Quiz 15: Recursion and object references

Name: _____

CSCI 110 Section 1

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Say you have the following function:

```java
void someFunction(double d) {
    if (d < 3) {
        System.out.println("pow");
        return;
    }
    someFunction(d - 1.5);
    System.out.println(d);
}
```

1) What's printed when you call someFunction(6)? [no points, warmup]

2) Write a recursive function that prints a countdown from a number, going down by two. Once the count is zero or below, it should print "BLASTOFF!". [30 points]

Consider this function:

```java
void other(int m) {
    if (m <= 0) {
        System.out.println("ok");
        return;
    }
    System.out.println("wait");
    other(m - 1);
    other(m - 3);
    System.out.println(m);
}
```

3) What's printed when you call other(3)? [30 points]

Consider these two functions that each take an ArrayList<Integer> as a parameter:

```java
void something(ArrayList<Integer> ints) {
    ints.add(777);
}

void somethingElse(ArrayList<Integer> ints) {
    ints = new ArrayList<Integer>();
    ints.add(333);
}
```

4) What gets printed when the following code is run? [20 points]

```java
ArrayList<Integer> ints = new ArrayList<Integer>();
ints.add(10);
something(ints);
System.out.println(ints);
```

5) What gets printed when the following code is run? [20 points]

```java
ArrayList<Integer> ints = new ArrayList<Integer>();
ints.add(1);
ints.add(2);
somethingElse(ints);
something(ints);
System.out.println(ints);
```