CSI 140 Introduction to Programming

Name: _____

1. Based on the given scenario, write the **boolean condition** that should be placed inside the `if` statement's parentheses.

A student passes an exam if their score is 50 or above. Write the condition for the if statement.
A number is considered "in range" if it is greater than or equal to 10 AND less than or equal to 100. Write the condition for the if statement.
A number is even if it is divisible by 2. Write the condition for the if statement.
A triangle is valid if the sum of any two sides is greater than the third side. Given three sides a, b, and c, write the condition to check if it forms a valid triangle.
A student gets a grade "A" if their marks are greater than or equal to 90 AND their attendance is at least 75%. Given variables marks and attendance, write the condition for the if statement.

2. What is the output of the following code?

Code	Output
``double tax, total;

if (total >= 3.0){
    tax = 0.10;
    cout << total + (total * tax) << endl;
}
else{
    cout << total << endl;
}``` | total = 2
output:

total = 3
output:

total =4
output: |
| ```int x=10;
if(x++ >10){
    x =13;
}
 cout< <x;``` | |
| ```int x=10;
if(++x >10){
    x =13;
}
 cout< <x;``` | |
| ```if (num < 10){
    cout << "num is less than 10";
}
else if (num < 20){
    cout << "num is between 10 and 19";
}
else{
    cout << "num is 20 or more";
}``` | num = 2
output:

num = 20
output: |
| ```if (number % 2 == 0){
    cout << number << "is even";
}
else if (number % 3 == 0){
    cout << number << "is divisible by 3";
}
else{
    cout << number << "is odd";
}``` | number = 76
output:

number = 51
output:

number = 73
output: |