33 Castellers competition

32 points

Introduction

In Catalonia, there is a tradition called "Castellers", which consists in building a tower made of people. There are several competitions about this tradition, in which different teams of "Castellers" from all Catalonia try to build the most complex human tower. Can you implement a program that can evaluate each tower and decide who is the winner of the competition?

Input

A list of lines, where each line contains the name of a team followed by a '-' and the name of the tower built by that team. The name of the tower is what defines the tower shape, and the name are 3 words that follow these rules:

- The first word defines the width of the tower (i.e the amount of people at each level of the tower). This first word may be a number or a word, and if it is a word it can be "pilar" to define a tower of a 1 person per level or "torre" to define a tower of 2 people per level. If it is a number, it is always a positive number.

- The second word is always "de", it does not define anything about the shape of the tower.

- The third word is a number that defines the height of the tower (including the ground level), which will be always greater or equal than 4.

- The name may be followed by "amb folre" to indicate that the second level (the one over the ground level) of the tower has extra people.

- If there is "amb folre" after the name, it may also contain "amb manilles" to indicate that the third level of the tower has extra people too.

Output

The representation of the human towers for all the teams, followed by the score of each team and the name of the winner or winners.

As you can see in the examples below, there are some rules to properly draw the human towers:

- Each people on the tower is represented with caracter "|" and, in the same level, is separated by a single space " "

- Each tower is sepparated with four "_" at each side of the tower.

- The base has to be wider than the tower, and it is represented with 2 extra people at each side, and the caracters "/" and "\" at each side too.

- The "amb folre" option is represented with the first level being as wide as the ground level.

- The "amb manilles" option is represented as the "amb folre", but with 1 less person per side.

- The last level of the tower is ALWAYS just a single person, called "anxaneta". Is represented allways on the center of the tower

- The rest of the levels have as many people as the width of the tower.

Regarding the score, it is computed following these rules:

- If the width of the tower is less than 10, add "10 - width" points for each level of the tower.

- If the width of the tower is greater or equal than 10, add "1" points for each level of the tower.

- If the tower has "amb folre", subtract 5 points.

- If the tower has "amb manilles", subtract 8 points.

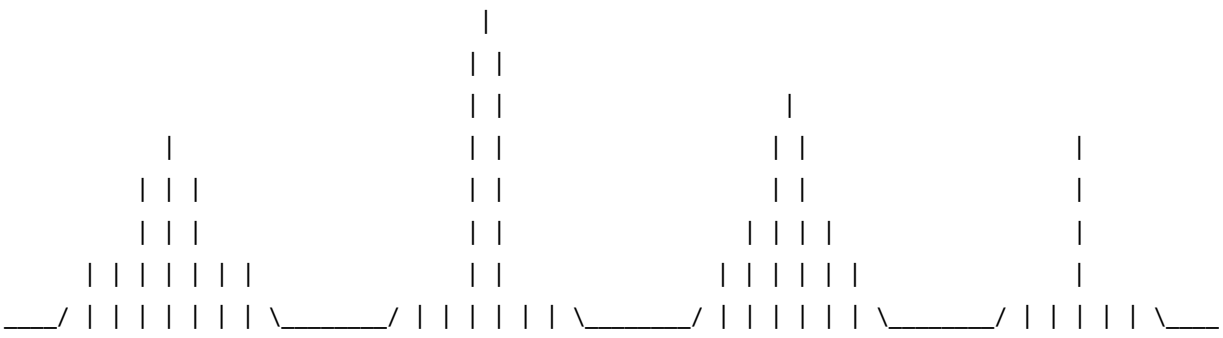
- The score must be greater or equal than 0.

Example 1

Input

```
La colla castellera - 3 de 5 amb folre
The Catalan Lions - 2 de 8
En Pinxu i en Panxu - torre de 6 amb folre amb manilles
Olakase - pilar de 5
```

Output



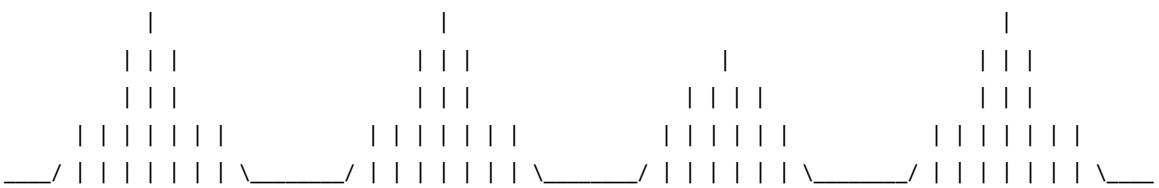
```
La colla castellera: 30
The Catalan Lions: 64
En Pinxu i en Panxu: 35
Olakase: 45
The winner is The Catalan Lions with 64 points.
```

Example 2

Input

```
La colla castellera - 3 de 5 amb folre
The Catalan Lions - 3 de 5 amb folre
En Pinxu i en Panxu - torre de 4 amb folre amb manilles
Olakase - 3 de 5 amb folre
```

Output



```
La colla castellera: 30
The Catalan Lions: 30
En Pinxu i en Panxu: 19
```

```
Olakase: 30
The winners are La colla castellera, The Catalan Lions and Olakase with 30
points.
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