Software Design I (CS 120)
Quiz 01: Tuesday, 20 September

NAME _____

(1) (2 points) When creating an object for use in a Java program, there are two steps to the process. What are they? (You can assume that Java is fully installed, and all code to create the object is available, via `import` or other process. I am asking what steps you must take, once it is time to actually write Java code.)

(a) _____

(b) _____

(2) (3 points) What are the three main parts of a Java **class diagram**, used to explain how that class works?

(a) _____

(b) _____

(c) _____

(3) (4 points) Suppose you are writing a program, and you need to choose an identifier (variable name) for an object.

(a) What is one rule that you ***must follow*** when choosing the identifier (i.e., if you do not follow it, the code will not compile properly)?

(b) What is one rule that you ***should follow*** when choosing the identifier (i.e., the code will still compile properly if you don't, but it will make your code more readable)?

(4) (6 points) Analyze the following code, and answer the questions that follow it.

```
DrawingGizmo pen;
pen = new DrawingGizmo();
DrawingGizmo pencil = new DrawingGizmo();

DrawingGizmo draw1, draw2, draw3;
draw1 = pencil;
draw2 = pen;
pen = null;
```

(a) Circle all of those variables that have `null` reference after the code is complete.

`pen` `pencil` `draw1` `draw2` `draw3`

(b) Write down the names of all distinct pairs of variables that have **the same** object reference, (**once the code has completed its run**). For example, if `pencil` and `draw1` refer to the same object, then you would write down the pair (`pencil`, `draw1`).