UVa Online Judge

727 Equation

Write a program that changes an infix expression to a postfix expression according to the following specifications.

Input

1. The infix expression to be converted is in the input file in the format of one character per line, with a maximum of 50 lines in the file. For example, (3+2)*5 would be in the form:

   ```
   (
   3
   +
   2
   )
   *
   5
   ```

2. The input starts with an integer on a line by itself indicating the number of test cases. Several infix expressions follows, preceded by a blank line.

3. The program will only be designed to handle the binary operators `+`, `-`, `*`, `/`.

4. The operands will be one digit numerals.

5. The operators `*` and `/` have the highest priority. The operators `+` and `-` have the lowest priority. Operators at the same precedence level associate from left to right. Parentheses act as grouping symbols that over-ride the operator priorities.

6. Each testcase will be an expression with valid syntax.

Output

The output file will have each postfix expression all on one line. Print a blank line between different expressions.

Sample Input

```
1

(
3
+
2
)
*
5
```

Sample Output

```
32+5*
```