

## 7820 Expression

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:

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

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/denominator*’. 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**

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