P & C Calculator

Summary:

In this question, you need to implement a Permutations or Combination calculator. This calculator only computes **Integer numbers**

Description:

1. Use Lex to recognize real number tokens in a given formula.
2. Use YACC to create a program that analyzes a given formula, and prints the result of the formula.
3. The input data of the test case has only one formula. In the formula, each number and operator will be separated by one and only one blank.
4. If the formula has the wrong format, show "Wrong Formula."

The files you need to complete and submit:

yourPostCalc.l and yourPostCalc.y (You need to write these two programs)

The Permutation Formula:

$$P(n, k) = \frac{n!}{(n-k)!} \qquad C_n^m = \frac{n!}{m!(n-m)!} \qquad N! = 1 * 2 * 3 \ldots * n$$

The following table shows a list of operators that may appear in the input equation.

Operator	Description	example
'+'	addition	M + N
'-'	subtraction	M - N
'P' or 'p'	Permutations	P M N
'C' or 'c'	Combination	C M N

The limit of input and output:

1. Every Operator has two integer numbers M and N.
2. When operator is 'C' or 'P', M >= N and M <=12, N <=12. So if the conditions can't be fulfilled, you should output "Wrong Formula".
3. When operator is '+' or '-', M, N <= 2,147,483,647.

Sample Input 1:

p 5 4 + C 4 2

Sample Output 1:

126

Sample Input 2:

P 10 5 - c 10 2

Sample Output 2:

30195

Sample Input 3:

95 C 3

Sample Output 3:

Wrong Formula