Build a String



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 S for A dollars.
- 2. Copy any substring of S, and then add it to the end of S for S dollars.

Calculate minimum amount of money Greg needs to build S.

Input Format

The first line contains number of testcases T.

The $2 \times T$ subsequent lines each describe a test case over 2 lines:

The first contains 3 space-separated integers, N, A, and B, respectively.

The second contains S (the string Greg wishes to build).

Constraints

- 1 < T < 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 S.

Sample Input

Sample Output

26 42

Explanation

Test Case 0:

 $S_{initial} =$ ""; $S_{final} =$ "aabaacaba"

Append "a"; S = "a"; cost is 4

Append "a"; S = "aa"; cost is 4

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:

 $S_{initial} = \verb"""; S_{final} = \verb"bacbacacb"$

Append "b"; S = "b"; cost is \$8

Append "a"; S = "ba"; cost is \$8

Append "c"; S= "bac"; cost is \$8

Copy and append "bac"; S = "bacbac"; cost is \$9

Copy and append "acb"; S = "bacbacacb"; cost is \$9

Summing each cost, we get 8+8+8+9+9=42, so our output for *Test Case 2* is 42.