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

- $1 \le |s| \le 100$

- $1 \le n \le 10^{12}$

- For 25% of the test cases, $n \le 10^6$.

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.

Python 3

```python
1   #!/bin/python3
2
3   import math
4   import os
5   import random
6   import re
7   import sys
8
9   # Complete the repeatedString function below.
10  def repeatedString(s, n):
11      q, r = divmod(n, len(s))
12      return (sum(a=='a' for a in s) * q) + sum(a=='a' for a in s[:r] )
13
14
15  if __name__ == '__main__':
16      fptr = open(os.environ['OUTPUT_PATH'], 'w')
17
18      s = input()
19
20      n = int(input())
21
22      result = repeatedString(s, n)
```

Line: 11 Col: 29

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