Homework 15

1.

```
private static int min(Queue<Integer> q) {
	int min = 99999999;
	int i;

	while (q.length() > 1) {
		i = q.dequeue();
		if  (i  <  min) {
			min =  i;
		}
	}
```

i. So that the passed queue variable is valid

ii. It needs to ensure that the returned value is in the queue. Without this, the program could return any value associated with the queue, even if it isn't in there.

2.

```
private static int[] minAndMax(Queue<Integer> q) {
	int[] minmax = new int[2];
	int qTemp;
	minmax[0] = 999999999;
	minmax[1] = -999999999;

	while (q.length() != 0) {
		qTemp = q.dequeue();

		if (qTemp < minmax[0]) {
			minmax[0] = qTemp;
		} else if (qTemp > minmax[1]) {
			minmax[1] = qTemp;
		}
	}

	return minmax;
```

3.

```
private static int[] minAndMax(Queue<Integer> q) {
	int[] minmax = new int[2];
	int qTemp, qTemp2, min, max;
	minmax[0] = 999999999;
	minmax[1] = -999999999;

	while (q.length() != 0) {
		qTemp = q.dequeue();
		qTemp2 = q.dequeue();
```

```
        if (qTemp > qTemp2) {
                max = qTemp;
                min = qtemp2;
        } else {
                Max = qTemp2;
                Min = qTemp;
        }

        if (min < minmax[0]) {
                minmax[0] = min;
        } else if (max > minmax[1]) {
                minmax[1] = max;
        }
}

return minmax;
```