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The run times for both of these programs are O(n). I came to this answer after looking at the run time of each line in the programs and cancelling out the constants.

public int find\_min\_recursive (int index, double min, int count) {

int minindex = 0;  // constant O(1)

if(index <= (arr.length - 1)){

        if(arr[index] < min){

            min = arr[index];

       }

       return find\_min\_recursive(index + 1, min, count +1);

   }

   for (int i = 0; i < arr.length; i++){ // for loop goes through n times O(n)

if (arr[i] == min){

minindex = i;

}

   }

  return minindex;

}

public int find\_min\_iterative () {

double min = arr[0]; //constant time O(1)

int minIndex = 0; //constant O(1)

for(int a = 1; a <arr.length; a++){ //for loop goes through n times O(n)

if(min> arr[a]){

min = arr[a]; // constant

minIndex = a; //constant

}

else{

minIndex = minIndex;

}

}

return minIndex;

}