# Christmas Elves

Icon

Description automatically generated with low confidence

*Everything in the Satna Claus' workshop was going well until, on one freezing Sunday, a dangerous storm destroyed almost all toys. Now Santa's elves fear they won't be able to meet their December deadline. It could be a disaster, and some children around the world may not get their Christmas toys. Luckily, you've come up with an idea, and you just need to write a program that manages your plan.*

The Christmas elves have special toy-making skills - еach elf can make a toy from a given number of materials.

First, you will receive a sequence of **integers** representing each **elf's energy**. On the following line, you will be given another sequence of **integers,** each representing a **number of materials** **in a box**.

Your task is to calculate **the total elves' energy used** for making toys and **the total number of successfully made toys**.

You are very clever and have immediately recognized the **pros and cons of the work process** - the **first elf** takes **the last box of materials** and tries to create the toy:

* Usually, the elf **needs energy equal to the number of materials**. If he **has enough** energy, he **makes the toy**. His energy **decreases** by the used energy, and the **toy** **goes straight to Santa's bag**. Then, the elf **eats** a cookie reward which **increases his energy by 1**, and **goes to the end of the line**, preparing for the upcoming boxes.
* Every **third** **time** one of the elves **takes a box**, he tries his best to be creative, and **he will need** **twice as much** **energy** **as usual**. If **he has enough**, he manages to create **2 toys**. Then, his **energy decreases;** he eats a **cookie reward** and **goes to the end of the line,** similar to the first bullet.
* Every **fifth** **time** one of the elves **takes a box**, he is a little clumsy and somehow manages to **break the toy** **when he just made it (if he made it)**. The **toy is** **thrown away,** and the **elf** **doesn't get a cookie reward**. However, his **energy is already spent,** and it needs to be **added** to the total elves' energy.
  + **If an elf creates 2 toys, but he is clumsy, he breaks them.**
* If an elf does **not** have enough energy, he **leaves the box of materials** **to the next elf**. Instead of making the toy, the elf drinks a hot chocolate which **doubles his energy**, and **goes to the end of the line**, preparing for the upcoming boxes.

**Note:** North Pole's social policy is very tolerant of the elves. If the **current elf's energy** is **less than 5 units**, he **does NOT TAKE a box**, but he takes a day off. **Remove the elf** from the collection.

**Stop crafting toys when you are out of materials or elves.**

## Input

* The **first** line of input will represent each elf's energy - **integers**, separated by a **single space**
* On the **second** line, you will be given the **number of materials in each box** - **integers**, separated by a **single space**

## Output

* On the **first line**, print **the number of created toys**: **"Toys: {total\_number\_of\_toys}"**
* On the **second line**, print **the total used energy**: **"Energy: {total\_used\_energy}"**
* On the **next two lines** print the **elves** and **boxes** that are **left**, **if there are any**, **otherwise skip the line:**
  + "**Elves left: {elf1}, {elf2}, … {elfN}**"
  + **"Boxes left: {box1}, {box2}, … {boxN}"**

## Constraints

* All the elves' values will be **integers** in the range **[1, 100]**
* All the boxes' values will be **integers** in the range **[1, 100]**

## Examples

|  |  |  |
| --- | --- | --- |
| ****Input**** | ****Output**** | ****Comment**** |
| **10 16 13 25**  **12 11 8** | **Toys: 3**  **Energy: 31**  **Elves left: 3, 6, 26, 14** | 1) The elf with energy **10** takes the box with **8** materials. He creates **1 gift** and uses **8 units of energy**. He eats a cookie and goes to the end of the line, which now looks like this: **16 13 25 3**.  2) The elf with energy **16** takes the box with 11 materials. He creates **1 gift** and uses **11 units of energy**. Then, he eats a cookie and goes to the end of the line, which now looks like this: **13 25 3 6**.  3) The elf with energy **13** takes the box with **12 materials**. It is the **third** time an elf takes a box. The elf does not have the needed energy: **12 \* 2**, so he drinks a hot chocolate and goes to the end of the line: **25 3 6 26**.  4) The elf with energy **25** **takes the box** with 12 materials. It is the **fourth** time an elf takes a box. He creates **1 gift** and uses **12 units of energy**. He eats a cookie and goes to the end of the line, which now looks like this: **3 6 26 14**.  No boxes are left, so the program ends. Print the desired text. |
| **10 14 22 4 5**  **11 16 17 11 1 8** | **Toys: 7**  **Energy: 75**  **Elves left: 10, 14** |  |
| **5 6 7**  **2 1 5 7 5 3** | **Toys: 3**  **Energy: 20**  **Boxes left: 2, 1** |  |