This quiz is out of 10 points: 2 for your name and 8 for answering the questions correctly. Clearly indicate your answers by putting a box or circle around them. There is no partial credit on this quiz. You have 10 minutes to complete this quiz.

1. (4 points)

```
13

8
```

Draw the above AVL tree after inserting the key 5.

```
8

5 13
```

2. (4 points)

```
s.push(1);
s.push(2);
std::cout << s.pop() << std::endl;
s.push(3);
s.push(4);
std::cout << s.pop() << std::endl;
s.push(5);
std::cout << s.pop() << std::endl;
```

If $s$ is a stack that starts out empty, what is the output of the above code?

```
2 4 3 5 1
```

```
q.enqueue(1);
q.enqueue(2);
std::cout << q.dequeue() << std::endl;
q.enqueue(3);
q.enqueue(4);
std::cout << q.dequeue() << std::endl;
std::cout << q.dequeue() << std::endl;
q.enqueue(5);
std::cout << q.dequeue() << std::endl;
std::cout << q.dequeue() << std::endl;
```

If $q$ is a queue that starts out empty, what is the output of the above code?

```
1 2 3 4 5
```