Problem 6766 - Big Bang Secrets Multilingual

Time Limit	Memory Limit	Submissions	Accepted	Solved	Ratio
2 seconds	512 MB	173	158	133	95.000%

Description

Sheldon and Leonard are physicists who are fixated on the BIG BANG theory. In order to exchange secret insights they have devised a code that encodes UPPERCASE words by shifting their letters forward.

Shifting a letter by S positions means to go forward S letters in the alphabet. For example, shifting B by S = 3 positions gives E. However, sometimes this makes us go past Z, the last letter of the alphabet. Whenever this happens we wrap around, treating A as the letter that follows Z. For example, shifting Z by S = 2 positions gives B.

Sheldon and Leonard's code depends on a parameter K and also varies depending on the position of each letter in the word. For the letter at position P, they use the shift value of S = 3P + K.

For example, here is how ZOOM is encoded when K = 3. The first letter Z has a shift value of S = 3 × 1 + 3 = 6; it wraps around and becomes the letter F. The second letter, O, has S = 3 × 2 + 3 = 9 and becomes X. The last two letters become A and B. So Sheldon sends Leonard the secret message: FXAB

Write a program for Leonard that will decode messages sent by Sheldon.

Input

The input will be two lines. The first line will contain the positive integer K (K < 10), which is used to compute the shift value. The second line of input will be the word, which will be a sequence of uppercase characters of length at most 20.

Output

The output will be the decoded word of uppercase letters.

Sample Input 1 Copy

```
5
JTUSUKG
```

Sample Output 1 Copy

```
BIGBANG
```

Sample Input 2 Copy

```
3
FXAB
```

Sample Output 2 Copy

```
ZOOM
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Source

Olympiad (/category/2) > Canadian Computing Competition & Olympiad (/category/173) > 2012 (/category/175) > CCC 2012 Junior Division (/category/detail/778) 4번