

Seize the Fire

The group of adventurers have gone on their first task. Now they have to walk through fire - literally. They have to use all of the water they have left. Your task is to help them survive.

Create a program that calculates the water that is needed to put out a "fire cell", based on the given information about its "fire level" and how much it gets affected by water.

First, you will be given **the level of fire** inside the cell with the **integer value** of the **cell**, which represents the needed water to put out the fire. They will be given in the following format:

"{typeOfFire} = {valueOfCell}#{typeOfFire} = {valueOfCell}#{typeOfFire} = {valueOfCell}....."

Afterwards you will receive the **amount of water** you have for putting out the fires. There is a **range** of fire for each of the fire types, and if a cell's value is below or exceeds it, it is invalid and you don't need to put it out.

Type of Fire	Range
High	81 - 125
Medium	51 - 80
Low	1 - 50

If a cell is valid, you have to put it out by reducing the water with its value. Putting out fire also takes **effort** and you need to **calculate it**. Its value is equal to **25% of the cell's value**. In the end you will have to print the **total effort**. Keep putting out cells until you run out of water. If you **don't have enough water** to put out a given cell – **skip it and try the next one**. In the end, **print the cells you have put out** in the following format:

"Cells:

- {cell1}
- {cell2}
- {cell3}

.....

- {cellN}"

"Effort: {effort}"

In the end, print the total fire you have put out from all of the cells in the following format: "Total Fire: {totalFire}"

Input / Constraints

- On the 1st line you are going to receive the **fires with their cells** in the format described above – **integer numbers in the range [1...500]**
- On the 2nd line, you are going to be given the **water** – **an integer number** in the range **[0...100000]**

Output

- Print the cells, which you have put out in the following format:

"Cells:

- {cell1}
- {cell2}

- {cell13}
- {cell15}

.....

- {cell1N}"

- Print the effort, rounded 2 digits after the decimal separator in the following format:

"Effort: {effort}"

- Print the total fire put out

"Total Fire: {totalFire}"

Examples

Input	Output
High = 89#Low = 28#Medium = 77#Low = 23 1250	Cells: - 89 - 28 - 77 - 23 Effort: 54.25 Total Fire: 217
Comments	
After reading the output, we start checking the level of the fire and its validity. The first is valid, so we subtract the 89 from the amount of water – 1250, and the water becomes 1161. We need to calculate the effort , which is 25% of 89. We will add 89 to the total fire we have put out. In the end the effort is 54.22 and the total fire: 217	
Input	Output
High = 150#Low = 55#Medium = 86#Low = 40#High = 110#Medium = 77 220	Cells: - 40 - 110 Effort: 37.50 Total Fire: 150