CSC 108 Quiz # 5 Name _____

Multiple Choice: /* 2 points each */

_____ 1. Assume an array named `values` is declared and instantiated with the following statement:

```
float[] values = new float[899];
```

What is the subscript number (also called the index number) of the first element in the array?

A) 0 B) 1 C) 899 D) 900 E) 901

_____ 2. Assume an array named `values` is declared and instantiated with the following statement:

```
float[] values = new float[899];
```

What is the subscript number (also called the index number) of the last element in the array?

A) 897 B) 898 C) 899 D) 900 E) 901

Short Answer:

1. How would you declare and instantiate (in the same line) the following: an array of 30 integers using the name `ages`? (3 pts)

2. How would you declare and instantiate (in the same line) the following: an array of 1000 floating-point numbers using the name `average`? (3 pts)

3. Explain what the following Processing code does in each numbered line. (5 pts)

```
int[] values = new int [100]; _________[1]___________
void draw() {
for (int i = 0; i < values.length; i++) { _______[2]_________
 values[i] = i; _________[3]_____________
 println(values[i]); _________[4]_____________
}
}
```

4. Explain what the following Processing code does in each numbered line. (10 pts)

```
float[] gray; _____[1]_____

void setup() {
  size(240, 120);
  gray = new float[width]; _____[2]_____
  for (int i = 0; i < gray.length; i++) { _____[3]_____
    gray[i] = random(0, 255);_____[4]_____
  }
}

void draw() {
  for (int i = 0; i < gray.length; i++) { _____[5]_____
    stroke(gray[i]); _____[6]_____
    line(i, 0, i, height);_____[7]_____
  }
}
```