



3380 - Single Digit Adder

North America - Pacific Northwest - 2005/2006

Write a program that can evaluate expressions from the following roughly BNF (Backus Naur Form) grammar:

```
expr ::= term | expr '+' term | expr '-' term
unary_op ::= '+' term | '-' term
term ::= '(' expr ')' | '(' unary_op ')' | literal
literal ::= [0-9]
```

There will be no whitespace within an expression. All expressions will consist solely of the characters `(' , ')', `+',`-', and the digits 0 through 9. You may assume that all input is well-formed.

Input

The input will consist of one expression per line followed by a newline. There will be no blank lines in the file.

Output

For each expression, output its integer value, followed by a single newline.

Sample Input

```
1
(-2)+3
(1-(2+3))
(1-2+3)
(1-(+(2-3)))
```

Sample Output

```
1
1
-4
2
2
```

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