**Coding I Midterm Exam Day A B (circle one)**

**Your name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

[4pts] **1.** Draw a figure on your graph paper using the following and use a different fill color for each shape and different stroke color for each line:

* 2 lines
* 2 ellipses (one circle and one that isn’t a circle)
* 2 rectangles (one square and one rectangle)
* 1 triangle

[36pts] **2.** On notebook paper, hand write the code to draw those shapes. WRITE YOUR CODE IN PROPER ORDER to Include…

* + choosing a center point;
  + assigning your variables;
  + your fill choices and stroke choices;
  + comments // for each line so I know what it’s representing including the color you are expecting to get.

**3.** Show me your written code. My initials \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

[10pts] **4.** Go to openprocessing and create a new sketch. Save it as **MIDTERM**

Type your code EXACTLY as you hand wrote it. Does it run?

If not, you may work on your code in your sketch, but **do NOT change what you hand wrote**.

If it runs, then…

make it movable with mouseX and mouseY

else… continue to look at your code until you can make it work.

1. Given the following code:

var x = 30;

var y = 10;

var z, q;

q = x - y; // (a)

z = q + y;

x = 15;

q = z + x; // (b)

Answer. Show your work:

1a. what is the value of q at (a):

1b. what is the final value of z:

1c. what is the value of q at (b):

2. Given the following code:

var x = 1;

var y = 2;

var z = 3;

var p, q, r;

r = x + y + z;

q = x + z \* 2;

p = y \* 2 + r;

Answer. Show your work:

2a. what is the final value of r:

2b. what is the final value of q:

2c. what is the final value of p:

3. Given the following code:

var x = 10;

var y = 20;

var z = 25;

var a, b;

a = x + y + z;

x = y \* 2;

b = z + y;

y = x + a;

x = b - x + y;

x = x + 1;

Answer. Show your work:

3a. what is the final value of a:

3b. what is the final value of b:

3c. what is the final value of y:

3d. what is the final value of x: