2381 - Letters Game

Description

Pepe and Juan play a very curious word game. The game starts with one word, containing only uppercase letters ('A' - 'Z'). Player alternates turns, and gain points on each one. The player who finish with the higher total points, is the winner. If both players have the same number of points (a common TIE), the winner is the player who obtained the last positive amount of points. Each player starts with 0 points.

• The first player (player who starts the game) takes the amount of 'A's in the word, and then multiplies the resulting number by the length of the string without any 'A'. The result is added to that player's points.
• The other player takes the amount of 'B's in the word, and then multiplies the resulting number by the length of the string without any 'A' or 'B'. The result is added to that player's points.
• And so on, in the same form, until the letter 'Z'.

Input specification

The first line contain a single integer number **n (1 <= n <= 10^6)** representing the length of the string, the second line contain the word of the game, and the last line contain a integer number k **(0 <= k <= 10)** that define the player who starts the game (if the number k is even then Pepe go first, otherwise Juan starts).

Output specification

The output consists of the name ("PEPE" or "JUAN") of the player who wins the game and the difference of the points earned by each player at the end of the game.

Sample input

```
27
BICXTFGBLZMYQGBBMHXINVIHXBE
9
```

Sample output

```
PEPE 58
```

Hint(s)