

[Crazy calculator] Common calculators (not scientific calculators) will evaluate an expression from left to right, e.g.,  $1 + 2 * 3 = 9$ , instead of 7. Suppose we have a common calculator that has gone crazy, mixing up the circuitry connecting those four operators (+ - \* /) in some strange way. In other words, each of the four buttons actually means some other operations. Furthermore, this calculator can only perform integer arithmetic, i.e., only integer division (//) can be performed. Note that for division, there is a possibility of a division by zero error.

Write a Python program to determine the output of such a calculator when operating on an expression, if we know how the four operators are being mixed up behind the circuitry. The first input line to the program indicates this mix-up information for the four operator buttons. For example, consider the first example, the + button actually means a multiplication, the - button means an integer division, the \* button means an addition, and the / button means a subtraction. The second input line contains the expression to be evaluated.

Sample input	Sample output
* / + - 1 + 5 - 2 * 4	6
+ * / - 2 + 0 - 2 * 1	4
/ * + - 2 + 0 - 2 * 1	division by zero
/ * - + 3 - 5 * 2 + 5 / 9	11