**Blacksmith**

*You are the most well-known blacksmith on Middle Earth. What makes your swords so good is the perfect ratio between steel and carbon*, *which makes them extremely sharp and durable.*

First, you will be given **a sequence representing steel**. Afterward, you will be given another **sequence representing carbon**.

You should start from the **first steel** and try to mix it with the **last carbon.** If the **sum** of their values is **equal** to **any of the swords in the table below** you should forge the **sword corresponding** to the **value** and **remove** **both** the **steel** and the **carbon**. Otherwise, **remove only the steel**, **increase** the **value** of the **carbon by 5** and **insert** it **back** into the **collection**. You need to **stop** forging when you have **no more steel** or **carbon left**.

|  |  |
| --- | --- |
| **Sword** | **Resources needed** |
| Gladius | 70 |
| Shamshir | 80 |
| Katana | 90 |
| Sabre | 110 |
| Broadsword | 150 |

Forge as **many swords as possible.**

**Input**

* On the **first line**, you will receive the steel, **separated** by a **single space (**" "**)**.
* On the **second line**, you will receive the carbon, **separated** by a **single space (**" "**)**.

**Output**

* On the **first** line of output depending on the result:
* If at least one sword was forged: "**You have forged {totalNumberOfSwords} swords.**"
* If no sword was forged: "**You did not have enough resources to forge a sword.**"
* On the **second** line - print all steel you have left:
* If there are no steel: "**Steel left: none**"
* If there are steel: "**Steel left: {steel1}, {steel2}, {steel3},** **(…)**"
* On the **third** line - print all carbon you have left:
* If there are no carbon: "**Carbon** **left: none**"
* If there are carbon: "**Carbon** **left: {carbon1}, {carbon2}, {carbon3},** **(…)"**
* Then**,** you need to print **only the swords that you manage to forge** and how many **of them**, **ordered** **alphabetically**:
* **"Broadsword: {amount}"**
* **"Sabre: {amount}"**
* **"Katana: {amount}"**
* **"Shamshir: {amount}"**
* **"Gladius: {amount}"**

**Constraints**

* All of the given numbers will be valid resources in the range **[0, 130]**.

**Examples**

|  |  |  |
| --- | --- | --- |
| **Input** | **Output** | **Comment** |
| 40 50 70 120 10 20  30 20 30 20 30 50 | You have forged 4 swords.  Steel left: none  Carbon left: 30, 30  Broadsword: 1  Katana: 2  Shamshir: 1 | We start by taking **40 (steel) + 50 (carbon) = 90**. The first sword is forged "**Katana**" and we remove both materials.  Next **50 (steel) + 30 (carbon) = 80**, "**Shamshir** " is forged and we remove both materials.  Next **70 (steel) + 20 (carbon) = 90**, "**Katana**" is forged and we remove both materials.  Next **120 (steel) + 30 (carbon) = 150**, "**Broadsword**" is forged and we remove both materials.  Next **10 (steel) + 20 (carbon) = 30**, no sword could be made, we remove **steel**, increase **carbon** by 5 and insert back **(25)** into the collection.  In the last iteration **20 (steel) + 25 (carbon) = 45** no sword could be made, we remove **steel**, increase **carbon** by 5 and insert back **(30)** into the collection.  We’ve menage to forge **4 swords** and left with **2 pieces (30, 30)** of carbon. |
| 10 5 30  30 20 10 | You did not have enough resources to forge a sword.  Steel left: none  Carbon left: 25, 20, 30 |  |