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:

- **Shadowmourne** - 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, then by **name** in **ascending** 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

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
123 silver 6 shards 8 shards 5 motes 9 fangs 75 motes 103 MOTES 8 Shards	Dragonwrath obtained! shards: 22

86 Motes 7 stones 19 silver	`motes: 19`
	`fragments: 0`
	`fangs: 9`
	`silver: 123`