

Your Name:

Lab#3: Week of September 21,2020

Due by midnight on your lab day.

Question 1. Consider the following program. Let's analyze the values of the variables `posX`, `p1x`, `p2x`, `red`, `green`, and `blue` for the following program for the first 5 frames.

```
float posX = 20.0;
float red = 0;
float green = 0;
float blue = 0;

void setup() {
  size(500, 500);
  posX = width;
}

void draw() {
  red = 128;
  green = (posX / width) * 255;
  blue += 10;

  float p1x = posX;
  float p2x = width - posX;

  // print variable values here!

  fill(red, green, blue);
  bezier(p1x, 0, // endpoint
        width*0.25, height*0.25, // control point
        width*0.75, height*0.75, // control point
        p2x, height); // endpoint

  posX -= 10;
}
```

- What is the initial value of `posX`?
- What are the global variables in this program?
- What are the local variables in this program?
- What are the values of `posX`, `p1x`, `p2x`, `red`, `green`, and `blue` for the first 5 times `draw()` is called?

frame	posX	p1x	p2x	red	green	blue
0						
1						
2						
3						
4						

Question 2. Each of the following Java expressions evaluates to some value. For each one, give the resulting value and its type (as one of `int`, `float`, `String`, or `boolean`).

```
int score = 100;
String name = "Mario";
boolean isBig = false;
```

	Value	Type
(a). <code>isBig</code>	_____	_____
(b). <code>isBig == true</code>	_____	_____
(c). <code>score >= 90</code>	_____	_____
(d). <code>name == "Luigi"</code>	_____	_____
(e). <code>score + 100.0</code>	_____	_____
(f). <code>score + 100</code>	_____	_____
(g). <code>score - 10 > 50</code>	_____	_____
(h). <code>score > 100 && isBig</code>	_____	_____
(i). <code>score > 100 isBig name == "Toad"</code>	_____	_____
(j). <code>score < 50 && (isBig name == "Mario")</code>	_____	_____
(k). <code>(score < 50 && !isBig) name != "Toad"</code>	_____	_____