Repeated String

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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 $s =$ '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
1000000000000
```

Sample Output 1

```
1000000000000
```

Explanation 1

Because all of the first $n = 1000000000000$ letters of the infinite string are a, we print 1000000000000 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         long multiple = (n/s.length());
15         long leftOver = n % multiple;
16         for(int i=0; i<s.length(); i++) {
17             if(s.charAt(i) == 'a') {
18                 count++;
19             }
20         }
21         count *= multiple;
22         for(int i=0; i<leftOver; i++) {
23             if(s.charAt(i) == 'a') {
24                 count++;
25             }
26         }
27         return count;
28     }
29
30     private static final Scanner scanner = new Scanner(System.in);
31
32     public static void main(String[] args) throws IOException {
33         BufferedWriter bufferedWriter = new BufferedWriter(new
FileWriter(System.getenv("OUTPUT_PATH")));
34
35         String s = scanner.nextLine();
36
37         long n = scanner.nextLong();
38         scanner.skip("(\r\n|[\n\r\u2028\u2029\u0085])?");
39
```

```
        long result = repeatedString(s, n);

        bufferedWriter.write(String.valueOf(result));
        bufferedWriter.newLine();

        bufferedWriter.close();

        scanner.close();
    }
}

```

Line: 28 Col: 6

Upload Code as File | Test against custom input | Run Code | Submit Code

Congratulations!

You have passed the sample test cases. Click the submit button to run your code against all the test cases.

Testcase 0 | Testcase 1

Input (stdin)

```
aba
10
```

Your Output (stdout)

```
7
```

Expected Output

```
7
```