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Section Handout # 3

Parameters, Random Numbers, and Simple Graphics

1. True/False questions

a) True.

int i only exists in the scope of the method it exists in. The value of i can be returned, but not the variable itself.

b) True.

While a variable named x in the method's caller can be used as an argument for a parameter named x, that doesn't mean said variable has to have a direct relationship. For example, a different variable named y can be used as an argument for parameter x. Only the value of the variable in the parameter gets copied to be used in the method being called.

2. Tracing method execution

For the program below, trace through its execution by hand to show what output is

produced when it runs.

Notes:

```
bludger(2001);
                                                    y is 2001
int x = 2001 / 1000;          x is 2.001, truncated to 2
int z = (2 + 2001)            z is 2003
x = quaffle(2003, 2001);                                          inside quaffle, x is 2003, y is 2001
        int z = snitch(2003 + 2001, 2001);      z is 1001, returned by snitch() method
                        y = 4004 / (4004 % 10);           y is 4004 / 4, which is 1001
                        println(.............);
                        return y;
        y /= z;                                                                2001 / 1001, so y is 1.99, truncated to 1
        println(.......................);
        return z;                                         inside bludger, x is now 1001
println(.............);
```

Output:

snitch: x = 4004, y = 1001

quaffle: x = 2003, y = 1, z = 1001

bludger: x = 1001, y = 2001, z = 2003