Our Solution(s) Run Code

Solution 1

```java
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import java.util.*;
import java.util.function.BiFunction;

class Program {
  static class ContinuousMedianHandler {
    Heap lowers = new Heap(Program::MAX_HEAP_FUNC, new ArrayList<Integ
    Heap greaters = new Heap(Program::MIN_HEAP_FUNC, new ArrayList<Int
    double median = 0;

    // O(log(n)) time | O(n) space
    public void insert(int number) {
      if (lowers.length == 0 || number < lowers.peek()) {
        lowers.insert(number);
      } else {
        greaters.insert(number);
      }
      rebalanceHeaps();
      updateMedian();
    }

    public void rebalanceHeaps() {
      if (lowers.length - greaters.length == 2) {
        greaters.insert(lowers.remove());
      } else if (greaters.length - lowers.length == 2) {
        lowers.insert(greaters.remove());
      }
    }

    public void updateMedian() {
      if (lowers.length == greaters.length) {
        median = ((double) lowers.peek() + (double) greaters.peek()) /
```

Your Solutions Run Code

Solution 1 Solution 2 Solution 3

```java
// Do not edit the class below except for
// the insert method. Feel free to add new
// properties and methods to the class.
class Program {
  static class ContinuousMedianHandler {
    double median = 0;

    public void insert(int number) {
      // Write your code here.
    }

    public double getMedian() {
      return median;
    }
  }
}

```

Our Tests

Custom Output Submit Code

```
    test.insert(10);
    assertTrue(test.getMedian() == 7.5);
  }

  @Test
  public void Test3and5() {
    test.insert(100);
    assertTrue(test.getMedian() == 10.0);
    test.insert(200);
    assertTrue(test.getMedian() == 55.0);
  }

  @Test
  public void Test3and20() {
    test.insert(20);
```

Run or submit code when you're ready.