English Name: _____

Worksheet: Selection Practice (if Statements)

1. For each code segment, ***in complete english sentences***, describe the error in the code, then re-write corrected version of the code.

   a) The following method is intended to use a chained if to return the appropriate letter grade for the given score: a score of 90 or over will receive an **"A"**, 80 or over but less than 90 a **"B"**, 70 or over but less than 80 a **"C"**, and lower than 70 a **"D"**.

```
 1  public static String getGrade(int score) {
 2     String grade;
 3     if (score >= 90) {
 4        grade = "A";
 5     } if (score >= 80) {
 6        grade = "B";
 7     } if (score >= 70) {
 8        grade = "C";
10     } else {
11        grade = "D";
12     }
13     return grade;
14  }
```

   i) What value will be returned when the following scores are passed as a parameter:

50		70		90	
60		80		100	

   ii) Why does this method not work as intended?

   ....

   ....

   iii) Write the corrected code in the space below.

b) The following method is intended to use a nested if statement to validate a user login. If user is admin and password is secret123, the method is to print "Login successful!" and return true.

```
public static boolean validateUser(String user, String password,
                                   boolean rememberMe) {
   if (user.equals("admin") && password.equals("secret123"))
      System.out.println("Login successful!");
         if (rememberMe = true) {
            System.out.println("Remembering your login...");
         }
   else
      System.out.println("Invalid credentials!");
      return false;
}
```

i) What will the output of the above code be if the following call is made:
```
System.out.println(validateUser("admin","incorrect",true));
```

ii) Explain why the output in part (i) is not as expected.

....

....

....

iii) What will the output of the above code be if the following call is made:
```
System.out.println(validateUser("admin","secret123",true));
```

iv) Explain why the final line of the output in part (iii) is not as expected.

....

....

v) What will the output of the above code be if the following call is made:

```
System.out.println(validateUser("admin","secret123",false));
```

vi) Explain why the second line of the output in part (v) is not as expected.

....

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vii) Write the corrected code in the space below.