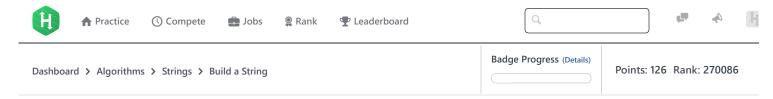
15/11/2017 HackerRank



Build a String **■**



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Greg wants to build a string, S of length N. Starting with an empty string, he can perform 2 operations:

- 1. Add a character to the end of $m{S}$ for $m{A}$ dollars.
- 2. Copy any substring of ${\it S}$, and then add it to the end of ${\it S}$ for ${\it B}$ dollars.

Calculate minimum amount of money Greg needs to build $oldsymbol{\mathcal{S}}$.

Input Format

The first line contains number of testcases T.

The $\mathbf{2} \times \mathbf{T}$ subsequent lines each describe a test case over $\mathbf{2}$ lines: The first contains $\mathbf{3}$ space-separated integers, \mathbf{N} , \mathbf{A} , and \mathbf{B} , respectively. The second contains \mathbf{S} (the string Greg wishes to build).

Constraints

- $1 \le T \le 3$
- $1 \le N \le 3 \times 10^4$
- $1 \le A, B \le 10000$
- ullet is composed of lowercase letters only.

Output Format

On a single line for each test case, print the minimum cost (as an integer) to build $oldsymbol{S}$.

Sample Input

Sample Output

26

Explanation

Test Case 0: $S_{initial} = ""; S_{final} = "aabaacaba"$ Append "a"; S = "a"; cost is 4 Append "a"; S = "aa"; cost is 4

Submissions:835

Max Score:80 Difficulty: Hard

Rate This Challenge: ななななな

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```
Append "b"; S = "aab"; cost is 4
Copy and append "aa"; S = "aabaa"; cost is 5
Append "c"; S = "aabaac"; cost is 4
Copy and append "aba"; S = "aabaacaba"; cost is 5
Summing each cost, we get 4 + 4 + 4 + 5 + 4 + 5 = 26, so our output for Test Case 1 is 26.

Test Case 1:
S_{initial} = ""; S_{final} = "bacbacacb"
Append "b"; S = "ba"; cost is $8
Append "a"; S = "ba"; cost is $8
Append "a"; S = "bac"; cost is $8
Copy and append "acb"; S = "bacbacacb"; cost is $9
Copy and append "acb"; S = "bacbacacb"; cost is $9
Summing each cost, we get S = S = "S = "
```

```
Current Buffer (saved locally, editable) &
                                                                                          Java 7
                                                                                                                           Ö
 1 ▼ import java.io.*;
 2 import java.util.*;
 3 import java.text.*;
 4 import java.math.*;
 5 import java.util.regex.*;
 7 ▼ public class Solution {
 8
 9 ▼
        public static void main(String[] args) {
10 ▼
            /* Enter your code here. Read input from STDIN. Print output to STDOUT. Your class should be named Solution. */
11
12 }
                                                                                                                   Line: 1 Col: 1
                      Test against custom input
                                                                                                       Run Code
                                                                                                                    Submit Code
1 Upload Code as File
```

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