Read through the end of Etter Chapter 3 - then answer the following items.

1. (3 pts) Each of the following phrases describes the meaning of a C relational operator. Write the correct operator on the blank line next to each one.
   a. is equal to: _______
   b. is less than or equal to: _______
   c. is not equal to: _______

2. (8 pts) Complete the following table (known as a “truth table”) by writing either True or False on each blank line. For example, the first blank asks for the result of (A && B) when A is True and B is True.

| A       | B     | A && B | A || B |
|---------|-------|--------|-------|
| True    | True  | ______ | ______ |
| True    | False | ______ | ______ |
| False   | True  | ______ | ______ |
| False   | False | ______ | ______ |

3. (8 pts) Let grade be a char variable, and let score be an int variable that has already been assigned a value. Write an if/else structure that sets grade to:
   'A' if score is greater than or equal to 90,
   'B' if score is at least 80 but less than 90,
   'C' if score is at least 70 but less than 80,
   'D' if score is at least 60 but less than 70, or
   'F' if score is less than 60.
4. (21 pts; 7 pts each) Solve the following problem three different ways, by first applying a while loop, then a do/while loop, and finally a for loop. The problem is to find the sum of all integers from m through n. For example, if m is 4 and n is 7, this sum is 4+5+6+7 = 22. You may assume that m will always be less than or equal to n.

There is no need to print anything. Just find the sum. Imagine the following statements have already been executed before your solutions start:

```c
int m, n;    /* start and end values */
int i;       /* a variable you can use to develop your solutions */
int sum = 0; /* store the result in this variable; already initialized */

printf("enter m, n: ");
scanf("%i %i", &m, &n); /* assume that m <= n */
```

a. Write your while loop solution here.

```c```

b. Write your do/while loop solution here.

```c```

c. Write your for loop solution here.

```c```

5. (4 pts) You just found the sum of all integers from m through n three ways. Such a sum can be neatly described by "summation notation" - describe it that way.

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ALSO BEFORE LAB:
Skip ahead and read section 4.5, "Random Numbers" (Lab03 uses random integers).

End of Hw3