Java: Assignment, Loops and Conditionals Exercises

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1. What is wrong with the following piece of code?

```java
int i = 10;
while (i < 5) {
     i++;
     System.out.println(i);
}
```

2. Write a conditional that will print "passed" if a variable called `result` is greater than 40 and "failed" otherwise.

3. How may exclamation marks will the following loop print

```java
for (int shriek = 0; shriek < 10; shriek++){
        System.out.print('!');
}
```

4. Rewrite the following using a for loop

```java
int number = 10;
while (number < 15) {
        System.out.println("*");
        number++;
}
```

5. Assume `getnumber();` returns a number entered by a user. What does the following piece of code do?

```
int i = getnumber();
while (i < 10) {
    i++;
    int j = getnumber();
    if (j == 0) {break;}
    else if (j == 1) {continue;}
    System.out.println(i);
}
System.out.println("finished");
```

6. Rewrite the following using a switch statement.

```
f (i == 10){
        System.out.println("Congratulations you have full marks");
} else if (i == 9) {
        System.out.println("Congratulations you have almost full marks");
} else if (i == 8) {
        System.out.println("Congratulations you have done very well");
} else if (i == 7) {
        System.out.println("Congratulations you have done well");
} else if (i == 6) {
        System.out.println("You are doing alright but could study more");
} else if (i == 5) {
        System.out.println("You only got half marks, you need to do more wor
        System.out.println("You got less than half marks, you need to do mor
} else if (i == 3) {
        System.out.println("You have got low marks, see a teacher");
} else if (i == 2) {
        System.out.println("You have got very low marks, see a teacher");
} else if (i == 1) {
        System.out.println("You only got 1 mark, see a teacher");
} else {
        System.out.println("You have failed abysmally")
}
```

7. Assume `getnumber();` returns a number entered by a user. What does the following piece of code do?

```
do {
    int i = getnumber();;
    System.out.println(i);
} while {i != 0);
```

8. What does the following program print?

```java
// This is the Hello Rusty program in Java

    class HelloRusty {

        public static void main (String args[]) {

            String name = "Rusty";

            /* Now let's say hello */
            System.out.println("Hello + name");

        }

    }
```

9. Write a for loop that will print the numbers between 10 and 20.

10. What is wrong with the following piece of code?

```java
if (i = 10) {
   System.out.println("Success");
}
```

11. Assume `getnumber();` returns a number entered by a user. Write some code using a while loop that echos whatever number the user enters unless they enter 0 in which case the programs exits. Could you do this with a for loop?

12. What does the following piece of code do:

```java
if ((i < 10) || (i == 15)) {
   i++;
   System.out.println(i);
}
```