Repeated String

Problem Submissions Leaderboard Editorial

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.

Change Theme C++

```
#include <bits/stdc++.h>

using namespace std;

// Complete the repeatedString function below.
long repeatedString(string s, long n) {


}

int main()
{
    ofstream fout(getenv("OUTPUT_PATH"));

    string s;
    getline(cin, s);

    long n;
    cin >> n;
    cin.ignore(numeric_limits<streamsize>::max(), '\n');

    long result = repeatedString(s, n);

    fout << result << "\n";

    fout.close();

    return 0;
}
```

Line: 30 Col: 1

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