CS172 Quiz 2

Note: This is an open book quiz. You can refer to any book, slides, videos, or other online resources. However, your work must be independent and should not get help from another person. You can choose to write on this Word document directly, or hand writing on a hard copy and scan it before uploading to D2L.

Name Gunnar Yonker   **Score**_____

1. **(4 points)** Read the following Java sentences, point out and correct the error for each case.

   a.
```java
int x = 3, output  = 0;

if(x != 0)
{
  output = 10;
}
```
→ this is an error and would not work, needs to be "=="

   b.
```java
double  GPA = 3.5;

if(GPA >= 3.8)
{
        System.out.println("You are super!");
}
```
Semi-colon needs to be removed, otherwise statement prints even though GPA value is below

2. **(8 points)** Read the following Java sentences and write the printout result.

   a.
```java
for(int i=20; i>=0; i=i-10)
{
        System.out.println(i+"\t \t" + (i*i));
}
```

Printout
_____

20	400
10	100
0	0

b.
```java
int age = 32;
double output  = 0;

if( age > 35)
{
  output = 5;
}
else
{
  output = 10;

}

    System.out.println("output = "+output);
```

Printout

$$output = 10.0$$

c.
```java
int experience = 15;//working experience (years)
double output  = 0; //bonus

if( experience >= 30)
{
  output = 5000;
}
else if( experience >= 20)
{
  output = 4000;
}
else if( experience >= 10)
{
  output = 3000;
}
else
{
  output = 2000;
}

    System.out.println("output = "+output);
```

Printout

$$Output = 3000.0$$

d.
```
int N = 2, output = 0;
switch ( N ) {
    case 1: output = 10;
    case 2: output = 20;
    case 3: output = 30;
            break;
    default: output = 50;
            break;
}
System.out.println("output = "+output);
```

Printout

Output = 30

3. (**8 points**) Write a program to implement the following function.
   (1) Allow the user to input one's age through the keyboard.
   (2) If one's age is greater than or equal to 17, print out the words "You are eligible for driving."
   (3) Otherwise, print out the words "You still need to wait X years". Make sure the final printout will replace X with the actual number.

```
public class Main {
    public static void main(String args[]) {
        Scanner myScanner = new Scanner(System.in);
        // declare variables
        int age = 0;
        int yearWait = 0;
        // ask for input
        System.out.println("How old are you?");
        age = myScanner.nextInt();

        // check age eligible
        if (age >= 17)
        {
            System.out.println("You are eligible for driving.");
            Return;
        }

        // make sure age isn't negative
        if (age < 0)
        {
            System.out.println("Invalid entry, try again.");
            return;
        }
        // else statement for under 17 and print
        else
        {
            yearWait = 17 - age;
            System.out.println("You still need to wait " + yearWait + " years");
        }
```