4C)

By using java API of Arrays.sort(int) the complexity for this is similar to a quicksort which has a complexity of O(N(logN)) where the worst case will be O(N^2). Since this is a log function of time, overall there should be a linear time solution. To do this you will have to find the local max and mins without using any sorting. Thus will create many for loops, however it will only take a complexity of O(N).

```
java.util.Arrays.sort(a); //uses quicksort

for (int i=1; i<arraySize-1; i += 2) {
    if(i+1 > arraySize-1) {
        break;
    }
    else if(a[i+1]>a[i]) {
        swap(a, i+1, i);
    }
}
```