CPS 210 Exam 1

Name: _____

1. (2 points) Java is a(an)

    A. Procedural Language

    B. Object Oriented Programming Language

    C. Assembly Language

    D. Structural Language

    E. None of the above

2. (2 points) In Java, an int can be assigned a double value, but a double cannot be assigned an int value.

    A. True

    B. False

3. (2 points) Check all that apply: Which of the following are primitive data types?

    A. int

    B. char

    C. String

    D. double

    E. boolean

    F. decimal

4. (3 points) The + sign can mean both addition and concatenation in Java. Give an example of the + sign being used as addition in Java. Give an example of the + sign being used as concatenation in Java:

    A. Example for addition:

B. Example for concatenation:

5. (4 points) Given a variable **int number = 365**, write the line of code to display:

> The number = 365!!!

You must use the variable, number, in your code; meaning, **DO NOT** hard code 365.

6. (6 points) There are one or more errors with the code below. Rewrite the program to fix the issues so the program can run with no errors:

```java
public class Main

    public static void main(String[] args)

        system.out.println(I'm taking a test!);

        int num = 4.5;

        System.out.printf("%-12s%-8s%.1d", "New Paltz", 55555, 45.8);
```

7. (10 points) The calculation to find the slope (angle) of a line that connects two points on a plane is below. Create a Java program that calculates the slope for the following values: $x_1 = 2$, $x_2 = 4$, $y_1 = 1$, and $y_2 = 3$. You MUST use variables to hold all data, including a variable to hold the value of *slope*. Display the value of slope.

$$\textbf{Slope} = y_2 - y_1 / x_2 - x_1$$

8. (10 points) Declare and initialize 3 variables with the following values: 34.5, 5, 18.75. Calculate the sum of the three variables. Then calculate the average the the three variables. Display both the sum and average.

9. (10 points) Recreate the following table in Java. You MUST use printf. DO NOT use Strings for everything — numbers must be treated as such. There are **3 spaces** between each column.

```
Quantity   Snack   Price
35         candy   1.50
```