Problem 2 – Magic Card

Sashko loves to play card games. He even invented his own game. The game uses a **standard deck of 52 cards**. The card faces are: **2**, **3**, **4**, **5**, **6**, **7**, **8**, **9**, **10**, **J**, **Q**, **K** and **A**. The cards suits are denoted by the letters **S** (spades), **H** (hearts), **D** (diamonds) and **C** (clubs). The player is given a hand of cards, a string ("**odd**" or "**even**"), and a **magic card**. You need to **count the sum of all cards at odd or even positions (positions start from 0)**. Card **values** are the following: 2 -> 20, 3 -> 30, 4 -> 40, 5 -> 50, 6 -> 60, 7 -> 70, 8 -> 80, 9 -> 90, 10 -> 100, J -> 120, Q -> 130, K -> 140, A -> 150. When a card's suit is the same as the suit of the magic card its value is **doubled**. When a card's face is the same as the face of the magic card its value is **tripled**. The input hand **will not contain** the magic card.

For example, if Sashko gets the hand "**2C 2D 2H AS 10H 10C 2S 3S 5D KD**", the string "**odd**" and a magic card "**AD**". The value of the hand is 20 * 2 + 150 * 3 + 100 + 30 + 140 * 2 = 900.

Write a program that takes a hand of cards and counts the sum.

Input

The input comes from the console**.** The first line **is holding the hand of cards**. Cards are separated by a space.

The second line **is holding a string – "odd" or "even"**. The third line **is holding the magic card**.

The input data will always be valid and in the format described. There is no need to check it explicitly.

Output

Print at the console a single number: the **value of the hand**.

Constraints

- The **count** of the cards will be in the range [1…99].
- **Card faces** will be one of the following values: [**2**, **3**, **4**, **5**, **6**, **7**, **8**, **9**, **10**, **J**, **Q**, **K**, **A**].
- **Card suits** will be one of the following values: [**S**, **H**, **D**, **C**].
- Time limit: 0.3 sec. Memory limit: 16 MB.

Examples

Input	Output
2C 2D 2H AS 10H 10C 2S 3S 5D KD odd AD	900
AS KH 10C even KD	250
AS 10C KS KH KD 9H JH QS 3H QD QH 8S 10D 10S 7C JD even 3D	1180