```c
#include <stdio.h>
int main(){
    // Sum might be 41 digits long so be safe have one more :)
    int a[42], b[42], c[42], x, i;
    int prod, sum, carry;

    // Reset all arrays for safety
    for(i = 0; i < 42; i++)
        a[i] = b[i] = c[i] = 0;

    // Read in both numbers in the last 40 indices of the array
    // Can also work with a 40 length array for a and b but it is
    // convenient to have a, b, c to be of same length
    for(i = 2; i < 42; i++)
        a[i] = getchar() - '0';
    getchar(); // Catch the newline character
    for(i = 2; i < 42; i++)
        b[i] = getchar() - '0';
    getchar(); // Catch the newline character
    x = getchar() - '0';

    // Carry is reset to zero
    carry = 0;

    // Work with only the last 40 digits of a since others are zero
    for(i = 41; i >= 2; i--){
        // Primary school math!
        prod = a[i] * x + carry;
        c[i] = prod % 10;
        carry = prod / 10;
    }
    // The 41st digit from the right has to receive any carry
    c[i] = carry;

    // Reset the carry since getting ready to add numbers
    carry = 0;
    for(i = 41; i >= 0; i--){
        // Primary school math!
        sum = c[i] + b[i] + carry;
        c[i] = sum % 10;
        carry = sum / 10;
    }

    // Dont print the leading zeros
    for(i = 0; c[i] == 0 && i < 42; i++);

    // Is the entire number just zero?
    if(i == 42) printf("0");

    for( ; i < 42; i++)
        printf("%d",c[i]);

    return 0;
}
```