

Your Name:

Class practice: Week of October 9,2020

Due by midnight on your class day.

Question 1. Consider the following program. Draw the function stack at the indicated location.

```
int add(int a, int b) {
    return a + b;
}

void setup() {
    int x = 10;
    int value = add(x, 50);
    // draw stack here
}
```

Question 2. Consider the following program. Draw the function stack at the indicated location.

```
int numCircles = 3;

void setup() {
    size(500,500);
}

void draw() {
    for (int i = 0; i < numCircles; i++) {
        drawDot(i*100, i*200);
    }
}

void drawDot(float x, float y) {
    ellipse(x, y, 50, 50);
}
```

Question 3. Watch out! Local variables “hide” (or “replace”) global ones.

```
float diameter = 10.0;
void draw() {
    float diameter = 100.0;
    ellipse(10, 10, diameter, diameter);
}
```

Question 4. Watch out! Parameters (e.g. arguments) represent *different* variables.

```
void drawBox(float x, float y) {  
    rect(x, y, 10, 50);  
}
```

```
void draw() {  
    float x = 20;  
    float y = 300;  
    drawBox(x, y);  
}
```

Question 5. Watch out! Values for int,boolean,float,String, and color types are *copied* to the function. This means that changes to a parameter inside a function disappear after the function completes.

```
color c = #FF0000;
```

```
void drawBox(float x, float y) {  
    x += 100;  
    y = 25;  
    rect(x, y, 50, 50);  
    println("drawBox: ", x, y);  
}
```

```
void draw() {  
    float x = 20;  
    float y = 300;  
    drawBox(x, y);  
    println("draw: ", x, y);  
}
```