

**Lab Goal :** This lab was designed to teach you more about priority queues.

**Lab Description :** Given an array, reduce the array to a single value with the minimum cost. You must use a PriorityQueue.

Given array 1,2,3  
Add all values to a priority queue  
Get the 2 smallest values and add their sum back to the pq  
The queue would contain 3,3  
Get the 2 smallest values and add their sum back to the pq  
The queue would contain 6  
The loop stops when the pq has a single value  
The min cost would be 9

### Sample Data :

212  
25,10,20      [25, 30] --> [55]  
1,2,3  
1,2,3,4,7,22,33,54,-66,3,4,5,76,7,999  
1,1,1,1,1      [1,1,1,2] --> [1,2,2] --> [3,2] --> [5]  
1,1

### Sample Output :

0  
85  
9  
947  
12  
2

### Files Needed ::

**ArrayReduction.java**