

## B2 – Magic Trick

Your friend has come up with a math trick that supposedly will blow your mind. Intrigued, you ask your friend to explain the trick.

First, you generate a random positive integer  $k$  between 1 and 100. Then, your friend will give you  $n$  operations to execute. An operation consists of one of the four arithmetic operations **ADD**, **SUBTRACT**, **MULTIPLY**, or **DIVIDE**, along with an integer-valued operand  $x$ . You are supposed to perform the requested operations in order.

You don't like dealing with fractions or negative numbers though, so if during the process, the operations generate a fraction or a negative number, you will tell your friend that he messed up.

Now, you know the  $n$  operations your friend will give. How many of the first 100 positive integers will cause your friend to mess up?

### Input

The first line of input contains a single positive integer  $n$  ( $1 \leq n \leq 10$ ). Each of the next  $n$  lines consists of an operation, followed by an operand. The operation is one of the strings **ADD**, **SUBTRACT**, **MULTIPLY**, or **DIVIDE**. Operands are positive integers not exceeding 5.

### Output

Print, on a single line, a single integer indicating how many of the first 100 positive integers will result in you telling your friend that he messed up.

### Input and output samples

Input: 1 SUBTRACT 5	Output: 4
Input: 1 DIVIDE 2	Output: 50
Input: 2 ADD 5 DIVIDE 5	Output: 80