Our Solution(s)   Run Code

Solution 1

```javascript
1   // Copyright © 2020 AlgoExpert, LLC. All rights reserved.
2
3   class MinHeap {
4     constructor(array) {
5       this.heap = this.buildHeap(array);
6     }
7
8     // O(n) time | O(1) space
9     buildHeap(array) {
10      const firstParentIdx = Math.floor((array.length - 2) / 2);
11      for (let currentIdx = firstParentIdx; currentIdx >= 0; curre
12        this.siftDown(currentIdx, array.length - 1, array);
13      }
14      return array;
15    }
16
17    // O(log(n)) time | O(1) space
18    siftDown(currentIdx, endIdx, heap) {
19      let childOneIdx = currentIdx * 2 + 1;
20      while (childOneIdx <= endIdx) {
21        const childTwoIdx = currentIdx * 2 + 2 <= endIdx ? current
22        let idxToSwap;
23        if (childTwoIdx !== -1 && heap[childTwoIdx] < heap[childOn
24          idxToSwap = childTwoIdx;
25        } else {
26          idxToSwap = childOneIdx;
27        }
28        if (heap[idxToSwap] < heap[currentIdx]) {
29          this.swap(currentIdx, idxToSwap, heap);
30          currentIdx = idxToSwap;
31          childOneIdx = currentIdx * 2 + 1;
32        } else {
33          return;
```

Your Solutions   Run Code

Solution 1   Solution 2   Solution 3

```javascript
1   // Do not edit the class below except for the buildHeap,
2   // siftDown, siftUp, peek, remove, and insert methods.
3   // Feel free to add new properties and methods to the class.
4   class MinHeap {
5     constructor(array) {
6       this.heap = this.buildHeap(array);
7     }
8
9     buildHeap(array) {
10      // Write your code here.
11    }
12
13    siftDown() {
14      // Write your code here.
15    }
16
17    siftUp() {
18      // Write your code here.
19    }
20
21    peek() {
22      // Write your code here.
23    }
24
25    remove() {
26      // Write your code here.
27    }
28
29    insert(value) {
30      // Write your code here.
31    }
32  }
33
```
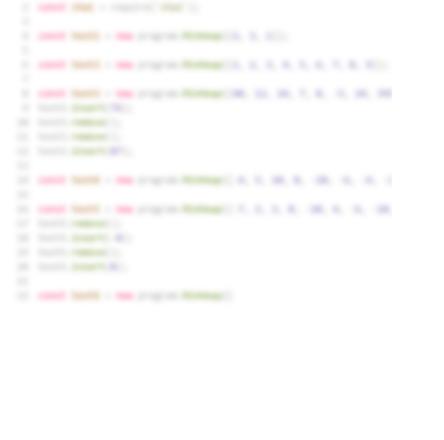
Our Tests   Custom Output   Submit Code