

Problem 4 – Legendary Farming

You've beaten all the content and the last thing left to accomplish is own a legendary item. However, it's a tedious process and requires quite a bit of farming. Anyway, you are not too pretentious – any legendary will do. The possible items are:

- **Shadowmourn** – requires **250 Shards**;
- **Valanyr** – requires **250 Fragments**;
- **Dragonwrath** – requires **250 Motes**;

Shards, **Fragments** and **Motes** are the **key materials**, all else is **junk**. You will be given lines of input, such as **2 motes 3 ores 15 stones**. Keep track of the **key materials** - the **first** that reaches the **250 mark wins the race**. At that point, print the corresponding legendary obtained. Then, print the **remaining** shards, fragments, motes, ordered by **quantity in descending** order, each on a new line. Finally, print the collected **junk** items, in **alphabetical** order.

Input

- Each line of input is in format **{quantity} {material} {quantity} {material} ... {quantity} {material}**

Output

- On the first line, print the obtained item in format **{Legendary item} obtained!**
- On the next three lines, print the remaining key materials in descending order by quantity
 - If two key materials have the same quantity, print them in alphabetical order
- On the final several lines, print the junk items in alphabetical order
 - All materials are printed in format **{material}: {quantity}**
 - All output should be **lowercase**, except the first letter of the legendary

Constraints

- The quantity-material pairs are between 1 and 25 per line.
- The number of lines is in range [1..10]
- All materials are case-insensitive.
- Allowed working time: 0.25s
- Allowed memory: 16 MB

Examples

Input	Output
3 Motes 5 stones 5 Shards 6 leathers 255 fragments 7 Shards	Valanyr obtained! fragments: 5 shards: 5 motes: 3 leathers: 6 stones: 5

Input	Output
123 silver 6 shards 8 shards 5 motes 9 fangs 75 motes 103 MOTES 8 Shards 86 Motes 7 stones 19 silver	Dragonwrath obtained! shards: 22 motes: 19 fragments: 0 fangs: 9 silver: 123

