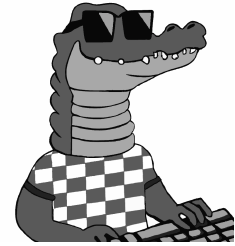




Task 7Krokods

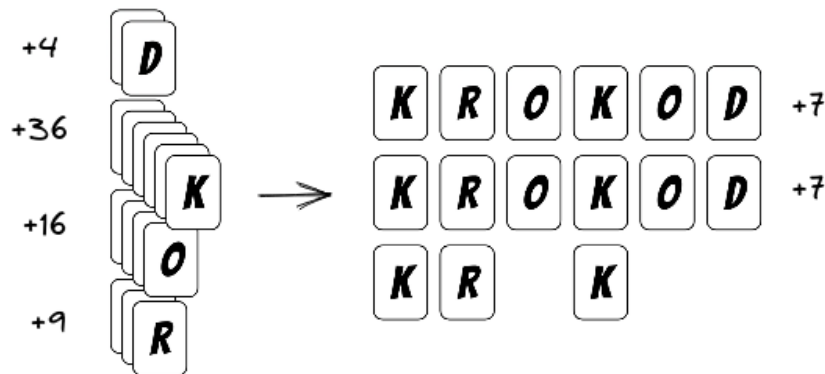
When he is not making videos for his [YouTube channel](#), the famous programmer influencer Krokod likes to play boardgames with his friend Paula. He wants to play the game *7Krokods*, but Paula doesn't like complex games, so Krokod decided that they will play only with green and crocodile cards.



Paula has n green cards, and each of them has one of the following letters written on it: **d**, **k**, **o**, or **r**. Her total score is defined as the sum of the following components:

- For each letter, she gets as much points as is the number of cards with that letter written on them, squared. For example, if she has 6 cards with the letter **k**, she gets 36 points.
- For each word **krokod** she can make from her cards, she gets an extra 7 points.

Illustration of the first example.



*Paula has 2 letters **d** ($2 \cdot 2 = 4$ points), 6 letters **k** ($6 \cdot 6 = 36$ points), 4 letters **o** ($4 \cdot 4 = 16$ points) and 3 letters **r** ($3 \cdot 3 = 9$ points). The word **krokod** can be spelled 2 times ($7 \cdot 2 = 14$ points). Her total score is 79. ($4 + 36 + 16 + 9 + 14 = 79$)*

Paula also has m crocodile cards. She can replace each of the crocodile cards with a green card having a letter of her choice. She will do it in a way that maximizes her score.

Help her determine the maximum score she can get with her cards.

Input

The first line contains integers n and m ($0 \leq n \leq 100, 0 \leq m \leq 10$), the number of green cards and the number of crocodile's cards.

The second line contains a sequence of n characters, where the i -th characters represents the letter on the i -th green card. The sequence consists only of characters **d**, **k**, **o** and **r**.

Output

In the first and only line output Paula's maximum possible score.



Scoring

Subtask	Points	Constraints
1	17	$m = 0$
2	26	$m = 1$
3	7	No additional constraints.

Examples

input	input	input
15 0 krokodkrokodkrk	5 1 rokod	8 2 ddkkoorr
output	output	output
79	17	35

Clarification of the first example:

Look at the illustration in the task statement.

Clarification of the second example:

For the maximum possible score, Paula can replace her crocodile card with a green card having the letter k.