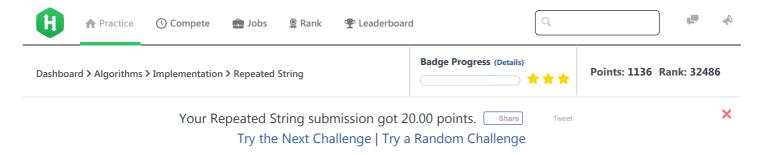
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# Repeated String



Problem Submissions Leaderboard Discussions Editorial

Lilah has a string,  $\boldsymbol{s}$ , of lowercase English letters that she repeated infinitely many times.

Given an integer, n, find and print the number of letter a 's in the first n letters of Lilah's infinite string.

## **Input Format**

The first line contains a single string, s. The second line contains an integer, n.

## Constraints

- $1 \le |s| \le 100$
- $1 \le n \le 10^{12}$
- For 25% of the test cases,  $n \leq 10^6$ .

#### **Output Format**

Print a single integer denoting the number of letter a 's in the first n letters of the infinite string created by repeating s infinitely many times.

## Sample Input 0

aba 10

## Sample Output 0

7

# **Explanation 0**

The first n=10 letters of the infinite string are abaabaabaa . Because there are 7 a 's, we print 7 on a new line.

# Sample Input 1

a 100000000000000

## Sample Output 1

10000000000000

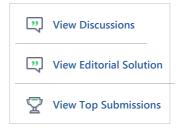
#### Explanation 1

Because all of the first n = 10000000000000 letters of the infinite string are a, we print 1000000000000 on a new line.

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```
Current Buffer (saved locally, editable) &
                                                                                         C++14
                                                                                                                            *
 1 ▼ #include <iostream>
 2 #include <string>
   #include <cmath>
 3
    typedef unsigned long long int uint64;
   void repeatedAs(const std::string& str, const uint64& N)
 6
 7 ▼ {
 8
        const unsigned int Size = str.length();
 9
        if(N <= Size)</pre>
10 ▼
11
             uint64 count = 0;
12
             for(uint64 i = 0; i<=N; ++i)</pre>
13 ▼
                 if(str[i]=='a')
14
                     ++count;
             std::cout << count << std::endl;</pre>
15
16
        }
17
        else
18 🔻
        {
             uint64 count = 0;
19
             for(unsigned int i = 0; i<=Size; ++i)</pre>
20
21 🔻
                 if(str[i]=='a')
22
                     ++count;
23
             long double times = static_cast<float>(N)/static_cast<float>(Size);
             if(times == (N/Size))
24
25
                 std::cout << count*times << std::endl;</pre>
26
             else
27 ▼
             {
                 float timesDecimalPart = times-(N/Size);
28
29
                 int perSizeStr = N%Size;
30
                 count *= (N/Size);
31
                 for( int i = 0; i<perSizeStr; ++i)</pre>
32
                     if(str[i]=='a')
33
                          ++count;
34
                 //std::cout << count <<" "<< perSizeStr << std::endl;</pre>
35
                 std::cout << count << std::endl;</pre>
36
             }
37
38
    }
39
40
   int main()
41 ▼ {
        std::string str; std::cin>> str;
42
43
        uint64 N ; std::cin>>N;
44
        repeatedAs(str,N);
```

Run Code

Submit Code

Test against custom input

**1** Upload Code as File

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