



# Repeated String ☆

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## Problem

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Lilah has a string,  $s$ , 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.

For example, if the string  $s = \text{'abcac'}$  and  $n = 10$ , the substring we consider is *abcacabcac*, the first 10 characters of her infinite string. There are 4 occurrences of a in the substring.

### Function Description

Complete the `repeatedString` function in the editor below. It should return an integer representing the number of occurrences of a in the prefix of length  $n$  in the infinitely repeating string.

`repeatedString` has the following parameter(s):

- $s$ : a string to repeat
- $n$ : the number of characters to consider

### Input Format

The first line contains a single string,  $s$ .

The second line contains an integer,  $n$ .

### Constraints

- $1 \leq |s| \leq 100$
- $1 \leq n \leq 10^{12}$
- 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
10000000000000
```

### Sample Output 1

```
10000000000000
```

### Explanation 1

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

Current Buffer (saved locally, editable)



Java 8



```
1  import java.io.*;
2  import java.math.*;
3  import java.security.*;
4  import java.text.*;
5  import java.util.*;
6  import java.util.concurrent.*;
7  import java.util.regex.*;
8
9  public class Solution {
10
11      // Complete the repeatedString function below.
12      static long repeatedString(String s, long n) {
13          long count = 0;
14          if( n > s.length() ) {
15              long multiple = (n/s.length());
16              long leftOver = n % multiple;
17              for(int i=0; i<s.length(); i++) {
18                  if(s.charAt(i) == 'a') {
19                      count++;
20                  }
21              }
22              count *= multiple;
23              for(int i=0; i<leftOver; i++) {
24                  if(s.charAt(i) == 'a') {
25                      count++;
26                  }
27              }
28          }else{
29              for(int i=0; i<n; i++) {
30                  if(s.charAt(i) == 'a') {
31                      count++;
32                  }
33              }
34          }
35      }
36  }
```

```

33     }
34 }
35     return count;
36 }
37
38     private static final Scanner scanner = new Scanner(System.in);
39
40     public static void main(String[] args) throws IOException {
41         BufferedWriter bufferedWriter = new BufferedWriter(new
42         FileWriter(System.getenv("OUTPUT_PATH")));
43
44         String s = scanner.nextLine();
45
46         long n = scanner.nextLong();
47         scanner.skip("(\\r\\n|[\\n\\r\\u2028\\u2029\\u0085])?");
48
49         long result = repeatedString(s, n);
50
51         bufferedWriter.write(String.valueOf(result));
52         bufferedWriter.newLine();
53
54         bufferedWriter.close();
55
56         scanner.close();
57     }
58 }

```

Line: 29 Col: 29

[Upload Code as File](#) ☐ Test against custom input

Run Code

Submit Code

You have earned 20.00 points!

These points will also count towards your progress in the Problem Solving Badge.

80%

774.18/850



# Congratulations

You solved this challenge. Would you like to challenge your friends?



Proceed

✓  
Testcase  
0

✓  
Testcase  
1

✓  
Testcase  
2

✓  
Testcase  
3

✓  
Testcase  
4

✓  
Testcase  
5

✓  
Testcase  
6

Input (stdin)

Download

Expected Output

Download

7

**aba**  
**10**

Compiler Message

**Success**

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