

## Caesar's Cipher

Julius Caesar protected his confidential information by encrypting it using a cipher. Caesar's cipher (check Resources tab for more info) shifts each letter by a number of letters. If the shift takes you past the end of the alphabet, just rotate back to the front of the alphabet. In the case of a rotation by 3, w, x, y and z would map to z, a, b and c.

Your task is to write a function that takes a string *s* (text to be encrypted) and an integer *k* (the rotation factor). It should return an encrypted string.

### Input

The first line of input contains a string *s*.

The second line of input contains an integer *k*.

### Output

The first line contains the encrypted string.

### Sample input

### Sample output

middle-Outz 2	okffng-Qwvb
Always-Look-on-the-Bright-Side-of-Life 5	Fqbfdx-Qttp-ts-ymj-Gwnlmy-Xnij-tk-Qnkj
A friend in need is a friend indeed 20	U zlcyhx ch hyyx cm u zlcyhx chxyyx