

Quiz 14: Recursion and objects

Name: _____

CSCI 110 Section 1

Wednesday, September 28, 2016

1) What's printed when you call warmup(10)? [no points, warmup]

```
void warmup(int x) {  
    if (x < 0) {  
        System.out.println("finally");  
        return;  
    }  
    if (x % 2 == 0) {  
        System.out.println("even");  
    } else {  
        System.out.println("odd");  
    }  
    warmup(x - 3);  
}
```

Say you have the following function:

```
void someFunction(double d) {  
    if (d < 2) {  
        System.out.println("whew");  
        return;  
    }  
    System.out.println(d);  
    someFunction(d - 0.5);  
}
```

2) Please convert each line of code to English. [30 points]

3) What's printed when you call someFunction(4)? [30 points]

Consider the following class.

```
class Roadrunner {
    private int speed;

    public Roadrunner(int speed) {
        this.speed = speed;
    }

    public void setSpeed(int newSpeed) {
        speed = newSpeed;
    }

    public int getSpeed() {
        return speed;
    }
}
```

and a separate function fn:

```
void fn(Roadrunner r) {
    r = new Roadrunner(50);
    r.setSpeed(20);
}
```

4) What gets printed when the following code is run? Why? [40 points]

```
Roadrunner runner = new Roadrunner(100);
fn(runner);
System.out.println(runner.getSpeed());
```