

Stock market

Mohamed is a rich man. He is dealing with stock market. Every day he starts with N dollars (specif budget). Through the day he can sell or buy if he sell he will gain S dollars and if he buy he will lose B dollars. Mohamed needs your help given his initial budget and amount he will gain if he sell stock , amount he will lose if he buy stock and sequence of actions sell or buy , print his total money after the day.

Input

input will contain 3 lines

First line : contain 3 integers N S B where $1 \leq N, S, B \leq 100000$. N is initial budget , S is amount of sell , B amount for buy

Second line : contain 1 integer M where M is number of actions for the day, $1 \leq M \leq 100$

thrid line : M charachters , each character will be B or S such that B represent buy and S represent sell

Output

print the mohamed total money after all day actions and if the amount of money < 0 just print 0.

print endl after the test case

Example

Input:

100 10 4

4

B B S B

Output:

98