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https://www.spoj.com/problems/ONP/

ONP - Transform the Expression

#stack

Transform the algebraic expression with brackets into RPN form (Reverse Polish Notation). Two-argument operators: +, -, *, /, ^ (priority from the lowest to the highest), brackets ( ). Operands: only letters: a,b,...,z. Assume that there is only one RPN form (no expressions like a*b*c).

Input

```
t [the number of expressions <= 100]

expression [length <= 400]

[other expressions]
```

Text grouped in [ ] does not appear in the input file.

Output

```
The expressions in RPN form, one per line.
```

Example

```
Input:

3

(a+(b*c))

((a+b)*(z+x))

((a+t)*((b+(a+c))^(c+d)))



Output:

abc*+

ab+zx+*
```

```
at+bac++cd+^*
```

Submit solution!

```
include<bits/stdc++.h>
using namespace std;

int main() {
   int m;
    cin>>m;

   while(m--){
       string str;
      cin >> str;
      vector<char> stay;
      for (int i=0; i<str.size(); i++){
         if ( isalpha(str[i]) ){
            cout << str[i];
         }else if (str[i] == ')'){
            while (stay.back() != '(')
            {
               cout << stay.back();
               stay.pop_back();
            }stay.pop_back();
         }else {
```

```
            stay.push_back(str[i]);
          }
        }
        cout<<endl;

    }
          return 0;
}
```

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