Due to heavy snow, George Dantzig was late for his class. When he arrived, his elementary school teacher, Jerzy Neyman had written a homework assignment on the blackboard. It seemed a little harder than usual, but George wrote it down anyway. The assignment was a complex mixture of additions, multiplications and divisions (shown by fractions) on positive numbers; something like the expression below:

$$5 + \frac{4 \times \frac{\frac{5}{7}}{6}}{2 + 3 \times 5} \times 2 + 1 + \frac{1}{1}$$

Every expression or sub-expression has a baseline on which all its elements lie, including operators, numbers, and fraction lines. Obviously, the numerator and denominator of a fraction are respectively placed on top and bottom of its fraction line and they themselves are smaller (possibly complex) sub-expressions. Note that multiplication has a higher priority than addition in evaluating mathematical expressions. Your task is to help George to evaluate the expression as a simple fraction.
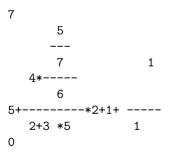
Input

There are several test cases in the input. Each test case starts with a line containing a single integer n as the height of the complex expression ($1 \leq n \leq 60$). The expression is presented in the next n lines. Each of these lines has at most 200 characters and consists of space characters, consecutive digits as positive numbers, "$*$" characters as operators for multiplication, '+' characters as operators for addition, and consecutive sequences of '$-$' characters as fraction lines. If a fraction line is made of t characters ($t \geq 3$), its corresponding numerator and denominator are horizontally aligned within its $t-2$ middle characters. Note that there might be some vertical space between a fraction line and its corresponding numerator and/or denominator. Also, the elements of a baseline might be separated by some space characters. Furthermore, some unnecessary spaces at the end of each line may be omitted.

The input terminates with a line containing '0' which should not be processed.

Output

For each test case, print a single line containing the value of the expression in the form of '*numerator/denom*
Note that the numerator and the denominator of each fraction must be coprime, i.e., their greatest common divisor should be 1.

Sample Input

```
7
          5
        ---
          7                1
     4*-----
          6
5+---------*2+1+ -----
    2+3 *5           1
0
```

Sample Output

```
2519/357
```