial value 22842.261562   
## iter 10 value 20054.818606  
## final value 20054.392272   
## converged  
## # weights: 25  
## initial value 22225.851559   
## iter 10 value 20053.601750  
## final value 20052.857882   
## converged  
## # weights: 41  
## initial value 21451.234315   
## iter 10 value 20054.762484  
## final value 20052.198402   
## converged  
## # weights: 9  
## initial value 23383.705811   
## iter 10 value 20059.641379  
## iter 20 value 20049.005751  
## iter 20 value 20049.005701  
## final value 20049.005701   
## converged  
## # weights: 25  
## initial value 22921.351394   
## iter 10 value 20063.604590  
## iter 20 value 20049.051443  
## final value 20048.895516   
## converged  
## # weights: 41  
## initial value 21564.868282   
## iter 10 value 20059.850419  
## iter 20 value 20049.008161  
## final value 20048.891194   
## converged  
## # weights: 9  
## initial value 23744.655105   
## final value 20039.160100   
## converged  
## # weights: 25  
## initial value 22524.275556   
## final value 20039.160100   
## converged  
## # weights: 41  
## initial value 21488.932522   
## final value 20039.160100   
## converged  
## # weights: 9  
## initial value 23424.358473   
## iter 10 value 20044.888341  
## final value 20044.670217   
## converged  
## # weights: 25  
## initial value 23293.731912   
## iter 10 value 20052.583376  
## iter 20 value 20043.137326  
## final value 20043.135978   
## converged  
## # weights: 41  
## initial value 22158.402171   
## iter 10 value 20043.728571  
## iter 20 value 20042.476490  
## iter 20 value 20042.476434  
## iter 20 value 20042.476430  
## final value 20042.476430   
## converged  
## # weights: 9  
## initial value 23017.133205   
## iter 10 value 20049.549580  
## iter 20 value 20039.279883  
## iter 20 value 20039.279835  
## final value 20039.279835   
## converged  
## # weights: 25  
## initial value 22550.120966   
## iter 10 value 20053.657634  
## iter 20 value 20039.327245  
## final value 20039.174153   
## converged  
## # weights: 41  
## initial value 21678.101454   
## iter 10 value 20051.935814  
## iter 20 value 20039.307394  
## final value 20039.170056   
## converged  
## # weights: 9  
## initial value 22513.978789   
## final value 19995.272500   
## converged  
## # weights: 25  
## initial value 23095.012402   
## final value 19995.272500   
## converged  
## # weights: 41  
## initial value 22331.433529   
## final value 19995.272500   
## converged  
## # weights: 9  
## initial value 22866.763175   
## iter 10 value 20001.534622  
## final value 20000.781374   
## converged  
## # weights: 25  
## initial value 23376.281922   
## iter 10 value 20003.056978  
## iter 20 value 19999.248395  
## final value 19999.247515   
## converged  
## # weights: 41  
## initial value 22848.462883   
## iter 10 value 20014.137433  
## iter 20 value 19998.628585  
## final value 19998.588160   
## converged  
## # weights: 9  
## initial value 21806.057084   
## iter 10 value 20003.566979  
## iter 20 value 19995.368129  
## iter 20 value 19995.368091  
## final value 19995.368091   
## converged  
## # weights: 25  
## initial value 22717.334491   
## iter 10 value 20012.415591  
## iter 20 value 19995.470146  
## final value 19995.283585   
## converged  
## # weights: 41  
## initial value 21871.531797   
## iter 10 value 20011.029222  
## iter 20 value 19995.454163  
## final value 19995.282930   
## converged  
## # weights: 9  
## initial value 23100.076330   
## final value 19959.537700   
## converged  
## # weights: 25  
## initial value 23377.427558   
## final value 19959.537700   
## converged  
## # weights: 41  
## initial value 24261.312187   
## final value 19959.537700   
## converged  
## # weights: 9  
## initial value 22780.621407   
## iter 10 value 19966.690325  
## final value 19965.045906   
## converged  
## # weights: 25  
## initial value 22202.848338   
## iter 10 value 19965.502384  
## final value 19963.512318   
## converged  
## # weights: 41  
## initial value 23418.523166   
## iter 10 value 19965.000209  
## iter 20 value 19962.853158  
## iter 20 value 19962.853076  
## iter 20 value 19962.853063  
## final value 19962.853063   
## converged  
## # weights: 9  
## initial value 23178.359577   
## iter 10 value 19969.526626  
## iter 20 value 19959.652864  
## iter 20 value 19959.652818  
## final value 19959.652818   
## converged  
## # weights: 25  
## initial value 22298.946222   
## iter 10 value 19975.227106  
## iter 20 value 19959.718587  
## final value 19959.553169   
## converged  
## # weights: 41  
## initial value 22012.319579   
## iter 10 value 19976.190004  
## iter 20 value 19959.729688  
## final value 19959.547858   
## converged  
## # weights: 9  
## initial value 23672.471692   
## final value 19990.409200   
## converged  
## # weights: 25  
## initial value 22311.025971   
## final value 19990.409200   
## converged  
## # weights: 41  
## initial value 21543.513609   
## final value 19990.409200   
## converged  
## # weights: 9  
## initial value 22658.630960   
## iter 10 value 19996.256193  
## final value 19995.917899   
## converged  
## # weights: 25  
## initial value 22085.865277   
## iter 10 value 19995.560146  
## final value 19994.384062   
## converged  
## # weights: 41  
## initial value 23575.678075   
## iter 10 value 19994.770878  
## iter 20 value 19993.724855  
## iter 20 value 19993.724773  
## iter 20 value 19993.724750  
## final value 19993.724750   
## converged  
## # weights: 9  
## initial value 21764.991963   
## iter 10 value 19997.912761  
## iter 20 value 19990.495710  
## iter 20 value 19990.495676  
## final value 19990.495676   
## converged  
## # weights: 25  
## initial value 21779.600970   
## iter 10 value 20002.505155  
## iter 20 value 19990.548657  
## final value 19990.420755   
## converged  
## # weights: 41  
## initial value 22047.236838   
## iter 10 value 20006.945265  
## iter 20 value 19990.599848  
## final value 19990.419870   
## converged  
## # weights: 9  
## initial value 22657.200514   
## final value 20036.647600   
## converged  
## # weights: 25  
## initial value 23313.896487   
## final value 20036.647600   
## converged  
## # weights: 41  
## initial value 21805.988439   
## final value 20036.647600   
## converged  
## # weights: 9  
## initial value 22475.060289   
## iter 10 value 20043.018816  
## final value 20042.157608   
## converged  
## # weights: 25  
## initial value 21747.760041   
## iter 10 value 20041.809102  
## final value 20040.623396   
## converged  
## # weights: 41  
## initial value 22364.232292   
## iter 10 value 20040.963099  
## final value 20039.963889   
## converged  
## # weights: 9  
## initial value 23488.267781   
## iter 10 value 20045.546720  
## iter 20 value 20036.750200  
## iter 20 value 20036.750159  
## final value 20036.750159   
## converged  
## # weights: 25  
## initial value 22931.124653   
## iter 10 value 20052.210669  
## iter 20 value 20036.827030  
## final value 20036.659558   
## converged  
## # weights: 41  
## initial value 24082.298566   
## iter 10 value 20050.452764  
## iter 20 value 20036.806763  
## final value 20036.661097   
## converged  
## # weights: 9  
## initial value 22156.213074   
## final value 20029.530100   
## converged  
## # weights: 25  
## initial value 23248.942175   
## final value 20029.530100   
## converged  
## # weights: 41  
## initial value 23018.148820   
## final value 20029.530100   
## converged  
## # weights: 9  
## initial value 22563.490261   
## iter 10 value 20037.237498  
## final value 20035.039858   
## converged  
## # weights: 25  
## initial value 22900.187769   
## iter 10 value 20035.058408  
## iter 20 value 20033.505828  
## iter 20 value 20033.505707  
## iter 20 value 20033.505693  
## final value 20033.505693   
## converged  
## # weights: 41  
## initial value 23968.991284   
## iter 10 value 20046.747862  
## iter 20 value 20032.848060  
## final value 20032.846281   
## converged  
## # weights: 9  
## initial value 22270.578208   
## iter 10 value 20040.354942  
## iter 20 value 20029.654902  
## iter 20 value 20029.654852  
## final value 20029.654852   
## converged  
## # weights: 25  
## initial value 23243.519087   
## iter 10 value 20044.668994  
## iter 20 value 20029.704640  
## final value 20029.542247   
## converged  
## # weights: 41  
## initial value 21468.669011   
## iter 10 value 20040.850347  
## iter 20 value 20029.660614  
## final value 20029.539434   
## converged  
## # weights: 9  
## initial value 22763.305575   
## final value 19993.781200   
## converged  
## # weights: 25  
## initial value 22767.307018   
## final value 19993.781200   
## converged  
## # weights: 41  
## initial value 22326.805639   
## final value 19993.781200   
## converged  
## # weights: 9  
## initial value 23126.046659   
## iter 10 value 20001.166829  
## final value 19999.290023   
## converged  
## # weights: 25  
## initial value 22401.496069   
## iter 10 value 19998.347562  
## final value 19997.756219   
## converged  
## # weights: 41  
## initial value 22574.689800   
## iter 10 value 19999.364086  
## final value 19997.096873   
## converged  
## # weights: 9  
## initial value 22206.440150   
## iter 10 value 20002.787298  
## iter 20 value 19993.885033  
## iter 20 value 19993.884992  
## final value 19993.884992   
## converged  
## # weights: 25  
## initial value 22826.150152   
## iter 10 value 20007.830015  
## iter 20 value 19993.943172  
## final value 19993.794207   
## converged  
## # weights: 41  
## initial value 22751.092516   
## iter 10 value 20011.454282  
## iter 20 value 19993.984957  
## final value 19993.791402   
## converged  
## # weights: 9  
## initial value 23341.783058   
## final value 20018.011700   
## converged  
## # weights: 25  
## initial value 21821.927763   
## final value 20018.011700   
## converged  
## # weights: 41  
## initial value 21184.771715   
## final value 20018.011700   
## converged  
## # weights: 9  
## initial value 22716.874107   
## iter 10 value 20025.532557  
## final value 20023.521090   
## converged  
## # weights: 25  
## initial value 22507.430086   
## iter 10 value 20022.921445  
## iter 20 value 20021.987057  
## iter 20 value 20021.987011  
## iter 20 value 20021.987007  
## final value 20021.987007   
## converged  
## # weights: 41  
## initial value 21880.944589   
## iter 10 value 20042.051465  
## iter 20 value 20021.328252  
## final value 20021.327658   
## converged  
## # weights: 9  
## initial value 22038.755345   
## iter 10 value 20026.881027  
## iter 20 value 20018.113956  
## iter 20 value 20018.113915  
## final value 20018.113915   
## converged  
## # weights: 25  
## initial value 23929.746429   
## iter 10 value 20029.976642  
## iter 20 value 20018.149646  
## final value 20018.029829   
## converged  
## # weights: 41  
## initial value 23508.148438   
## iter 10 value 20034.562988  
## iter 20 value 20018.202523  
## final value 20018.024907   
## converged  
## # weights: 9  
## initial value 22124.346142   
## final value 20034.118000   
## converged  
## # weights: 25  
## initial value 22988.265927   
## final value 20034.118000   
## converged  
## # weights: 41  
## initial value 23033.691478   
## final value 20034.118000   
## converged  
## # weights: 9  
## initial value 23599.668469   
## iter 10 value 20040.009755  
## final value 20039.627898   
## converged  
## # weights: 25  
## initial value 23233.302367   
## iter 10 value 20038.557605  
## final value 20038.093692   
## converged  
## # weights: 41  
## initial value 23344.188685   
## iter 10 value 20045.339477  
## iter 20 value 20037.435436  
## final value 20037.434188   
## converged  
## # weights: 9  
## initial value 22216.620848   
## iter 10 value 20043.180408  
## iter 20 value 20034.222482  
## iter 20 value 20034.222441  
## final value 20034.222441   
## converged  
## # weights: 25  
## initial value 21569.515086   
## iter 10 value 20043.392346  
## iter 20 value 20034.224926  
## final value 20034.130538   
## converged  
## # weights: 41  
## initial value 22631.057062   
## iter 10 value 20053.031662  
## iter 20 value 20034.336060  
## final value 20034.128432   
## converged  
## # weights: 9  
## initial value 23744.769076   
## final value 19849.133200   
## converged  
## # weights: 25  
## initial value 21676.452030   
## final value 19849.133200   
## converged  
## # weights: 41  
## initial value 21498.824163   
## final value 19849.133200   
## converged  
## # weights: 9  
## initial value 22021.317075   
## iter 10 value 19855.112924  
## final value 19854.639917   
## converged  
## # weights: 25  
## initial value 22741.343733   
## iter 10 value 19856.818089  
## iter 20 value 19853.107454  
## final value 19853.106895   
## converged  
## # weights: 41  
## initial value 22883.318042   
## iter 10 value 19853.458834  
## final value 19852.447873   
## converged  
## # weights: 9  
## initial value 21696.018077   
## iter 10 value 19857.425436  
## iter 20 value 19849.228803  
## iter 20 value 19849.228765  
## final value 19849.228765   
## converged  
## # weights: 25  
## initial value 23003.432751   
## iter 10 value 19863.951789  
## iter 20 value 19849.304047  
## final value 19849.146740   
## converged  
## # weights: 41  
## initial value 22811.636584   
## iter 10 value 19867.928469  
## iter 20 value 19849.349895  
## final value 19849.143669   
## converged  
## # weights: 9  
## initial value 23667.015116   
## final value 20033.902000   
## converged  
## # weights: 25  
## initial value 23310.400609   
## final value 20033.902000   
## converged  
## # weights: 41  
## initial value 23351.967071   
## final value 20033.902000   
## converged  
## # weights: 9  
## initial value 21858.771620   
## iter 10 value 20041.445933  
## final value 20039.411876   
## converged  
## # weights: 25  
## initial value 22992.546027   
## iter 10 value 20039.003840  
## final value 20037.877629   
## converged  
## # weights: 41  
## initial value 22801.406968   
## iter 10 value 20038.575062  
## final value 20037.218215   
## converged  
## # weights: 9  
## initial value 22082.159456   
## iter 10 value 20043.252989  
## iter 20 value 20034.009810  
## iter 20 value 20034.009766  
## final value 20034.009766   
## converged  
## # weights: 25  
## initial value 22212.084250   
## iter 10 value 20048.449745  
## iter 20 value 20034.069724  
## final value 20033.914920   
## converged  
## # weights: 41  
## initial value 22458.894451   
## iter 10 value 20054.688727  
## iter 20 value 20034.141655  
## final value 20033.911882   
## converged  
## # weights: 9  
## initial value 23204.718919   
## final value 19980.723700   
## converged  
## # weights: 25  
## initial value 23202.042631   
## final value 19980.723700   
## converged  
## # weights: 41  
## initial value 22685.745816   
## final value 19980.723700   
## converged  
## # weights: 9  
## initial value 23490.341598   
## iter 10 value 19988.199455  
## final value 19986.232236   
## converged  
## # weights: 25  
## initial value 22319.878934   
## iter 10 value 19985.624131  
## final value 19984.698536   
## converged  
## # weights: 41  
## initial value 21951.221759   
## iter 10 value 19997.324661  
## iter 20 value 19984.041479  
## final value 19984.039235   
## converged  
## # weights: 9  
## initial value 21705.148763   
## iter 10 value 19989.071460  
## iter 20 value 19980.819943  
## iter 20 value 19980.819905  
## final value 19980.819905   
## converged  
## # weights: 25  
## initial value 24115.668139   
## iter 10 value 19990.451186  
## iter 20 value 19980.835850  
## final value 19980.740766   
## converged  
## # weights: 41  
## initial value 23738.683751   
## iter 10 value 19994.098119  
## iter 20 value 19980.877897  
## final value 19980.736481   
## converged  
## # weights: 9  
## initial value 21789.288054   
## final value 20027.529200   
## converged  
## # weights: 25  
## initial value 22540.593453   
## final value 20027.529200   
## converged  
## # weights: 41  
## initial value 23804.415115   
## final value 20027.529200   
## converged  
## # weights: 9  
## initial value 23765.086095   
## iter 10 value 20033.608097  
## final value 20033.038892   
## converged  
## # weights: 25  
## initial value 22353.797486   
## iter 10 value 20036.022215  
## final value 20031.504814   
## converged  
## # weights: 41  
## initial value 21318.839571   
## iter 10 value 20033.611962  
## final value 20030.845418   
## converged  
## # weights: 9  
## initial value 23933.316310   
## iter 10 value 20035.092155  
## iter 20 value 20027.616395  
## iter 20 value 20027.616360  
## final value 20027.616360   
## converged  
## # weights: 25  
## initial value 23093.438712   
## iter 10 value 20043.671105  
## iter 20 value 20027.715303  
## final value 20027.543305   
## converged  
## # weights: 41  
## initial value 22671.797976   
## iter 10 value 20047.376499  
## iter 20 value 20027.758024  
## final value 20027.538450   
## converged  
## # weights: 9  
## initial value 22372.564003   
## final value 20039.550500   
## converged  
## # weights: 25  
## initial value 23077.429768   
## final value 20039.550500   
## converged  
## # weights: 41  
## initial value 23655.011516   
## final value 20039.550500   
## converged  
## # weights: 9  
## initial value 23263.150195   
## iter 10 value 20048.804221  
## final value 20045.060629   
## converged  
## # weights: 25  
## initial value 22703.131957   
## iter 10 value 20051.911131  
## iter 20 value 20043.526481  
## iter 20 value 20043.526329  
## iter 20 value 20043.526327  
## final value 20043.526327   
## converged  
## # weights: 41  
## initial value 22597.517018   
## iter 10 value 20066.481740  
## iter 20 value 20042.893825  
## final value 20042.866895   
## converged  
## # weights: 9  
## initial value 22198.369519   
## iter 10 value 20049.042437  
## iter 20 value 20039.659935  
## iter 20 value 20039.659891  
## final value 20039.659891   
## converged  
## # weights: 25  
## initial value 22787.584714   
## iter 10 value 20055.764974  
## iter 20 value 20039.737440  
## final value 20039.568833   
## converged  
## # weights: 41  
## initial value 22507.694865   
## iter 10 value 20057.907680  
## iter 20 value 20039.762144  
## final value 20039.559745   
## converged  
## # weights: 9  
## initial value 22719.788300   
## final value 20020.659700   
## converged  
## # weights: 25  
## initial value 21831.554605   
## final value 20020.659700   
## converged  
## # weights: 41  
## initial value 22461.083804   
## final value 20020.659700   
## converged  
## # weights: 9  
## initial value 22901.954066   
## iter 10 value 20027.263314  
## final value 20026.169187   
## converged  
## # weights: 25  
## initial value 23032.461789   
## iter 10 value 20025.984413  
## final value 20024.635100   
## converged  
## # weights: 41  
## initial value 22620.287879   
## iter 10 value 20024.707704  
## final value 20023.975766   
## converged  
## # weights: 9  
## initial value 22650.418260   
## iter 10 value 20030.764936  
## iter 20 value 20020.776205  
## iter 20 value 20020.776159  
## final value 20020.776159   
## converged  
## # weights: 25  
## initial value 22424.515286   
## iter 10 value 20035.552182  
## iter 20 value 20020.831399  
## final value 20020.670212   
## converged  
## # weights: 41  
## initial value 22157.708983   
## iter 10 value 20039.428502  
## iter 20 value 20020.876090  
## final value 20020.669810   
## converged  
## # weights: 9  
## initial value 22052.058186   
## final value 19996.584500   
## converged  
## # weights: 25  
## initial value 22096.977707   
## final value 19996.584500   
## converged  
## # weights: 41  
## initial value 21575.979952   
## final value 19996.584500   
## converged  
## # weights: 9  
## initial value 23141.603386   
## iter 10 value 20003.072987  
## final value 20002.093314   
## converged  
## # weights: 25  
## initial value 22654.945061   
## iter 10 value 20000.978579  
## final value 20000.559436   
## converged  
## # weights: 41  
## initial value 23644.515767   
## iter 10 value 20000.991545  
## iter 20 value 19999.900237  
## iter 20 value 19999.900114  
## iter 20 value 19999.900094  
## final value 19999.900094   
## converged  
## # weights: 9  
## initial value 23714.190965   
## iter 10 value 20004.836444  
## iter 20 value 19996.679638  
## iter 20 value 19996.679600  
## final value 19996.679600   
## converged  
## # weights: 25  
## initial value 23479.114785   
## iter 10 value 20008.959540  
## iter 20 value 19996.727174  
## final value 19996.600093   
## converged  
## # weights: 41  
## initial value 22230.654146   
## iter 10 value 20014.524696  
## iter 20 value 19996.791336  
## final value 19996.594156   
## converged  
## # weights: 9  
## initial value 21728.938880   
## final value 19975.560500   
## converged  
## # weights: 25  
## initial value 22393.775889   
## final value 19975.560500   
## converged  
## # weights: 41  
## initial value 22151.517933   
## final value 19975.560500   
## converged  
## # weights: 9  
## initial value 23339.170771   
## iter 10 value 19981.262992  
## final value 19981.068998   
## converged  
## # weights: 25  
## initial value 22429.031988   
## iter 10 value 19980.964633  
## iter 20 value 19979.535653  
## final value 19979.535273   
## converged  
## # weights: 41  
## initial value 22939.012338   
## iter 10 value 19980.265059  
## final value 19978.876043   
## converged  
## # weights: 9  
## initial value 23932.059611   
## iter 10 value 19983.629104  
## iter 20 value 19975.653525  
## iter 20 value 19975.653487  
## final value 19975.653487   
## converged  
## # weights: 25  
## initial value 22253.221104   
## iter 10 value 19989.970823  
## iter 20 value 19975.726640  
## final value 19975.573434   
## converged  
## # weights: 41  
## initial value 24064.321251   
## iter 10 value 19989.024840  
## iter 20 value 19975.715733  
## final value 19975.575110   
## converged  
## # weights: 9  
## initial value 23464.236541   
## final value 20060.414500   
## converged  
## # weights: 25  
## initial value 22142.330058   
## final value 20060.414500   
## converged  
## # weights: 41  
## initial value 23735.654296   
## final value 20060.414500   
## converged  
## # weights: 9  
## initial value 23444.076347   
## iter 10 value 20066.121269  
## final value 20065.925953   
## converged  
## # weights: 25  
## initial value 23014.608770   
## iter 10 value 20065.445849  
## iter 20 value 20064.392520  
## final value 20064.391319   
## converged  
## # weights: 41  
## initial value 21306.883176   
## iter 10 value 20075.423858  
## iter 20 value 20063.733040  
## final value 20063.731667   
## converged  
## # weights: 9  
## initial value 22609.743832   
## iter 10 value 20071.610859  
## iter 20 value 20060.543585  
## iter 20 value 20060.543534  
## final value 20060.543534   
## converged  
## # weights: 25  
## initial value 21822.847062   
## iter 10 value 20071.043181  
## iter 20 value 20060.537040  
## final value 20060.426004   
## converged  
## # weights: 41  
## initial value 23246.403493   
## iter 10 value 20078.015823  
## iter 20 value 20060.617429  
## final value 20060.428437   
## converged  
## # weights: 9  
## initial value 22649.308284   
## final value 19948.680100   
## converged  
## # weights: 25  
## initial value 22591.106557   
## final value 19948.680100   
## converged  
## # weights: 41  
## initial value 21965.315054   
## final value 19948.680100   
## converged  
## # weights: 9  
## initial value 22444.285505   
## iter 10 value 19956.430152  
## final value 19954.188110   
## converged  
## # weights: 25  
## initial value 21437.218142   
## iter 10 value 19954.036990  
## iter 20 value 19952.654631  
## iter 20 value 19952.654565  
## iter 20 value 19952.654560  
## final value 19952.654560   
## converged  
## # weights: 41  
## initial value 22883.777816   
## iter 10 value 19953.061450  
## final value 19951.995345   
## converged  
## # weights: 9  
## initial value 22195.556207   
## iter 10 value 19958.092952  
## iter 20 value 19948.788623  
## iter 20 value 19948.788579  
## final value 19948.788579   
## converged  
## # weights: 25  
## initial value 22499.255080   
## iter 10 value 19963.823990  
## iter 20 value 19948.854697  
## final value 19948.691915   
## converged  
## # weights: 41  
## initial value 22036.123880   
## iter 10 value 19967.962359  
## iter 20 value 19948.902409  
## final value 19948.690919   
## converged  
## # weights: 9  
## initial value 21698.404696   
## final value 20049.554000   
## converged  
## # weights: 25  
## initial value 22545.424370   
## final value 20049.554000   
## converged  
## # weights: 41  
## initial value 21841.997047   
## final value 20049.554000   
## converged  
## # weights: 9  
## initial value 23378.357597   
## iter 10 value 20055.228970  
## final value 20055.064644   
## converged  
## # weights: 25  
## initial value 23465.030120   
## iter 10 value 20054.242674  
## iter 20 value 20053.532157  
## final value 20053.530161   
## converged  
## # weights: 41  
## initial value 22033.577980   
## iter 10 value 20055.122428  
## iter 20 value 20052.870755  
## iter 20 value 20052.870660  
## iter 20 value 20052.870622  
## final value 20052.870622   
## converged  
## # weights: 9  
## initial value 22913.561302   
## iter 10 value 20060.128818  
## iter 20 value 20049.675919  
## iter 20 value 20049.675871  
## final value 20049.675871   
## converged  
## # weights: 25  
## initial value 21857.024490   
## iter 10 value 20063.035784  
## iter 20 value 20049.709434  
## final value 20049.566205   
## converged  
## # weights: 41  
## initial value 23681.757690   
## iter 10 value 20064.737760  
## iter 20 value 20049.729057  
## final value 20049.568345   
## converged  
## # weights: 9  
## initial value 22327.493235   
## final value 20035.817200   
## converged  
## # weights: 25  
## initial value 22968.426569   
## final value 20035.817200   
## converged  
## # weights: 41  
## initial value 21697.668553   
## final value 20035.817200   
## converged  
## # weights: 9  
## initial value 22119.623962   
## iter 10 value 20042.363869  
## final value 20041.327169   
## converged  
## # weights: 25  
## initial value 22508.546797   
## iter 10 value 20041.250105  
## iter 20 value 20039.796052  
## final value 20039.792919   
## converged  
## # weights: 41  
## initial value 22406.320513   
## iter 10 value 20050.047138  
## iter 20 value 20039.133724  
## iter 20 value 20039.133565  
## iter 20 value 20039.133550  
## final value 20039.133550   
## converged  
## # weights: 9  
## initial value 22325.355096   
## iter 10 value 20046.339734  
## iter 20 value 20035.938517  
## iter 20 value 20035.938468  
## final value 20035.938468   
## converged  
## # weights: 25  
## initial value 22708.914997   
## iter 10 value 20049.548847  
## iter 20 value 20035.975515  
## final value 20035.837592   
## converged  
## # weights: 41  
## initial value 22426.649421   
## iter 10 value 20054.030802  
## iter 20 value 20036.027189  
## final value 20035.827063   
## converged  
## # weights: 9  
## initial value 21912.870873   
## final value 20058.547600   
## converged  
## # weights: 25  
## initial value 23282.535452   
## final value 20058.547600   
## converged  
## # weights: 41  
## initial value 24282.548877   
## final value 20058.547600   
## converged  
## # weights: 9  
## initial value 23454.013030   
## iter 10 value 20068.194031  
## iter 20 value 20064.058753  
## iter 20 value 20064.058751  
## final value 20064.058751   
## converged  
## # weights: 25  
## initial value 23253.490148   
## iter 10 value 20064.020500  
## final value 20062.524108   
## converged  
## # weights: 41  
## initial value 21251.041243   
## iter 10 value 20062.670000  
## final value 20061.864603   
## converged  
## # weights: 9  
## initial value 23069.685387   
## iter 10 value 20070.284782  
## iter 20 value 20058.682920  
## iter 20 value 20058.682866  
## final value 20058.682866   
## converged  
## # weights: 25  
## initial value 22920.377848   
## iter 10 value 20074.006620  
## iter 20 value 20058.725830  
## final value 20058.563488   
## converged  
## # weights: 41  
## initial value 23180.575233   
## iter 10 value 20078.298508  
## iter 20 value 20058.775312  
## final value 20058.557543   
## converged  
## # weights: 9  
## initial value 23278.307188   
## final value 19957.697200   
## converged  
## # weights: 25  
## initial value 22340.343738   
## final value 19957.697200   
## converged  
## # weights: 41  
## initial value 21916.766230   
## final value 19957.697200   
## converged  
## # weights: 9  
## initial value 21696.529367   
## iter 10 value 19964.229723  
## final value 19963.205372   
## converged  
## # weights: 25  
## initial value 22009.929191   
## iter 10 value 19962.090972  
## final value 19961.671774   
## converged  
## # weights: 41  
## initial value 22721.342834   
## iter 10 value 19969.200038  
## final value 19961.012601   
## converged  
## # weights: 9  
## initial value 22360.547543   
## iter 10 value 19967.882303  
## iter 20 value 19957.814626  
## iter 20 value 19957.814579  
## final value 19957.814579   
## converged  
## # weights: 25  
## initial value 22813.550524   
## iter 10 value 19972.306120  
## iter 20 value 19957.865629  
## final value 19957.710352   
## converged  
## # weights: 41  
## initial value 21224.122761   
## iter 10 value 19968.704066  
## iter 20 value 19957.824101  
## final value 19957.706045   
## converged  
## # weights: 9  
## initial value 22138.386242   
## final value 20047.250000   
## converged  
## # weights: 25  
## initial value 22320.982284   
## final value 20047.250000   
## converged  
## # weights: 41  
## initial value 22908.342548   
## final value 20047.250000   
## converged  
## # weights: 9  
## initial value 23142.004262   
## iter 10 value 20053.318406  
## final value 20052.760431   
## converged  
## # weights: 25  
## initial value 21696.400536   
## iter 10 value 20052.125025  
## final value 20051.226088   
## converged  
## # weights: 41  
## initial value 22281.368301   
## iter 10 value 20062.156085  
## iter 20 value 20050.567348  
## final value 20050.566547   
## converged  
## # weights: 9  
## initial value 22615.566597   
## iter 10 value 20058.906529  
## iter 20 value 20047.384391  
## iter 20 value 20047.384337  
## final value 20047.384337   
## converged  
## # weights: 25  
## initial value 21970.386074   
## iter 10 value 20061.069178  
## iter 20 value 20047.409324  
## final value 20047.264431   
## converged  
## # weights: 41  
## initial value 23968.266453   
## iter 10 value 20062.703113  
## iter 20 value 20047.428162  
## final value 20047.261549   
## converged  
## # weights: 9  
## initial value 22759.193502   
## final value 19980.360100   
## converged  
## # weights: 25  
## initial value 21756.821652   
## final value 19980.360100   
## converged  
## # weights: 41  
## initial value 22001.614982   
## final value 19980.360100   
## converged  
## # weights: 9  
## initial value 21719.678941   
## iter 10 value 19986.362018  
## final value 19985.868661   
## converged  
## # weights: 25  
## initial value 23272.335891   
## iter 10 value 19986.160001  
## final value 19984.334899   
## converged  
## # weights: 41  
## initial value 23964.403176   
## iter 10 value 19998.144415  
## iter 20 value 19983.683880  
## final value 19983.675639   
## converged  
## # weights: 9  
## initial value 23484.948247   
## iter 10 value 19990.276774  
## iter 20 value 19980.474431  
## iter 20 value 19980.474386  
## final value 19980.474386   
## converged  
## # weights: 25  
## initial value 23763.459332   
## iter 10 value 19992.060266  
## iter 20 value 19980.494994  
## final value 19980.377746   
## converged  
## # weights: 41  
## initial value 23563.070270   
## iter 10 value 19996.728138  
## iter 20 value 19980.548811  
## final value 19980.371002   
## converged  
## # weights: 9  
## initial value 22170.701921   
## final value 20040.702500   
## converged  
## # weights: 25  
## initial value 22101.056345   
## final value 20040.702500   
## converged  
## # weights: 41  
## initial value 22346.425900   
## final value 20040.702500   
## converged  
## # weights: 9  
## initial value 22818.906844   
## iter 10 value 20046.325267  
## final value 20046.212624   
## converged  
## # weights: 25  
## initial value 22934.025381   
## iter 10 value 20045.919488  
## final value 20044.678272   
## converged  
## # weights: 41  
## initial value 23026.921169   
## iter 10 value 20045.613571  
## iter 20 value 20044.019122  
## final value 20044.018782   
## converged  
## # weights: 9  
## initial value 22794.815430   
## iter 10 value 20052.935074  
## iter 20 value 20040.843532  
## iter 20 value 20040.843476  
## final value 20040.843476   
## converged  
## # weights: 25  
## initial value 22144.515712   
## iter 10 value 20055.414586  
## iter 20 value 20040.872119  
## final value 20040.716253   
## converged  
## # weights: 41  
## initial value 23489.015667   
## iter 10 value 20056.039193  
## iter 20 value 20040.879320  
## final value 20040.715355   
## converged  
## # weights: 9  
## initial value 23362.444528   
## final value 20039.453200   
## converged  
## # weights: 25  
## initial value 22074.368806   
## final value 20039.453200   
## converged  
## # weights: 41  
## initial value 23110.618155   
## final value 20039.453200   
## converged  
## # weights: 9  
## initial value 21803.126643   
## iter 10 value 20045.798265  
## final value 20044.963340   
## converged  
## # weights: 25  
## initial value 22630.378860   
## iter 10 value 20044.700217  
## final value 20043.429043   
## converged  
## # weights: 41  
## initial value 23493.183808   
## iter 10 value 20044.219777  
## iter 20 value 20042.769750  
## iter 20 value 20042.769622  
## iter 20 value 20042.769577  
## final value 20042.769577   
## converged  
## # weights: 9  
## initial value 22836.099746   
## iter 10 value 20049.244457  
## iter 20 value 20039.566086  
## iter 20 value 20039.566040  
## final value 20039.566040   
## converged  
## # weights: 25  
## initial value 23307.309791   
## iter 10 value 20054.557959  
## iter 20 value 20039.627346  
## final value 20039.470036   
## converged  
## # weights: 41  
## initial value 23383.893214   
## iter 10 value 20057.953010  
## iter 20 value 20039.666488  
## final value 20039.466838   
## converged  
## # weights: 9  
## initial value 22797.205493   
## final value 20019.213200   
## converged  
## # weights: 25  
## initial value 21200.003494   
## final value 20019.213200   
## converged  
## # weights: 41  
## initial value 22924.551558   
## final value 20019.213200   
## converged  
## # weights: 9  
## initial value 23160.355259   
## iter 10 value 20025.326062  
## final value 20024.722608   
## converged  
## # weights: 25  
## initial value 22944.652389   
## iter 10 value 20025.052772  
## iter 20 value 20023.188671  
## iter 20 value 20023.188536  
## iter 20 value 20023.188519  
## final value 20023.188519   
## converged  
## # weights: 41  
## initial value 24675.552111   
## iter 10 value 20030.307975  
## iter 20 value 20022.531554  
## final value 20022.529195   
## converged  
## # weights: 9  
## initial value 21868.303638   
## iter 10 value 20027.385803  
## iter 20 value 20019.307424  
## iter 20 value 20019.307386  
## final value 20019.307386   
## converged  
## # weights: 25  
## initial value 23845.114296   
## iter 10 value 20029.901246  
## iter 20 value 20019.336425  
## final value 20019.229354   
## converged  
## # weights: 41  
## initial value 23619.424286   
## iter 10 value 20034.116892  
## iter 20 value 20019.385028  
## final value 20019.227393   
## converged  
## # weights: 9  
## initial value 22574.102550   
## final value 20036.337700   
## converged  
## # weights: 25  
## initial value 23326.725659   
## final value 20036.337700   
## converged  
## # weights: 41  
## initial value 21984.657752   
## final value 20036.337700   
## converged  
## # weights: 9  
## initial value 22711.388010   
## iter 10 value 20043.376762  
## final value 20041.847690   
## converged  
## # weights: 25  
## initial value 23726.565628   
## iter 10 value 20041.342209  
## final value 20040.313444   
## converged  
## # weights: 41  
## initial value 22068.285502   
## iter 10 value 20040.938524  
## iter 20 value 20039.654105  
## iter 20 value 20039.653971  
## iter 20 value 20039.653964  
## final value 20039.653964   
## converged  
## # weights: 9  
## initial value 23423.709862   
## iter 10 value 20045.311981  
## iter 20 value 20036.441166  
## iter 20 value 20036.441125  
## final value 20036.441125   
## converged  
## # weights: 25  
## initial value 22144.258612   
## iter 10 value 20050.520008  
## iter 20 value 20036.501211  
## final value 20036.349987   
## converged  
## # weights: 41  
## initial value 22772.152775   
## iter 10 value 20052.546284  
## iter 20 value 20036.524572  
## final value 20036.350484   
## converged  
## # weights: 9  
## initial value 22195.957568   
## final value 20045.781200   
## converged  
## # weights: 25  
## initial value 22410.845076   
## final value 20045.781200   
## converged  
## # weights: 41  
## initial value 22223.559557   
## final value 20045.781200   
## converged  
## # weights: 9  
## initial value 22808.159607   
## iter 10 value 20053.736561  
## final value 20051.291593   
## converged  
## # weights: 25  
## initial value 23586.584121   
## iter 10 value 20051.173071  
## iter 20 value 20049.765052  
## final value 20049.757245   
## converged  
## # weights: 41  
## initial value 22191.856666   
## iter 10 value 20053.082621  
## iter 20 value 20049.097896  
## iter 20 value 20049.097735  
## iter 20 value 20049.097711  
## final value 20049.097711   
## converged  
## # weights: 9  
## initial value 22017.762345   
## iter 10 value 20054.409418  
## iter 20 value 20045.880677  
## iter 20 value 20045.880637  
## final value 20045.880637   
## converged  
## # weights: 25  
## initial value 22037.011596   
## iter 10 value 20058.071745  
## iter 20 value 20045.922900  
## final value 20045.794602   
## converged  
## # weights: 41  
## initial value 22707.727967   
## iter 10 value 20064.535419  
## iter 20 value 20045.997421  
## final value 20045.791177   
## converged  
## # weights: 9  
## initial value 22294.259756   
## final value 20005.258000   
## converged  
## # weights: 25  
## initial value 22592.912775   
## final value 20005.258000   
## converged  
## # weights: 41  
## initial value 22816.741971   
## final value 20005.258000   
## converged  
## # weights: 9  
## initial value 22491.302222   
## iter 10 value 20011.012633  
## final value 20010.767182   
## converged  
## # weights: 25  
## initial value 22196.862645   
## iter 10 value 20010.765243  
## iter 20 value 20009.233191  
## iter 20 value 20009.233075  
## iter 20 value 20009.233061  
## final value 20009.233061   
## converged  
## # weights: 41  
## initial value 21991.039734   
## iter 10 value 20011.560753  
## final value 20008.573783   
## converged  
## # weights: 9  
## initial value 22938.845056   
## iter 10 value 20017.090212  
## iter 20 value 20005.394416  
## iter 20 value 20005.394362  
## final value 20005.394362   
## converged  
## # weights: 25  
## initial value 22774.839660   
## iter 10 value 20021.683990  
## iter 20 value 20005.447379  
## final value 20005.271627   
## converged  
## # weights: 41  
## initial value 22559.458786   
## iter 10 value 20024.887528  
## iter 20 value 20005.484313  
## final value 20005.269086   
## converged  
## # weights: 9  
## initial value 22445.135438   
## final value 20038.469200   
## converged  
## # weights: 25  
## initial value 23000.605986   
## final value 20038.469200   
## converged  
## # weights: 41  
## initial value 22729.330771   
## final value 20038.469200   
## converged  
## # weights: 9  
## initial value 23323.753722   
## iter 10 value 20044.276069  
## final value 20043.979287   
## converged  
## # weights: 25  
## initial value 22965.985106   
## iter 10 value 20043.016412  
## final value 20042.445020   
## converged  
## # weights: 41  
## initial value 22301.464262   
## iter 10 value 20042.928066  
## iter 20 value 20041.785748  
## final value 20041.785482   
## converged  
## # weights: 9  
## initial value 23119.457067   
## iter 10 value 20050.167467  
## iter 20 value 20038.604072  
## iter 20 value 20038.604018  
## final value 20038.604018   
## converged  
## # weights: 25  
## initial value 22659.721709   
## iter 10 value 20054.627420  
## iter 20 value 20038.655492  
## final value 20038.485275   
## converged  
## # weights: 41  
## initial value 22990.033003   
## iter 10 value 20060.676784  
## iter 20 value 20038.725236  
## final value 20038.483483   
## converged  
## # weights: 9  
## initial value 21813.386335   
## final value 19952.078500   
## converged  
## # weights: 25  
## initial value 22417.526922   
## final value 19952.078500   
## converged  
## # weights: 41  
## initial value 23633.759289   
## final value 19952.078500   
## converged  
## # weights: 9  
## initial value 22984.148791   
## iter 10 value 19958.045966  
## final value 19957.586426   
## converged  
## # weights: 25  
## initial value 22870.153902   
## iter 10 value 19957.060482  
## final value 19956.052841   
## converged  
## # weights: 41  
## initial value 23239.002610   
## iter 10 value 19966.874769  
## iter 20 value 19955.394946  
## final value 19955.393659   
## converged  
## # weights: 9  
## initial value 23095.858691   
## iter 10 value 19963.092374  
## iter 20 value 19952.205481  
## iter 20 value 19952.205431  
## final value 19952.205431   
## converged  
## # weights: 25  
## initial value 21306.328505   
## iter 10 value 19960.003373  
## iter 20 value 19952.169868  
## final value 19952.088804   
## converged  
## # weights: 41  
## initial value 24030.837030   
## iter 10 value 19964.581393  
## iter 20 value 19952.222649  
## final value 19952.094479   
## converged  
## # weights: 9  
## initial value 22246.953037   
## final value 20020.920100   
## converged  
## # weights: 25  
## initial value 22806.924608   
## final value 20020.920100   
## converged  
## # weights: 41  
## initial value 22768.294852   
## final value 20020.920100   
## converged  
## # weights: 9  
## initial value 23351.536846   
## iter 10 value 20026.613777  
## final value 20026.429609   
## converged  
## # weights: 25  
## initial value 23267.331748   
## iter 10 value 20042.336630  
## iter 20 value 20024.900517  
## final value 20024.895485   
## converged  
## # weights: 41  
## initial value 22613.917983   
## iter 10 value 20025.621598  
## final value 20024.236082   
## converged  
## # weights: 9  
## initial value 22237.391942   
## iter 10 value 20031.223049  
## iter 20 value 20021.038885  
## iter 20 value 20021.038837  
## final value 20021.038837   
## converged  
## # weights: 25  
## initial value 21507.029163   
## iter 10 value 20029.519462  
## iter 20 value 20021.019244  
## final value 20020.931605   
## converged  
## # weights: 41  
## initial value 22282.441910   
## iter 10 value 20038.767738  
## iter 20 value 20021.125869  
## final value 20020.929174   
## converged  
## # weights: 9  
## initial value 23534.670990   
## final value 20022.465700   
## converged  
## # weights: 25  
## initial value 23726.910067   
## final value 20022.465700   
## converged  
## # weights: 41  
## initial value 23976.242207   
## final value 20022.465700   
## converged  
## # weights: 9  
## initial value 23571.729906   
## iter 10 value 20028.677932  
## final value 20027.975245   
## converged  
## # weights: 25  
## initial value 23284.625015   
## iter 10 value 20027.312722  
## final value 20026.441158   
## converged  
## # weights: 41  
## initial value 24101.590330   
## iter 10 value 20026.993214  
## final value 20025.781772   
## converged  
## # weights: 9  
## initial value 23183.087180   
## iter 10 value 20033.825513  
## iter 20 value 20022.596670  
## iter 20 value 20022.596617  
## final value 20022.596617   
## converged  
## # weights: 25  
## initial value 21778.852091   
## iter 10 value 20034.433547  
## iter 20 value 20022.603680  
## final value 20022.478031   
## converged  
## # weights: 41  
## initial value 23670.453628   
## iter 10 value 20037.400541  
## iter 20 value 20022.637887  
## final value 20022.479070   
## converged  
## # weights: 9  
## initial value 23611.270741   
## final value 20016.794000   
## converged  
## # weights: 25  
## initial value 22466.731721   
## final value 20016.794000   
## converged  
## # weights: 41  
## initial value 22281.984356   
## final value 20016.794000   
## converged  
## # weights: 9  
## initial value 22577.306976   
## iter 10 value 20022.773240  
## final value 20022.303384   
## converged  
## # weights: 25  
## initial value 23191.134215   
## iter 10 value 20021.453059  
## final value 20020.769427   
## converged  
## # weights: 41  
## initial value 21855.925083   
## iter 10 value 20033.329732  
## iter 20 value 20020.114413  
## final value 20020.110031   
## converged  
## # weights: 9  
## initial value 22602.629246   
## iter 10 value 20026.924112  
## iter 20 value 20016.910792  
## iter 20 value 20016.910746  
## final value 20016.910746   
## converged  
## # weights: 25  
## initial value 22883.283657   
## iter 10 value 20033.117104  
## iter 20 value 20016.982193  
## final value 20016.806752   
## converged  
## # weights: 41  
## initial value 22764.404803   
## iter 10 value 20039.013216  
## iter 20 value 20017.050170  
## final value 20016.806693   
## converged  
## # weights: 9  
## initial value 22433.918837   
## final value 20038.270000   
## converged  
## # weights: 25  
## initial value 22499.961214   
## final value 20038.270000   
## converged  
## # weights: 41  
## initial value 21871.627922   
## final value 20038.270000   
## converged  
## # weights: 9  
## initial value 23123.466416   
## iter 10 value 20046.615661  
## final value 20043.780092   
## converged  
## # weights: 25  
## initial value 23897.702939   
## iter 10 value 20046.635626  
## iter 20 value 20042.245936  
## iter 20 value 20042.245815  
## iter 20 value 20042.245778  
## final value 20042.245778   
## converged  
## # weights: 41  
## initial value 22386.972588   
## iter 10 value 20055.238173  
## iter 20 value 20041.587565  
## final value 20041.586306   
## converged  
## # weights: 9  
## initial value 23855.816103   
## iter 10 value 20046.350781  
## iter 20 value 20038.363165  
## iter 20 value 20038.363128  
## final value 20038.363128   
## converged  
## # weights: 25  
## initial value 23184.327980   
## iter 10 value 20052.716983  
## iter 20 value 20038.436562  
## final value 20038.282852   
## converged  
## # weights: 41  
## initial value 22296.418504   
## iter 10 value 20055.840387  
## iter 20 value 20038.472573  
## final value 20038.279807   
## converged  
## # weights: 9  
## initial value 22128.818628   
## final value 20007.965200   
## converged  
## # weights: 25  
## initial value 22590.604507   
## final value 20007.965200   
## converged  
## # weights: 41  
## initial value 21934.767614   
## final value 20007.965200   
## converged  
## # weights: 9  
## initial value 22258.336105   
## iter 10 value 20014.967509  
## final value 20013.474289   
## converged  
## # weights: 25  
## initial value 22201.883114   
## iter 10 value 20012.800992  
## iter 20 value 20011.941064  
## final value 20011.940335   
## converged  
## # weights: 41  
## initial value 22102.517691   
## iter 10 value 20017.798805  
## iter 20 value 20011.281560  
## final value 20011.281004   
## converged  
## # weights: 9  
## initial value 21991.399397   
## iter 10 value 20017.543320  
## iter 20 value 20008.075628  
## iter 20 value 20008.075584  
## final value 20008.075584   
## converged  
## # weights: 25  
## initial value 22562.317886   
## iter 10 value 20023.874664  
## iter 20 value 20008.148624  
## final value 20007.976415   
## converged  
## # weights: 41  
## initial value 22764.790590   
## iter 10 value 20027.965182  
## iter 20 value 20008.195784  
## final value 20007.975402   
## converged  
## # weights: 9  
## initial value 22846.945094   
## final value 20048.654000   
## converged  
## # weights: 25  
## initial value 22808.478014   
## final value 20048.654000   
## converged  
## # weights: 41  
## initial value 22039.899815   
## final value 20048.654000   
## converged  
## # weights: 9  
## initial value 22132.395270   
## iter 10 value 20054.343858  
## final value 20054.164588   
## converged  
## # weights: 25  
## initial value 22460.625865   
## iter 10 value 20053.394692  
## iter 20 value 20052.630506  
## final value 20052.630163   
## converged  
## # weights: 41  
## initial value 24300.488812   
## iter 10 value 20062.677245  
## iter 20 value 20051.971495  
## final value 20051.970677   
## converged  
## # weights: 9  
## initial value 23408.308027   
## iter 10 value 20059.645771  
## iter 20 value 20048.780726  
## iter 20 value 20048.780676  
## final value 20048.780676   
## converged  
## # weights: 25  
## initial value 22235.961281   
## iter 10 value 20062.298306  
## iter 20 value 20048.811308  
## final value 20048.666284   
## converged  
## # weights: 41  
## initial value 23577.004858   
## iter 10 value 20067.333071  
## iter 20 value 20048.869355  
## final value 20048.664309   
## converged  
## # weights: 9  
## initial value 23984.152553   
## final value 19999.649200   
## converged  
## # weights: 25  
## initial value 21918.275154   
## final value 19999.649200   
## converged  
## # weights: 41  
## initial value 22125.761213   
## final value 19999.649200   
## converged  
## # weights: 9  
## initial value 23694.579607   
## iter 10 value 20005.820985  
## final value 20005.158151   
## converged  
## # weights: 25  
## initial value 22134.942903   
## iter 10 value 20004.177912  
## final value 20003.624248   
## converged  
## # weights: 41  
## initial value 21917.387185   
## iter 10 value 20017.837990  
## iter 20 value 20002.977718  
## final value 20002.964909   
## converged  
## # weights: 9  
## initial value 23335.039711   
## iter 10 value 20008.716642  
## iter 20 value 19999.753740  
## iter 20 value 19999.753699  
## final value 19999.753699   
## converged  
## # weights: 25  
## initial value 22157.366661   
## iter 10 value 20012.360726  
## iter 20 value 19999.795754  
## final value 19999.663048   
## converged  
## # weights: 41  
## initial value 24081.693949   
## iter 10 value 20010.197227  
## iter 20 value 19999.770810  
## final value 19999.662194   
## converged  
## # weights: 9  
## initial value 22418.143670   
## final value 20028.595700   
## converged  
## # weights: 25  
## initial value 22996.317307   
## final value 20028.595700   
## converged  
## # weights: 41  
## initial value 23387.975485   
## final value 20028.595700   
## converged  
## # weights: 9  
## initial value 22659.193064   
## iter 10 value 20057.849264  
## iter 20 value 20034.108250  
## final value 20034.105440   
## converged  
## # weights: 25  
## initial value 22207.443727   
## iter 10 value 20033.171663  
## iter 20 value 20032.571474  
## final value 20032.571240   
## converged  
## # weights: 41  
## initial value 22082.157001   
## iter 10 value 20032.806031  
## iter 20 value 20031.911893  
## iter 20 value 20031.911817  
## iter 20 value 20031.911804  
## final value 20031.911804   
## converged  
## # weights: 9  
## initial value 23229.657197   
## iter 10 value 20038.146496  
## iter 20 value 20028.705813  
## iter 20 value 20028.705769  
## final value 20028.705769   
## converged  
## # weights: 25  
## initial value 22140.937614   
## iter 10 value 20042.432214  
## iter 20 value 20028.755224  
## final value 20028.610522   
## converged  
## # weights: 41  
## initial value 24055.414426   
## iter 10 value 20040.156035  
## iter 20 value 20028.728982  
## final value 20028.608874   
## converged  
## # weights: 9  
## initial value 22494.615826   
## final value 19929.305200   
## converged  
## # weights: 25  
## initial value 23031.701554   
## final value 19929.305200   
## converged  
## # weights: 41  
## initial value 23378.884500   
## final value 19929.305200   
## converged  
## # weights: 9  
## initial value 23451.372804   
## iter 10 value 19935.423708  
## final value 19934.812944   
## converged  
## # weights: 25  
## initial value 21055.772772   
## iter 10 value 19933.890474  
## final value 19933.279665   
## converged  
## # weights: 41  
## initial value 22645.744351   
## iter 10 value 19935.293179  
## iter 20 value 19932.620533  
## iter 20 value 19932.620391  
## iter 20 value 19932.620369  
## final value 19932.620369   
## converged  
## # weights: 9  
## initial value 21649.653827   
## iter 10 value 19936.723529  
## iter 20 value 19929.390728  
## iter 20 value 19929.390693  
## final value 19929.390693   
## converged  
## # weights: 25  
## initial value 21883.149788   
## iter 10 value 19942.172369  
## iter 20 value 19929.453548  
## final value 19929.317644   
## converged  
## # weights: 41  
## initial value 21835.861594   
## iter 10 value 19948.113081  
## iter 20 value 19929.522040  
## final value 19929.316047   
## converged  
## # weights: 9  
## initial value 22448.467529   
## final value 19993.947700   
## converged  
## # weights: 25  
## initial value 22901.706754   
## final value 19993.947700   
## converged  
## # weights: 41  
## initial value 22168.406934   
## final value 19993.947700   
## converged  
## # weights: 9  
## initial value 22974.361830   
## iter 10 value 20000.080738  
## final value 19999.456564   
## converged  
## # weights: 25  
## initial value 21597.134032   
## iter 10 value 19998.917726  
## final value 19997.922685   
## converged  
## # weights: 41  
## initial value 22569.420507   
## iter 10 value 20000.926607  
## final value 19997.263475   
## converged  
## # weights: 9  
## initial value 23206.485353   
## iter 10 value 20004.368693  
## iter 20 value 19994.067846  
## iter 20 value 19994.067798  
## final value 19994.067798   
## converged  
## # weights: 25  
## initial value 22187.495313   
## iter 10 value 20007.649583  
## iter 20 value 19994.105672  
## final value 19993.960036   
## converged  
## # weights: 41  
## initial value 22429.251353   
## iter 10 value 20013.965106  
## iter 20 value 19994.178485  
## final value 19993.959303   
## converged  
## # weights: 9  
## initial value 22693.986942   
## final value 20004.800500   
## converged  
## # weights: 25  
## initial value 22003.577657   
## final value 20004.800500   
## converged  
## # weights: 41  
## initial value 22434.247101   
## final value 20004.800500   
## converged  
## # weights: 9  
## initial value 21685.023502   
## iter 10 value 20010.702819  
## final value 20010.309579   
## converged  
## # weights: 25  
## initial value 23707.337252   
## iter 10 value 20012.176633  
## iter 20 value 20008.775918  
## iter 20 value 20008.775737  
## iter 20 value 20008.775727  
## final value 20008.775727   
## converged  
## # weights: 41  
## initial value 24171.377322   
## iter 10 value 20019.566755  
## iter 20 value 20008.119983  
## final value 20008.116386   
## converged  
## # weights: 9  
## initial value 22904.903152   
## iter 10 value 20016.109318  
## iter 20 value 20004.930882  
## iter 20 value 20004.930830  
## final value 20004.930830   
## converged  
## # weights: 25  
## initial value 23570.399771   
## iter 10 value 20015.838577  
## iter 20 value 20004.927760  
## final value 20004.814982   
## converged  
## # weights: 41  
## initial value 21645.253974   
## iter 10 value 20019.016947  
## iter 20 value 20004.964404  
## final value 20004.810353   
## converged  
## # weights: 9  
## initial value 23484.075144   
## final value 19974.056500   
## converged  
## # weights: 25  
## initial value 21928.177522   
## final value 19974.056500   
## converged  
## # weights: 41  
## initial value 22121.909663   
## final value 19974.056500   
## converged  
## # weights: 9  
## initial value 22178.821941   
## iter 10 value 19980.278207  
## final value 19979.564952   
## converged  
## # weights: 25  
## initial value 22175.852155   
## iter 10 value 19978.225173  
## final value 19978.031273   
## converged  
## # weights: 41  
## initial value 22472.582653   
## iter 10 value 19978.651015  
## iter 20 value 19977.372069  
## iter 20 value 19977.371995  
## iter 20 value 19977.371976  
## final value 19977.371976   
## converged  
## # weights: 9  
## initial value 21634.790473   
## iter 10 value 19982.280616  
## iter 20 value 19974.151318  
## iter 20 value 19974.151280  
## final value 19974.151280   
## converged  
## # weights: 25  
## initial value 23091.424316   
## iter 10 value 19989.949419  
## iter 20 value 19974.239733  
## final value 19974.069077   
## converged  
## # weights: 41  
## initial value 22924.859542   
## iter 10 value 19996.367320  
## iter 20 value 19974.313726  
## final value 19974.066063   
## converged  
## # weights: 9  
## initial value 22591.154249   
## final value 19908.416500   
## converged  
## # weights: 25  
## initial value 22225.908575   
## final value 19908.416500   
## converged  
## # weights: 41  
## initial value 23212.685980   
## final value 19908.416500   
## converged  
## # weights: 9  
## initial value 21702.170384   
## iter 10 value 19914.038904  
## final value 19913.923813   
## converged  
## # weights: 25  
## initial value 22027.583637   
## iter 10 value 19913.712207  
## iter 20 value 19912.390579  
## iter 20 value 19912.390490  
## iter 20 value 19912.390481  
## final value 19912.390481   
## converged  
## # weights: 41  
## initial value 22071.341090   
## iter 10 value 19912.876099  
## final value 19911.731403   
## converged  
## # weights: 9  
## initial value 23483.463021   
## iter 10 value 19918.239834  
## iter 20 value 19908.529755  
## iter 20 value 19908.529710  
## final value 19908.529710   
## converged  
## # weights: 25  
## initial value 22171.995284   
## iter 10 value 19920.374681  
## iter 20 value 19908.554368  
## final value 19908.429987   
## converged  
## # weights: 41  
## initial value 23425.208069   
## iter 10 value 19925.084864  
## iter 20 value 19908.608673  
## final value 19908.428655   
## converged  
## # weights: 9  
## initial value 23458.608257   
## final value 19991.767600   
## converged  
## # weights: 25  
## initial value 22906.493231   
## final value 19991.767600   
## converged  
## # weights: 41  
## initial value 22430.563052   
## final value 19991.767600   
## converged  
## # weights: 9  
## initial value 21687.391381   
## iter 10 value 19997.720548  
## final value 19997.276406   
## converged  
## # weights: 25  
## initial value 21994.445320   
## iter 10 value 19996.823015  
## final value 19995.742583   
## converged  
## # weights: 41  
## initial value 24153.506608   
## iter 10 value 20010.149459  
## iter 20 value 19995.084370  
## final value 19995.083314   
## converged  
## # weights: 9  
## initial value 23045.217706   
## iter 10 value 20001.400680  
## iter 20 value 19991.878662  
## iter 20 value 19991.878617  
## final value 19991.878617   
## converged  
## # weights: 25  
## initial value 23188.543175   
## iter 10 value 20005.316750  
## iter 20 value 19991.923811  
## final value 19991.781580   
## converged  
## # weights: 41  
## initial value 22249.776039   
## iter 10 value 20008.796597  
## iter 20 value 19991.963931  
## final value 19991.778871   
## converged  
## # weights: 9  
## initial value 22388.007627   
## final value 20044.680100   
## converged  
## # weights: 25  
## initial value 22040.209433   
## final value 20044.680100   
## converged  
## # weights: 41  
## initial value 21327.315138   
## final value 20044.680100   
## converged  
## # weights: 9  
## initial value 22874.987238   
## iter 10 value 20050.515583  
## final value 20050.190467   
## converged  
## # weights: 25  
## initial value 22772.979582   
## iter 10 value 20050.225581  
## final value 20048.656168   
## converged  
## # weights: 41  
## initial value 22193.634451   
## iter 10 value 20048.984903  
## final value 20047.996631   
## converged  
## # weights: 9  
## initial value 22747.400607   
## iter 10 value 20056.197663  
## iter 20 value 20044.812888  
## iter 20 value 20044.812835  
## final value 20044.812835   
## converged  
## # weights: 25  
## initial value 21623.534777   
## iter 10 value 20054.754969  
## iter 20 value 20044.796255  
## final value 20044.691670   
## converged  
## # weights: 41  
## initial value 23794.801636   
## iter 10 value 20061.559991  
## iter 20 value 20044.874712  
## final value 20044.693481   
## converged  
## # weights: 9  
## initial value 22014.899934   
## final value 20026.929700   
## converged  
## # weights: 25  
## initial value 24221.688306   
## final value 20026.929700   
## converged  
## # weights: 41  
## initial value 23830.177668   
## final value 20026.929700   
## converged  
## # weights: 9  
## initial value 23292.155299   
## iter 10 value 20032.998268  
## final value 20032.439366   
## converged  
## # weights: 25  
## initial value 23510.402156   
## iter 10 value 20032.845703  
## iter 20 value 20030.905376  
## iter 20 value 20030.905239  
## iter 20 value 20030.905231  
## final value 20030.905231   
## converged  
## # weights: 41  
## initial value 23188.863106   
## iter 10 value 20036.003112  
## iter 20 value 20030.246358  
## final value 20030.245789   
## converged  
## # weights: 9  
## initial value 21951.262437   
## iter 10 value 20035.777776  
## iter 20 value 20027.031711  
## iter 20 value 20027.031671  
## final value 20027.031671   
## converged  
## # weights: 25  
## initial value 21861.788218   
## iter 10 value 20038.653928  
## iter 20 value 20027.064871  
## final value 20026.941662   
## converged  
## # weights: 41  
## initial value 22127.499576   
## iter 10 value 20045.754331  
## iter 20 value 20027.146733  
## final value 20026.939443   
## converged  
## # weights: 9  
## initial value 22770.255401   
## final value 20056.513700   
## converged  
## # weights: 25  
## initial value 22087.125305   
## final value 20056.513700   
## converged  
## # weights: 41  
## initial value 21664.677321   
## final value 20056.513700   
## converged  
## # weights: 9  
## initial value 22646.837237   
## iter 10 value 20062.112688  
## final value 20062.024826   
## converged  
## # weights: 25  
## initial value 22463.048847   
## iter 10 value 20078.090999  
## iter 20 value 20060.588833  
## final value 20060.490344   
## converged  
## # weights: 41  
## initial value 22918.629578   
## iter 10 value 20060.797816  
## final value 20059.830698   
## converged  
## # weights: 9  
## initial value 23623.120897   
## iter 10 value 20065.436099  
## iter 20 value 20056.616568  
## iter 20 value 20056.616527  
## final value 20056.616527   
## converged  
## # weights: 25  
## initial value 23001.532181   
## iter 10 value 20071.276853  
## iter 20 value 20056.683908  
## final value 20056.527786   
## converged  
## # weights: 41  
## initial value 21991.233369   
## iter 10 value 20073.251381  
## iter 20 value 20056.706672  
## iter 30 value 20056.523980  
## iter 30 value 20056.523979  
## iter 30 value 20056.523976  
## final value 20056.523976   
## converged  
## # weights: 9  
## initial value 23026.144546   
## final value 19910.400500   
## converged  
## # weights: 25  
## initial value 21830.880378   
## final value 19910.400500   
## converged  
## # weights: 41  
## initial value 22383.602957   
## final value 19910.400500   
## converged  
## # weights: 9  
## initial value 22004.585844   
## iter 10 value 19918.311591  
## final value 19915.907976   
## converged  
## # weights: 25  
## initial value 23220.202881   
## iter 10 value 19915.909384  
## iter 20 value 19914.374872  
## iter 20 value 19914.374762  
## iter 20 value 19914.374712  
## final value 19914.374712   
## converged  
## # weights: 41  
## initial value 22190.746039   
## iter 10 value 19916.228153  
## final value 19913.715681   
## converged  
## # weights: 9  
## initial value 22503.720956   
## iter 10 value 19920.942021  
## iter 20 value 19910.522035  
## iter 20 value 19910.521987  
## final value 19910.521987   
## converged  
## # weights: 25  
## initial value 21249.538314   
## iter 10 value 19919.314118  
## iter 20 value 19910.503267  
## final value 19910.411776   
## converged  
## # weights: 41  
## initial value 22781.540606   
## iter 10 value 19929.535831  
## iter 20 value 19910.621115  
## final value 19910.410068   
## converged  
## # weights: 9  
## initial value 22157.469925   
## final value 20053.121200   
## converged  
## # weights: 25  
## initial value 22879.303937   
## final value 20053.121200   
## converged  
## # weights: 41  
## initial value 23074.796556   
## final value 20053.121200   
## converged  
## # weights: 9  
## initial value 23369.172858   
## iter 10 value 20061.101948  
## final value 20058.631951   
## converged  
## # weights: 25  
## initial value 22433.550378   
## iter 10 value 20057.897912  
## final value 20057.097444   
## converged  
## # weights: 41  
## initial value 22957.983456   
## iter 10 value 20067.627532  
## iter 20 value 20056.438491  
## final value 20056.437890   
## converged  
## # weights: 9  
## initial value 23199.357491   
## iter 10 value 20062.815421  
## iter 20 value 20053.232967  
## iter 20 value 20053.232922  
## final value 20053.232922   
## converged  
## # weights: 25  
## initial value 23033.305288   
## iter 10 value 20066.501439  
## iter 20 value 20053.275464  
## final value 20053.145816   
## converged  
## # weights: 41  
## initial value 22953.478560   
## iter 10 value 20074.244454  
## iter 20 value 20053.364735  
## final value 20053.133014   
## converged  
## # weights: 9  
## initial value 23139.862591   
## final value 20058.633200   
## converged  
## # weights: 25  
## initial value 22837.459142   
## final value 20058.633200   
## converged  
## # weights: 41  
## initial value 24125.363946   
## final value 20058.633200   
## converged  
## # weights: 9  
## initial value 22715.081571   
## iter 10 value 20064.701133  
## final value 20064.144397   
## converged  
## # weights: 25  
## initial value 24130.318116   
## iter 10 value 20066.738424  
## iter 20 value 20062.612946  
## final value 20062.609876   
## converged  
## # weights: 41  
## initial value 22348.316775   
## iter 10 value 20062.717469  
## final value 20061.950174   
## converged  
## # weights: 9  
## initial value 21537.081686   
## iter 10 value 20065.218350  
## iter 20 value 20058.709122  
## iter 20 value 20058.709091  
## final value 20058.709091   
## converged  
## # weights: 25  
## initial value 23144.800978   
## iter 10 value 20072.371968  
## iter 20 value 20058.791597  
## final value 20058.648359   
## converged  
## # weights: 41  
## initial value 22719.076826   
## iter 10 value 20079.128702  
## iter 20 value 20058.869497  
## final value 20058.644499   
## converged  
## # weights: 9  
## initial value 22380.902827   
## final value 20002.797200   
## converged  
## # weights: 25  
## initial value 23291.497509   
## final value 20002.797200   
## converged  
## # weights: 41  
## initial value 22452.753116   
## final value 20002.797200   
## converged  
## # weights: 9  
## initial value 21981.649593   
## iter 10 value 20010.380188  
## final value 20008.306236   
## converged  
## # weights: 25  
## initial value 23237.419754   
## iter 10 value 20008.090684  
## iter 20 value 20006.772361  
## iter 20 value 20006.772314  
## iter 20 value 20006.772303  
## final value 20006.772303   
## converged  
## # weights: 41  
## initial value 24313.240919   
## iter 10 value 20015.403677  
## iter 20 value 20006.113253  
## final value 20006.112941   
## converged  
## # weights: 9  
## initial value 22849.659472   
## iter 10 value 20013.505029  
## iter 20 value 20002.920653  
## iter 20 value 20002.920603  
## final value 20002.920603   
## converged  
## # weights: 25  
## initial value 22429.826342   
## iter 10 value 20016.808221  
## iter 20 value 20002.958736  
## final value 20002.812588   
## converged  
## # weights: 41  
## initial value 23274.478163   
## iter 10 value 20019.643970  
## iter 20 value 20002.991430  
## final value 20002.810429   
## converged  
## # weights: 9  
## initial value 23622.737997   
## final value 20004.187700   
## converged  
## # weights: 25  
## initial value 22256.124007   
## final value 20004.187700   
## converged  
## # weights: 41  
## initial value 23451.826041   
## final value 20004.187700   
## converged  
## # weights: 9  
## initial value 22076.846864   
## iter 10 value 20010.324247  
## final value 20009.696763   
## converged  
## # weights: 25  
## initial value 22169.824626   
## iter 10 value 20008.572317  
## final value 20008.162872   
## converged  
## # weights: 41  
## initial value 22710.109602   
## iter 10 value 20008.403987  
## final value 20007.503466   
## converged  
## # weights: 9  
## initial value 22302.493983   
## iter 10 value 20015.198975  
## iter 20 value 20004.314651  
## iter 20 value 20004.314601  
## final value 20004.314601   
## converged  
## # weights: 25  
## initial value 22104.427891   
## iter 10 value 20017.886972  
## iter 20 value 20004.345642  
## final value 20004.202777   
## converged  
## # weights: 41  
## initial value 24627.477371   
## iter 10 value 20009.844351  
## iter 20 value 20004.252917  
## final value 20004.205514   
## converged  
## # weights: 9  
## initial value 23307.528415   
## final value 20045.107600   
## converged  
## # weights: 25  
## initial value 22381.900603   
## final value 20045.107600   
## converged  
## # weights: 41  
## initial value 22071.591304   
## final value 20045.107600   
## converged  
## # weights: 9  
## initial value 23471.297345   
## iter 10 value 20051.113424  
## final value 20050.617984   
## converged  
## # weights: 25  
## initial value 22765.178636   
## iter 10 value 20049.397625  
## final value 20049.083662   
## converged  
## # weights: 41  
## initial value 23436.568001   
## iter 10 value 20049.437639  
## final value 20048.424122   
## converged  
## # weights: 9  
## initial value 23576.087283   
## iter 10 value 20054.465818  
## iter 20 value 20045.215493  
## iter 20 value 20045.215450  
## final value 20045.215450   
## converged  
## # weights: 25  
## initial value 23042.732341   
## iter 10 value 20061.531955  
## iter 20 value 20045.296960  
## final value 20045.120089   
## converged  
## # weights: 41  
## initial value 23756.252597   
## iter 10 value 20059.384458  
## iter 20 value 20045.272201  
## final value 20045.119956   
## converged  
## # weights: 9  
## initial value 21931.460088   
## final value 19977.422500   
## converged  
## # weights: 25  
## initial value 22485.189347   
## final value 19977.422500   
## converged  
## # weights: 41  
## initial value 23349.980839   
## final value 19977.422500   
## converged  
## # weights: 9  
## initial value 22834.167810   
## iter 10 value 20057.704744  
## iter 20 value 19983.388798  
## final value 19982.931007   
## converged  
## # weights: 25  
## initial value 23361.002517   
## iter 10 value 19984.070264  
## iter 20 value 19981.416793  
## final value 19981.397263   
## converged  
## # weights: 41  
## initial value 22771.658098   
## iter 10 value 19989.325830  
## iter 20 value 19980.769563  
## final value 19980.738019   
## converged  
## # weights: 9  
## initial value 22701.003795   
## iter 10 value 19987.923702  
## iter 20 value 19977.543571  
## iter 20 value 19977.543522  
## final value 19977.543522   
## converged  
## # weights: 25  
## initial value 21930.831604   
## iter 10 value 19989.936377  
## iter 20 value 19977.566775  
## final value 19977.435333   
## converged  
## # weights: 41  
## initial value 22996.917674   
## iter 10 value 19997.824673  
## iter 20 value 19977.657721  
## final value 19977.435017   
## converged  
## # weights: 9  
## initial value 22958.310510   
## final value 19972.920100   
## converged  
## # weights: 25  
## initial value 22472.817386   
## final value 19972.920100   
## converged  
## # weights: 41  
## initial value 22985.346369   
## final value 19972.920100   
## converged  
## # weights: 9  
## initial value 22260.750800   
## iter 10 value 19978.828249  
## final value 19978.428496   
## converged  
## # weights: 25  
## initial value 21695.139813   
## iter 10 value 19978.645207  
## final value 19976.894806   
## converged  
## # weights: 41  
## initial value 21436.929969   
## iter 10 value 19984.175002  
## iter 20 value 19976.236557  
## final value 19976.235546   
## converged  
## # weights: 9  
## initial value 22946.966155   
## iter 10 value 19983.255381  
## iter 20 value 19973.039258  
## iter 20 value 19973.039210  
## final value 19973.039210   
## converged  
## # weights: 25  
## initial value 22087.601409   
## iter 10 value 19988.016343  
## iter 20 value 19973.094148  
## final value 19972.933969   
## converged  
## # weights: 41  
## initial value 22474.484100   
## iter 10 value 19991.614869  
## iter 20 value 19973.135636  
## final value 19972.930179   
## converged  
## # weights: 9  
## initial value 22984.518035   
## final value 20032.589200   
## converged  
## # weights: 25  
## initial value 23091.448946   
## final value 20032.589200   
## converged  
## # weights: 41  
## initial value 22561.340689   
## final value 20032.589200   
## converged  
## # weights: 9  
## initial value 22935.149820   
## iter 10 value 20040.616789  
## final value 20038.099000   
## converged  
## # weights: 25  
## initial value 21359.563893   
## iter 10 value 20037.322233  
## final value 20036.564818   
## converged  
## # weights: 41  
## initial value 23694.035823   
## iter 10 value 20037.772199  
## iter 20 value 20035.908380  
## final value 20035.905312   
## converged  
## # weights: 9  
## initial value 23344.559550   
## iter 10 value 20043.013930  
## iter 20 value 20032.709389  
## iter 20 value 20032.709341  
## final value 20032.709341   
## converged  
## # weights: 25  
## initial value 23003.165969   
## iter 10 value 20046.508374  
## iter 20 value 20032.749677  
## final value 20032.606711   
## converged  
## # weights: 41  
## initial value 23432.782390   
## iter 10 value 20052.744018  
## iter 20 value 20032.821569  
## final value 20032.599907   
## converged  
## # weights: 9  
## initial value 22475.901481   
## final value 20038.369700   
## converged  
## # weights: 25  
## initial value 24202.718297   
## final value 20038.369700   
## converged  
## # weights: 41  
## initial value 22851.402309   
## final value 20038.369700   
## converged  
## # weights: 9  
## initial value 21975.143753   
## iter 10 value 20045.448655  
## final value 20043.879778   
## converged  
## # weights: 25  
## initial value 21540.918666   
## iter 10 value 20043.679851  
## final value 20042.345509   
## converged  
## # weights: 41  
## initial value 22511.663673   
## iter 10 value 20042.688383  
## final value 20041.686031   
## converged  
## # weights: 9  
## initial value 22727.811477   
## iter 10 value 20048.487314  
## iter 20 value 20038.486348  
## iter 20 value 20038.486301  
## final value 20038.486301   
## converged  
## # weights: 25  
## initial value 23051.218977   
## iter 10 value 20052.485596  
## iter 20 value 20038.532445  
## final value 20038.387892   
## converged  
## # weights: 41  
## initial value 22397.856903   
## iter 10 value 20056.576243  
## iter 20 value 20038.579607  
## final value 20038.379512   
## converged  
## # weights: 9  
## initial value 21665.607428   
## final value 19884.413200   
## converged  
## # weights: 25  
## initial value 22327.308178   
## final value 19884.413200   
## converged  
## # weights: 41  
## initial value 23079.231533   
## final value 19884.413200   
## converged  
## # weights: 9  
## initial value 22411.483383   
## iter 10 value 19892.914794  
## final value 19889.920328   
## converged  
## # weights: 25  
## initial value 22149.107923   
## iter 10 value 19889.300777  
## final value 19888.387247   
## converged  
## # weights: 41  
## initial value 22767.671291   
## iter 10 value 19888.650923  
## final value 19887.728149   
## converged  
## # weights: 9  
## initial value 22795.778055   
## iter 10 value 19894.102590  
## iter 20 value 19884.524911  
## iter 20 value 19884.524866  
## final value 19884.524866   
## converged  
## # weights: 25  
## initial value 22034.282886   
## iter 10 value 19897.107343  
## iter 20 value 19884.559554  
## final value 19884.424011   
## converged  
## # weights: 41  
## initial value 24211.779523   
## iter 10 value 19893.577665  
## iter 20 value 19884.518859  
## final value 19884.427180   
## converged  
## # weights: 9  
## initial value 22220.031235   
## final value 19968.886000   
## converged  
## # weights: 25  
## initial value 23309.476049   
## final value 19968.886000   
## converged  
## # weights: 41  
## initial value 22073.774489   
## final value 19968.886000   
## converged  
## # weights: 9  
## initial value 22136.230591   
## iter 10 value 19974.541774  
## final value 19974.394328   
## converged  
## # weights: 25  
## initial value 23589.702884   
## iter 10 value 19973.733558  
## final value 19972.860701   
## converged  
## # weights: 41  
## initial value 21546.241765   
## iter 10 value 19983.759391  
## iter 20 value 19972.202231  
## final value 19972.201369   
## converged  
## # weights: 9  
## initial value 22668.778649   
## iter 10 value 19979.958289  
## iter 20 value 19969.013655  
## iter 20 value 19969.013604  
## final value 19969.013604   
## converged  
## # weights: 25  
## initial value 22779.271718   
## iter 10 value 19984.613566  
## iter 20 value 19969.067326  
## final value 19968.899538   
## converged  
## # weights: 41  
## initial value 21674.150244   
## iter 10 value 19985.562543  
## iter 20 value 19969.078267  
## final value 19968.896293   
## converged  
## # weights: 9  
## initial value 23203.948028   
## final value 19977.422500   
## converged  
## # weights: 25  
## initial value 22231.592349   
## final value 19977.422500   
## converged  
## # weights: 41  
## initial value 22910.659173   
## final value 19977.422500   
## converged  
## # weights: 9  
## initial value 23831.701629   
## iter 10 value 19983.805816  
## final value 19982.931025   
## converged  
## # weights: 25  
## initial value 21967.723621   
## iter 10 value 19982.323814  
## final value 19981.397298   
## converged  
## # weights: 41  
## initial value 23733.114470   
## iter 10 value 19982.312790  
## iter 20 value 19980.738342  
## iter 20 value 19980.738167  
## iter 20 value 19980.738086  
## final value 19980.738086   
## converged  
## # weights: 9  
## initial value 22028.896475   
## iter 10 value 19987.060290  
## iter 20 value 19977.533616  
## iter 20 value 19977.533572  
## final value 19977.533572   
## converged  
## # weights: 25  
## initial value 22256.592936   
## iter 10 value 19991.660574  
## iter 20 value 19977.586654  
## final value 19977.438753   
## converged  
## # weights: 41  
## initial value 22242.691189   
## iter 10 value 19996.603853  
## iter 20 value 19977.643646  
## final value 19977.433961   
## converged  
## # weights: 9  
## initial value 23044.469629   
## final value 20018.547700   
## converged  
## # weights: 25  
## initial value 23676.894121   
## final value 20018.547700   
## converged  
## # weights: 41  
## initial value 23145.155021   
## final value 20018.547700   
## converged  
## # weights: 9  
## initial value 23773.395795   
## iter 10 value 20025.129252  
## final value 20024.057117   
## converged  
## # weights: 25  
## initial value 23029.968525   
## iter 10 value 20023.626445  
## final value 20022.523102   
## converged  
## # weights: 41  
## initial value 23527.486985   
## iter 10 value 20025.491136  
## iter 20 value 20021.863908  
## final value 20021.863637   
## converged  
## # weights: 9  
## initial value 21961.705156   
## iter 10 value 20026.773660  
## iter 20 value 20018.642539  
## iter 20 value 20018.642501  
## final value 20018.642501   
## converged  
## # weights: 25  
## initial value 22716.610311   
## iter 10 value 20032.477694  
## iter 20 value 20018.708302  
## final value 20018.563683   
## converged  
## # weights: 41  
## initial value 22257.724343   
## iter 10 value 20035.578796  
## iter 20 value 20018.744055  
## final value 20018.558063   
## converged  
## # weights: 9  
## initial value 22972.449323   
## final value 19997.883700   
## converged  
## # weights: 25  
## initial value 23380.418629   
## final value 19997.883700   
## converged  
## # weights: 41  
## initial value 22830.430624   
## final value 19997.883700   
## converged  
## # weights: 9  
## initial value 22419.190268   
## iter 10 value 20004.072905  
## final value 20003.392557   
## converged  
## # weights: 25  
## initial value 23497.854248   
## iter 10 value 20003.793365  
## iter 20 value 20001.863166  
## final value 20001.858726   
## converged  
## # weights: 41  
## initial value 21900.711094   
## iter 10 value 20004.079659  
## iter 20 value 20001.199478  
## iter 20 value 20001.199344  
## iter 20 value 20001.199317  
## final value 20001.199317   
## converged  
## # weights: 9  
## initial value 23533.252160   
## iter 10 value 20008.159133  
## iter 20 value 19998.002168  
## iter 20 value 19998.002120  
## final value 19998.002120   
## converged  
## # weights: 25  
## initial value 23216.955752   
## iter 10 value 20014.678364  
## iter 20 value 19998.077329  
## final value 19997.896100   
## converged  
## # weights: 41  
## initial value 22730.756953   
## iter 10 value 20015.171395  
## iter 20 value 19998.083014  
## final value 19997.893398   
## converged  
## # weights: 9  
## initial value 21830.916553   
## final value 20016.930100   
## converged  
## # weights: 25  
## initial value 22406.997549   
## final value 20016.930100   
## converged  
## # weights: 41  
## initial value 22350.371993   
## final value 20016.930100   
## converged  
## # weights: 9  
## initial value 22382.813879   
## iter 10 value 20025.024729  
## final value 20022.439478   
## converged  
## # weights: 25  
## initial value 21694.956502   
## iter 10 value 20021.746600  
## final value 20020.905434   
## converged  
## # weights: 41  
## initial value 21865.685341   
## iter 10 value 20034.804710  
## iter 20 value 20020.246661  
## final value 20020.246055   
## converged  
## # weights: 9  
## initial value 23540.414640   
## iter 10 value 20026.595681  
## iter 20 value 20017.041537  
## iter 20 value 20017.041492  
## final value 20017.041492   
## converged  
## # weights: 25  
## initial value 21954.826493   
## iter 10 value 20031.112138  
## iter 20 value 20017.093608  
## final value 20016.941562   
## converged  
## # weights: 41  
## initial value 22683.657142   
## iter 10 value 20034.053961  
## iter 20 value 20017.127525  
## final value 20016.942196   
## converged  
## # weights: 9  
## initial value 23636.662156   
## final value 20042.193700   
## converged  
## # weights: 25  
## initial value 22373.187375   
## final value 20042.193700   
## converged  
## # weights: 41  
## initial value 24296.291996   
## final value 20042.193700   
## converged  
## # weights: 9  
## initial value 22223.005642   
## iter 10 value 20048.077741  
## final value 20047.703953   
## converged  
## # weights: 25  
## initial value 22218.222549   
## iter 10 value 20046.727634  
## final value 20046.169611   
## converged  
## # weights: 41  
## initial value 22834.067599   
## iter 10 value 20058.331988  
## iter 20 value 20045.517752  
## final value 20045.510152   
## converged  
## # weights: 9  
## initial value 22853.184179   
## iter 10 value 20052.900740  
## iter 20 value 20042.317144  
## iter 20 value 20042.317094  
## final value 20042.317094   
## converged  
## # weights: 25  
## initial value 21819.494688   
## iter 10 value 20053.665276  
## iter 20 value 20042.325958  
## final value 20042.205384   
## converged  
## # weights: 41  
## initial value 23742.256335   
## iter 10 value 20057.551259  
## iter 20 value 20042.370761  
## final value 20042.205075   
## converged  
## # weights: 9  
## initial value 23558.362555   
## final value 19991.936500   
## converged  
## # weights: 25  
## initial value 24497.102015   
## final value 19991.936500   
## converged  
## # weights: 41  
## initial value 20959.278069   
## final value 19991.936500   
## converged  
## # weights: 9  
## initial value 22966.200245   
## iter 10 value 19998.102414  
## final value 19997.445275   
## converged  
## # weights: 25  
## initial value 21905.138736   
## iter 10 value 19996.757687  
## final value 19995.911439   
## converged  
## # weights: 41  
## initial value 22409.718664   
## iter 10 value 20010.812862  
## iter 20 value 19995.255755  
## final value 19995.252121   
## converged  
## # weights: 9  
## initial value 22825.280245   
## iter 10 value 20001.982252  
## iter 20 value 19992.052320  
## iter 20 value 19992.052273  
## final value 19992.052273   
## converged  
## # weights: 25  
## initial value 22407.357316   
## iter 10 value 20006.449901  
## iter 20 value 19992.103828  
## final value 19991.952606   
## converged  
## # weights: 41  
## initial value 22895.203254   
## iter 10 value 20013.443150  
## iter 20 value 19992.184455  
## final value 19991.946785   
## converged  
## # weights: 9  
## initial value 23339.331340   
## final value 20015.560100   
## converged  
## # weights: 25  
## initial value 23696.154090   
## final value 20015.560100   
## converged  
## # weights: 41  
## initial value 24082.074623   
## final value 20015.560100   
## converged  
## # weights: 9  
## initial value 23392.230150   
## iter 10 value 20021.555933  
## final value 20021.069413   
## converged  
## # weights: 25  
## initial value 22853.749454   
## iter 10 value 20021.539431  
## iter 20 value 20019.535681  
## final value 20019.535369   
## converged  
## # weights: 41  
## initial value 24208.209990   
## iter 10 value 20027.044337  
## iter 20 value 20018.877948  
## final value 20018.876044   
## converged  
## # weights: 9  
## initial value 22212.991554   
## iter 10 value 20025.511097  
## iter 20 value 20015.674827  
## iter 20 value 20015.674781  
## final value 20015.674781   
## converged  
## # weights: 25  
## initial value 22848.196252   
## iter 10 value 20031.229821  
## iter 20 value 20015.740760  
## final value 20015.573833   
## converged  
## # weights: 41  
## initial value 21121.199564   
## iter 10 value 20024.979647  
## iter 20 value 20015.668700  
## final value 20015.569265   
## converged  
## # weights: 9  
## initial value 21418.824997   
## final value 19829.997200   
## converged  
## # weights: 25  
## initial value 22112.221034   
## final value 19829.997200   
## converged  
## # weights: 41  
## initial value 22757.733722   
## final value 19829.997200   
## converged  
## # weights: 9  
## initial value 22779.080522   
## iter 10 value 19836.875311  
## final value 19835.503716   
## converged  
## # weights: 25  
## initial value 22750.214731   
## iter 10 value 19834.805436  
## final value 19833.970824   
## converged  
## # weights: 41  
## initial value 22449.576480   
## iter 10 value 19836.845503  
## iter 20 value 19833.312142  
## final value 19833.311787   
## converged  
## # weights: 9  
## initial value 22869.595865   
## iter 10 value 19840.790557  
## iter 20 value 19830.121639  
## iter 20 value 19830.121589  
## final value 19830.121589   
## converged  
## # weights: 25  
## initial value 21181.919072   
## iter 10 value 19837.741186  
## iter 20 value 19830.086482  
## final value 19830.008262   
## converged  
## # weights: 41  
## initial value 23417.626849   
## iter 10 value 19845.199133  
## iter 20 value 19830.172466  
## final value 19830.008481   
## converged  
## # weights: 9  
## initial value 21471.091644   
## final value 20029.414000   
## converged  
## # weights: 25  
## initial value 22438.236968   
## final value 20029.414000   
## converged  
## # weights: 41  
## initial value 22599.867277   
## final value 20029.414000   
## converged  
## # weights: 9  
## initial value 23042.855175   
## iter 10 value 20037.088069  
## final value 20034.923760   
## converged  
## # weights: 25  
## initial value 22686.191539   
## iter 10 value 20037.995485  
## iter 20 value 20033.389816  
## iter 20 value 20033.389696  
## iter 20 value 20033.389686  
## final value 20033.389686   
## converged  
## # weights: 41  
## initial value 23748.600212   
## iter 10 value 20034.196932  
## iter 20 value 20032.730404  
## iter 20 value 20032.730223  
## iter 20 value 20032.730181  
## final value 20032.730181   
## converged  
## # weights: 9  
## initial value 22385.143606   
## iter 10 value 20039.204169  
## iter 20 value 20029.526873  
## iter 20 value 20029.526828  
## final value 20029.526828   
## converged  
## # weights: 25  
## initial value 23377.002940   
## iter 10 value 20044.470484  
## iter 20 value 20029.587589  
## final value 20029.427079   
## converged  
## # weights: 41  
## initial value 23215.527955   
## iter 10 value 20047.822765  
## iter 20 value 20029.626239  
## final value 20029.424107   
## converged  
## # weights: 9  
## initial value 23890.641562   
## final value 20037.058000   
## converged  
## # weights: 25  
## initial value 23456.981665   
## final value 20037.058000   
## converged  
## # weights: 41  
## initial value 23001.426517   
## final value 20037.058000   
## converged  
## # weights: 9  
## initial value 23776.819472   
## iter 10 value 20043.030316  
## final value 20042.568040   
## converged  
## # weights: 25  
## initial value 22976.150422   
## iter 10 value 20041.908902  
## final value 20041.033775   
## converged  
## # weights: 41  
## initial value 23659.958033   
## iter 10 value 20054.348543  
## iter 20 value 20040.375702  
## final value 20040.374460   
## converged  
## # weights: 9  
## initial value 23236.559766   
## iter 10 value 20046.604915  
## iter 20 value 20037.168068  
## iter 20 value 20037.168024  
## final value 20037.168024   
## converged  
## # weights: 25  
## initial value 22919.601593   
## iter 10 value 20052.262588  
## iter 20 value 20037.233297  
## iter 30 value 20037.071116  
## iter 30 value 20037.071026  
## iter 30 value 20037.071026  
## final value 20037.071026   
## converged  
## # weights: 41  
## initial value 21786.533177   
## iter 10 value 20051.797953  
## iter 20 value 20037.227940  
## final value 20037.067356   
## converged  
## # weights: 9  
## initial value 23779.201520   
## final value 20040.034000   
## converged  
## # weights: 25  
## initial value 22317.529600   
## final value 20040.034000   
## converged  
## # weights: 41  
## initial value 22169.836324   
## final value 20040.034000   
## converged  
## # weights: 9  
## initial value 21629.211011   
## iter 10 value 20045.678048  
## final value 20045.544134   
## converged  
## # weights: 25  
## initial value 23736.651076   
## iter 10 value 20046.461306  
## iter 20 value 20044.118878  
## final value 20044.009839   
## converged  
## # weights: 41  
## initial value 23034.878553   
## iter 10 value 20053.950331  
## iter 20 value 20043.350573  
## final value 20043.350336   
## converged  
## # weights: 9  
## initial value 23627.460532   
## iter 10 value 20049.041974  
## iter 20 value 20040.137855  
## iter 20 value 20040.137813  
## final value 20040.137813   
## converged  
## # weights: 25  
## initial value 22274.275335   
## iter 10 value 20055.259448  
## iter 20 value 20040.209537  
## final value 20040.045912   
## converged  
## # weights: 41  
## initial value 23013.588776   
## iter 10 value 20056.746718  
## iter 20 value 20040.226685  
## final value 20040.043736   
## converged  
## # weights: 9  
## initial value 21839.108281   
## final value 19988.520500   
## converged  
## # weights: 25  
## initial value 23041.292610   
## final value 19988.520500   
## converged  
## # weights: 41  
## initial value 24013.388819   
## final value 19988.520500   
## converged  
## # weights: 9  
## initial value 23445.862430   
## iter 10 value 19994.780035  
## final value 19994.029224   
## converged  
## # weights: 25  
## initial value 23794.737382   
## iter 10 value 19992.642955  
## final value 19992.495483   
## converged  
## # weights: 41  
## initial value 21655.332583   
## iter 10 value 20003.170930  
## iter 20 value 19991.838985  
## final value 19991.836129   
## converged  
## # weights: 9  
## initial value 22671.339179   
## iter 10 value 19999.785313  
## iter 20 value 19988.650374  
## iter 20 value 19988.650323  
## final value 19988.650323   
## converged  
## # weights: 25  
## initial value 22173.055274   
## iter 10 value 20001.375679  
## iter 20 value 19988.668710  
## final value 19988.532231   
## converged  
## # weights: 41  
## initial value 22257.021705   
## iter 10 value 20006.639663  
## iter 20 value 19988.729400  
## final value 19988.531249   
## converged  
## # weights: 9  
## initial value 23224.809295   
## final value 20054.760100   
## converged  
## # weights: 25  
## initial value 22301.268849   
## final value 20054.760100   
## converged  
## # weights: 41  
## initial value 22021.268715   
## final value 20054.760100   
## converged  
## # weights: 9  
## initial value 22809.642957   
## iter 10 value 20062.313386  
## final value 20060.271002   
## converged  
## # weights: 25  
## initial value 22326.627839   
## iter 10 value 20060.224056  
## iter 20 value 20058.736637  
## iter 20 value 20058.736476  
## iter 20 value 20058.736451  
## final value 20058.736451   
## converged  
## # weights: 41  
## initial value 22231.095918   
## iter 10 value 20074.149151  
## iter 20 value 20058.077145  
## iter 20 value 20058.076950  
## iter 20 value 20058.076906  
## final value 20058.076906   
## converged  
## # weights: 9  
## initial value 21815.479684   
## iter 10 value 20063.116580  
## iter 20 value 20054.856444  
## iter 20 value 20054.856405  
## final value 20054.856405   
## converged  
## # weights: 25  
## initial value 22752.177527   
## iter 10 value 20068.292587  
## iter 20 value 20054.916119  
## final value 20054.772811   
## converged  
## # weights: 41  
## initial value 22308.809547   
## iter 10 value 20070.740589  
## iter 20 value 20054.944342  
## final value 20054.771578   
## converged  
## # weights: 9  
## initial value 23145.552664   
## final value 20047.567600   
## converged  
## # weights: 25  
## initial value 23381.003105   
## final value 20047.567600   
## converged  
## # weights: 41  
## initial value 21918.678089   
## final value 20047.567600   
## converged  
## # weights: 9  
## initial value 22059.990214   
## iter 10 value 20055.619694  
## iter 20 value 20053.078076  
## iter 20 value 20053.078065  
## final value 20053.078065   
## converged  
## # weights: 25  
## initial value 23159.041039   
## iter 10 value 20052.757960  
## final value 20051.543680   
## converged  
## # weights: 41  
## initial value 21383.705826   
## iter 10 value 20059.763889  
## iter 20 value 20050.886783  
## final value 20050.884111   
## converged  
## # weights: 9  
## initial value 22608.479704   
## iter 10 value 20057.397243  
## iter 20 value 20047.680928  
## iter 20 value 20047.680883  
## final value 20047.680883   
## converged  
## # weights: 25  
## initial value 22280.576888   
## iter 10 value 20061.669380  
## iter 20 value 20047.730182  
## final value 20047.581146   
## converged  
## # weights: 41  
## initial value 23474.118757   
## iter 10 value 20066.565023  
## iter 20 value 20047.786625  
## final value 20047.582311   
## converged  
## # weights: 9  
## initial value 21575.666187   
## final value 19993.447600   
## converged  
## # weights: 25  
## initial value 23334.717365   
## final value 19993.447600   
## converged  
## # weights: 41  
## initial value 24020.270968   
## final value 19993.447600   
## converged  
## # weights: 9  
## initial value 22542.020878   
## iter 10 value 20002.431105  
## final value 19998.956426   
## converged  
## # weights: 25  
## initial value 22691.380422   
## iter 10 value 19997.706065  
## final value 19997.422592   
## converged  
## # weights: 41  
## initial value 23376.102564   
## iter 10 value 19998.061298  
## final value 19996.763258   
## converged  
## # weights: 9  
## initial value 22225.254547   
## iter 10 value 20004.743293  
## iter 20 value 19993.577830  
## iter 20 value 19993.577778  
## final value 19993.577778   
## converged  
## # weights: 25  
## initial value 23676.869348   
## iter 10 value 20004.668270  
## iter 20 value 19993.576966  
## final value 19993.471785   
## converged  
## # weights: 41  
## initial value 22874.840273   
## iter 10 value 20014.006157  
## iter 20 value 19993.684624  
## final value 19993.457873   
## converged  
## # weights: 9  
## initial value 21923.629609   
## final value 19922.747600   
## converged  
## # weights: 25  
## initial value 23465.867779   
## final value 19922.747600   
## converged  
## # weights: 41  
## initial value 23154.886215   
## final value 19922.747600   
## converged  
## # weights: 9  
## initial value 22821.475287   
## iter 10 value 19929.390113  
## final value 19928.255218   
## converged  
## # weights: 25  
## initial value 22276.419001   
## iter 10 value 19927.247539  
## final value 19926.721872   
## converged  
## # weights: 41  
## initial value 21445.254674   
## iter 10 value 19927.429504  
## final value 19926.062734   
## converged  
## # weights: 9  
## initial value 23741.311542   
## iter 10 value 19930.002956  
## iter 20 value 19922.831249  
## iter 20 value 19922.831215  
## final value 19922.831215   
## converged  
## # weights: 25  
## initial value 20932.599753   
## iter 10 value 19928.566457  
## iter 20 value 19922.814687  
## final value 19922.758266   
## converged  
## # weights: 41  
## initial value 23052.394324   
## iter 10 value 19940.357482  
## iter 20 value 19922.950628  
## final value 19922.758492   
## converged  
## # weights: 9  
## initial value 23798.385201   
## final value 20039.453200   
## converged  
## # weights: 25  
## initial value 23927.043190   
## final value 20039.453200   
## converged  
## # weights: 41  
## initial value 23581.043803   
## final value 20039.453200   
## converged  
## # weights: 9  
## initial value 21976.440504   
## iter 10 value 20046.713726  
## final value 20044.963321   
## converged  
## # weights: 25  
## initial value 22372.566328   
## iter 10 value 20044.398486  
## final value 20043.429018   
## converged  
## # weights: 41  
## initial value 22011.729211   
## iter 10 value 20045.513750  
## iter 20 value 20042.769996  
## final value 20042.769581   
## converged  
## # weights: 9  
## initial value 22750.754586   
## iter 10 value 20049.522700  
## iter 20 value 20039.569293  
## iter 20 value 20039.569247  
## final value 20039.569247   
## converged  
## # weights: 25  
## initial value 22468.952829   
## iter 10 value 20054.320886  
## iter 20 value 20039.624613  
## final value 20039.466364   
## converged  
## # weights: 41  
## initial value 22513.831404   
## iter 10 value 20060.162707  
## iter 20 value 20039.691964  
## final value 20039.465104   
## converged  
## # weights: 9  
## initial value 22849.532367   
## final value 20044.507700   
## converged  
## # weights: 25  
## initial value 21888.375334   
## final value 20044.507700   
## converged  
## # weights: 41  
## initial value 21950.730058   
## final value 20044.507700   
## converged  
## # weights: 9  
## initial value 22191.812658   
## iter 10 value 20050.279156  
## final value 20050.018046   
## converged  
## # weights: 25  
## initial value 23321.668293   
## iter 10 value 20050.176044  
## final value 20048.483680   
## converged  
## # weights: 41  
## initial value 22147.252914   
## iter 10 value 20048.778268  
## iter 20 value 20047.824276  
## iter 20 value 20047.824180  
## iter 20 value 20047.824171  
## final value 20047.824171   
## converged  
## # weights: 9  
## initial value 22416.164437   
## iter 10 value 20054.703691  
## iter 20 value 20044.625252  
## iter 20 value 20044.625205  
## final value 20044.625205   
## converged  
## # weights: 25  
## initial value 23171.502650   
## iter 10 value 20057.464293  
## iter 20 value 20044.657079  
## final value 20044.522505   
## converged  
## # weights: 41  
## initial value 22069.037625   
## iter 10 value 20061.243230  
## iter 20 value 20044.700648  
## final value 20044.518961   
## converged  
## # weights: 9  
## initial value 23505.747709   
## final value 20004.341200   
## converged  
## # weights: 25  
## initial value 21908.014297   
## final value 20004.341200   
## converged  
## # weights: 41  
## initial value 21709.097478   
## final value 20004.341200   
## converged  
## # weights: 9  
## initial value 23156.920982   
## iter 10 value 20010.339980  
## final value 20009.850262   
## converged  
## # weights: 25  
## initial value 23201.298645   
## iter 10 value 20009.582631  
## final value 20008.316348   
## converged  
## # weights: 41  
## initial value 22377.574647   
## iter 10 value 20010.070778  
## iter 20 value 20007.657067  
## iter 20 value 20007.656958  
## iter 20 value 20007.656948  
## final value 20007.656948   
## converged  
## # weights: 9  
## initial value 22682.602345   
## iter 10 value 20015.050194  
## iter 20 value 20004.464666  
## iter 20 value 20004.464617  
## final value 20004.464617   
## converged  
## # weights: 25  
## initial value 22103.088861   
## iter 10 value 20018.786176  
## iter 20 value 20004.507739  
## final value 20004.352533   
## converged  
## # weights: 41  
## initial value 21360.066520   
## iter 10 value 20015.069834  
## iter 20 value 20004.464893  
## final value 20004.351290   
## converged  
## # weights: 9  
## initial value 23497.353695   
## final value 20012.190500   
## converged  
## # weights: 25  
## initial value 23341.325965   
## final value 20012.190500   
## converged  
## # weights: 41  
## initial value 22169.381134   
## final value 20012.190500   
## converged  
## # weights: 9  
## initial value 22038.030101   
## iter 10 value 20035.613763  
## iter 20 value 20017.704622  
## final value 20017.699762   
## converged  
## # weights: 25  
## initial value 23029.702150   
## iter 10 value 20018.861449  
## iter 20 value 20016.166690  
## final value 20016.165876   
## converged  
## # weights: 41  
## initial value 22009.025843   
## iter 10 value 20016.486432  
## final value 20015.506474   
## converged  
## # weights: 9  
## initial value 23811.481162   
## iter 10 value 20020.775591  
## iter 20 value 20012.289479  
## iter 20 value 20012.289440  
## final value 20012.289440   
## converged  
## # weights: 25  
## initial value 22559.059971   
## iter 10 value 20027.521090  
## iter 20 value 20012.367250  
## final value 20012.201756   
## converged  
## # weights: 41  
## initial value 22912.123411   
## iter 10 value 20032.991428  
## iter 20 value 20012.430318  
## final value 20012.200952   
## converged  
## # weights: 9  
## initial value 22726.898626   
## final value 20007.816500   
## converged  
## # weights: 25  
## initial value 23091.630577   
## final value 20007.816500   
## converged  
## # weights: 41  
## initial value 23464.845353   
## final value 20007.816500   
## converged  
## # weights: 9  
## initial value 21952.025495   
## iter 10 value 20014.188345  
## final value 20013.325668   
## converged  
## # weights: 25  
## initial value 21848.820091   
## iter 10 value 20012.975660  
## iter 20 value 20011.792273  
## final value 20011.791711   
## converged  
## # weights: 41  
## initial value 22785.985309   
## iter 10 value 20024.542594  
## iter 20 value 20011.133833  
## final value 20011.132310   
## converged  
## # weights: 9  
## initial value 22326.543638   
## iter 10 value 20018.558343  
## iter 20 value 20007.940345  
## iter 20 value 20007.940295  
## final value 20007.940295   
## converged  
## # weights: 25  
## initial value 21517.334794   
## iter 10 value 20017.635845  
## iter 20 value 20007.929709  
## final value 20007.828626   
## converged  
## # weights: 41  
## initial value 23384.955560   
## iter 10 value 20024.760314  
## iter 20 value 20008.011849  
## final value 20007.827909   
## converged  
## # weights: 9  
## initial value 23523.266022   
## final value 20043.189200   
## converged  
## # weights: 25  
## initial value 22685.320656   
## final value 20043.189200   
## converged  
## # weights: 41  
## initial value 23308.757487   
## final value 20043.189200   
## converged  
## # weights: 9  
## initial value 23103.573038   
## iter 10 value 20048.712718  
## final value 20048.699776   
## converged  
## # weights: 25  
## initial value 23586.954562   
## iter 10 value 20048.342270  
## final value 20047.165125   
## converged  
## # weights: 41  
## initial value 22229.907619   
## iter 10 value 20061.611672  
## iter 20 value 20046.523139  
## final value 20046.505677   
## converged  
## # weights: 9  
## initial value 22464.519143   
## iter 10 value 20054.544238  
## iter 20 value 20043.320115  
## iter 20 value 20043.320062  
## final value 20043.320062   
## converged  
## # weights: 25  
## initial value 23081.460104   
## iter 10 value 20058.673947  
## iter 20 value 20043.367727  
## final value 20043.201298   
## converged  
## # weights: 41  
## initial value 22215.451238   
## iter 10 value 20060.902552  
## iter 20 value 20043.393421  
## final value 20043.203048   
## converged  
## # weights: 9  
## initial value 22276.511603   
## final value 20037.160100   
## converged  
## # weights: 25  
## initial value 23256.130448   
## final value 20037.160100   
## converged  
## # weights: 41  
## initial value 23675.201082   
## final value 20037.160100   
## converged  
## # weights: 9  
## initial value 21910.148626   
## iter 10 value 20044.737199  
## final value 20042.670151   
## converged  
## # weights: 25  
## initial value 22545.360045   
## iter 10 value 20042.442154  
## final value 20041.135999   
## converged  
## # weights: 41  
## initial value 22679.331741   
## iter 10 value 20042.304903  
## iter 20 value 20040.476669  
## iter 20 value 20040.476489  
## iter 20 value 20040.476474  
## final value 20040.476474   
## converged  
## # weights: 9  
## initial value 23263.548867   
## iter 10 value 20048.681614  
## iter 20 value 20037.292934  
## iter 20 value 20037.292881  
## final value 20037.292881   
## converged  
## # weights: 25  
## initial value 22319.803265   
## iter 10 value 20051.305038  
## iter 20 value 20037.323180  
## final value 20037.172012   
## converged  
## # weights: 41  
## initial value 22747.531344   
## iter 10 value 20055.311294  
## iter 20 value 20037.369369  
## final value 20037.173166   
## converged  
## # weights: 9  
## initial value 22533.853429   
## final value 20050.709200   
## converged  
## # weights: 25  
## initial value 22218.282208   
## final value 20050.709200   
## converged  
## # weights: 41  
## initial value 22616.507581   
## final value 20050.709200   
## converged  
## # weights: 9  
## initial value 24008.465066   
## iter 10 value 20058.012620  
## final value 20056.219787   
## converged  
## # weights: 25  
## initial value 21881.138255   
## iter 10 value 20055.110356  
## final value 20054.685328   
## converged  
## # weights: 41  
## initial value 22761.757744   
## iter 10 value 20055.414772  
## final value 20054.025850   
## converged  
## # weights: 9  
## initial value 23568.666168   
## iter 10 value 20060.710642  
## iter 20 value 20050.824509  
## iter 20 value 20050.824463  
## final value 20050.824463   
## converged  
## # weights: 25  
## initial value 23644.749740   
## iter 10 value 20064.018290  
## iter 20 value 20050.862643  
## final value 20050.728848   
## converged  
## # weights: 41  
## initial value 21693.719564   
## iter 10 value 20063.704036  
## iter 20 value 20050.859020  
## final value 20050.719528   
## converged  
## # weights: 9  
## initial value 22077.999981   
## final value 20042.285200   
## converged  
## # weights: 25  
## initial value 21679.827039   
## final value 20042.285200   
## converged  
## # weights: 41  
## initial value 21085.874103   
## final value 20042.285200   
## converged  
## # weights: 9  
## initial value 23041.568577   
## iter 10 value 20048.166543  
## final value 20047.795391   
## converged  
## # weights: 25  
## initial value 23495.741517   
## iter 10 value 20047.554432  
## iter 20 value 20046.261261  
## iter 20 value 20046.261129  
## iter 20 value 20046.261075  
## final value 20046.261075   
## converged  
## # weights: 41  
## initial value 22752.901689   
## iter 10 value 20060.581596  
## iter 20 value 20045.601855  
## iter 20 value 20045.601701  
## iter 20 value 20045.601651  
## final value 20045.601651   
## converged  
## # weights: 9  
## initial value 21952.063151   
## iter 10 value 20050.742958  
## iter 20 value 20042.382711  
## iter 20 value 20042.382672  
## final value 20042.382672   
## converged  
## # weights: 25  
## initial value 22481.490016   
## iter 10 value 20057.817494  
## iter 20 value 20042.464275  
## final value 20042.297961   
## converged  
## # weights: 41  
## initial value 22994.949553   
## iter 10 value 20064.339222  
## iter 20 value 20042.539466  
## final value 20042.294854   
## converged  
## # weights: 9  
## initial value 23834.307442   
## final value 20044.247600   
## converged  
## # weights: 25  
## initial value 21839.080011   
## final value 20044.247600   
## converged  
## # weights: 41  
## initial value 23423.108393   
## final value 20044.247600   
## converged  
## # weights: 9  
## initial value 22605.441551   
## iter 10 value 20052.318492  
## final value 20049.757867   
## converged  
## # weights: 25  
## initial value 21599.361776   
## iter 10 value 20049.404182  
## final value 20048.223529   
## converged  
## # weights: 41  
## initial value 23436.899283   
## iter 10 value 20051.625783  
## iter 20 value 20047.568157  
## final value 20047.564027   
## converged  
## # weights: 9  
## initial value 22429.472778   
## iter 10 value 20054.676372  
## iter 20 value 20044.367836  
## iter 20 value 20044.367787  
## final value 20044.367787   
## converged  
## # weights: 25  
## initial value 22467.058070   
## iter 10 value 20059.465732  
## iter 20 value 20044.423053  
## final value 20044.263747   
## converged  
## # weights: 41  
## initial value 24481.429472   
## iter 10 value 20052.659332  
## iter 20 value 20044.344581  
## final value 20044.264240   
## converged  
## # weights: 9  
## initial value 23565.495861   
## final value 19929.305200   
## converged  
## # weights: 25  
## initial value 23138.983408   
## final value 19929.305200   
## converged  
## # weights: 41  
## initial value 23007.763370   
## final value 19929.305200   
## converged  
## # weights: 9  
## initial value 22292.888679   
## iter 10 value 19935.186352  
## final value 19934.812915   
## converged  
## # weights: 25  
## initial value 23066.651431   
## iter 10 value 19934.149196  
## final value 19933.279510   
## converged  
## # weights: 41  
## initial value 22142.200428   
## iter 10 value 19934.414507  
## iter 20 value 19932.635804  
## final value 19932.620303   
## converged  
## # weights: 9  
## initial value 23313.155197   
## iter 10 value 19939.003818  
## iter 20 value 19929.417017  
## iter 20 value 19929.416973  
## final value 19929.416973   
## converged  
## # weights: 25  
## initial value 23754.022900   
## iter 10 value 19941.371298  
## iter 20 value 19929.444313  
## final value 19929.324976   
## converged  
## # weights: 41  
## initial value 23976.664758   
## iter 10 value 19941.451981  
## iter 20 value 19929.445243  
## final value 19929.317839   
## converged  
## # weights: 9  
## initial value 22738.581738   
## final value 20036.750500   
## converged  
## # weights: 25  
## initial value 23672.173114   
## final value 20036.750500   
## converged  
## # weights: 41  
## initial value 22784.205474   
## final value 20036.750500   
## converged  
## # weights: 9  
## initial value 23347.593537   
## iter 10 value 20043.903296  
## final value 20042.260553   
## converged  
## # weights: 25  
## initial value 23192.486708   
## iter 10 value 20044.479166  
## iter 20 value 20040.727209  
## final value 20040.726311   
## converged  
## # weights: 41  
## initial value 23232.591804   
## iter 10 value 20056.743556  
## iter 20 value 20040.075759  
## final value 20040.066875   
## converged  
## # weights: 9  
## initial value 22117.704162   
## iter 10 value 20045.947112  
## iter 20 value 20036.856530  
## iter 20 value 20036.856487  
## final value 20036.856487   
## converged  
## # weights: 25  
## initial value 22742.014424   
## iter 10 value 20051.464256  
## iter 20 value 20036.920138  
## final value 20036.761348   
## converged  
## # weights: 41  
## initial value 22889.061166   
## iter 10 value 20055.561564  
## iter 20 value 20036.967377  
## final value 20036.760629   
## converged  
## # weights: 9  
## initial value 23290.631083   
## final value 20022.082000   
## converged  
## # weights: 25  
## initial value 21568.912686   
## final value 20022.082000   
## converged  
## # weights: 41  
## initial value 22069.578482   
## final value 20022.082000   
## converged  
## # weights: 9  
## initial value 23414.613810   
## iter 10 value 20027.953035  
## final value 20027.591507   
## converged  
## # weights: 25  
## initial value 22698.078118   
## iter 10 value 20027.167110  
## iter 20 value 20026.057450  
## iter 20 value 20026.057373  
## iter 20 value 20026.057365  
## final value 20026.057365   
## converged  
## # weights: 41  
## initial value 22576.087859   
## iter 10 value 20026.208650  
## final value 20025.398000   
## converged  
## # weights: 9  
## initial value 22377.752577   
## iter 10 value 20033.509218  
## iter 20 value 20022.213747  
## iter 20 value 20022.213694  
## final value 20022.213694   
## converged  
## # weights: 25  
## initial value 22543.470709   
## iter 10 value 20038.023058  
## iter 20 value 20022.265788  
## final value 20022.097788   
## converged  
## # weights: 41  
## initial value 22954.920600   
## iter 10 value 20042.835664  
## iter 20 value 20022.321273  
## final value 20022.093867   
## converged  
## # weights: 9  
## initial value 23818.736449   
## final value 20038.766500   
## converged  
## # weights: 25  
## initial value 22595.692942   
## final value 20038.766500   
## converged  
## # weights: 41  
## initial value 22964.661788   
## final value 20038.766500   
## converged  
## # weights: 9  
## initial value 21775.684073   
## iter 10 value 20046.435508  
## final value 20044.276543   
## converged  
## # weights: 25  
## initial value 21851.133520   
## iter 10 value 20043.601229  
## final value 20042.742314   
## converged  
## # weights: 41  
## initial value 21809.859026   
## iter 10 value 20057.086027  
## iter 20 value 20042.084125  
## final value 20042.082799   
## converged  
## # weights: 9  
## initial value 21653.020595   
## iter 10 value 20045.775267  
## iter 20 value 20038.847306  
## iter 20 value 20038.847273  
## final value 20038.847273   
## converged  
## # weights: 25  
## initial value 23104.187086   
## iter 10 value 20055.216001  
## iter 20 value 20038.956150  
## final value 20038.778888   
## converged  
## # weights: 41  
## initial value 23174.097570   
## iter 10 value 20056.726187  
## iter 20 value 20038.973561  
## final value 20038.776843   
## converged  
## # weights: 9  
## initial value 21581.209665   
## final value 19987.306000   
## converged  
## # weights: 25  
## initial value 22531.257242   
## final value 19987.306000   
## converged  
## # weights: 41  
## initial value 22531.075270   
## final value 19987.306000   
## converged  
## # weights: 9  
## initial value 23226.535860   
## iter 10 value 20007.016957  
## iter 20 value 19992.814712  
## iter 20 value 19992.814642  
## final value 19992.814642   
## converged  
## # weights: 25  
## initial value 23834.437362   
## iter 10 value 19991.764801  
## final value 19991.280850   
## converged  
## # weights: 41  
## initial value 24011.394912   
## iter 10 value 20001.993202  
## iter 20 value 19990.623205  
## final value 19990.621479   
## converged  
## # weights: 9  
## initial value 22983.336527   
## iter 10 value 19997.584848  
## iter 20 value 19987.424507  
## iter 20 value 19987.424460  
## final value 19987.424460   
## converged  
## # weights: 25  
## initial value 22790.791927   
## iter 10 value 20002.256116  
## iter 20 value 19987.478363  
## final value 19987.324528   
## converged  
## # weights: 41  
## initial value 21912.684654   
## iter 10 value 20003.428660  
## iter 20 value 19987.491882  
## final value 19987.315908   
## converged  
## # weights: 9  
## initial value 21882.016854   
## iter 10 value 20070.693453  
## iter 20 value 20063.256838  
## iter 20 value 20063.256804  
## final value 20063.256804   
## converged

carseats\_nnet

## Neural Network   
##   
## 400 samples  
## 6 predictor  
##   
## Pre-processing: centered (6), scaled (6)   
## Resampling: Leave-One-Out Cross-Validation   
## Summary of sample sizes: 399, 399, 399, 399, 399, 399, ...   
## Resampling results across tuning parameters:  
##   
## size decay RMSE Rsquared MAE   
## 1 0e+00 7.082226 NA 6.511475  
## 1 1e-04 7.082226 NA 6.511475  
## 1 1e-01 7.082396 0.3253382425 6.511658  
## 3 0e+00 7.082226 NA 6.511475  
## 3 1e-04 7.082226 0.0001484986 6.511475  
## 3 1e-01 7.082337 0.3299915294 6.511597  
## 5 0e+00 7.082226 NA 6.511475  
## 5 1e-04 7.082226 0.0002082126 6.511475  
## 5 1e-01 7.082317 0.3313032601 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 final values(best hyper parameter)used for the model are size=1 and decay=1e-04.The R-squared for the selected value is “NA”.

**Question B4 - 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)  
   
 testset1 = data.frame(Sales, Price, Population, Advertising, Age, Income, Education)  
  
 Predict\_sales = predict(carseats\_nnet, testset1)  
Predict\_sales

## 1   
## 1

## The instructions suggest that the Neural Net’s prediction for the provided record is only one sale. This prediction is worrisome because the decision tree in the previous task predicted that 9.5 sales would occur with the same record. In my view, using the Keras package and constructing a neural network model with “keras\_model\_sequential” may yield a more flexible model that could potentially lead to a more favorable result.