

Suppose that the program to the right is compiled into the executable `a.out`. Please answer with the output of the following:

Question 1: `echo A | ./a.out`

Question 2: `echo AA | ./a.out`

Question 3: `echo BA | ./a.out`

Question 4: `echo BBBAA | ./a.out`

Question 5: `echo AAABB | ./a.out`

```
#include <iostream>
using namespace std;

void a(const string &s, int index)
{
    if (index >= s.size()) return;

    if (s[index] == 'A') {
        cout << '(';
        a(s, index+1);
        cout << ')';
    } else {
        cout << "()";
        a(s, index+1);
    }
}

int main()
{
    string s;

    cin >> s;
    a(s, 0);
    cout << endl;
    return 0;
}
```

Clicker Answers

Just compile and run:

```
UNIX> echo A | ./a.out  
(  
UNIX> echo AA | ./a.out  
((  
UNIX> echo BA | ./a.out  
(()  
UNIX> echo BBBAA | ./a.out  
(())()  
UNIX> echo AAABB | ./a.out  
(((())  
UNIX>
```