# The Fight for Gondor

*Sauron’s army is marching towards Gondor. Vicious waves of orcs are getting ready to attack Aragorn’s people and make their way into the city.*

**First**, you will be given a **number** equal to the **waves of orcs**. On the **second** line you will be given the **plates of the Aragorn's defense**. Then, on each next line (**for each wave**), you receive the power of **each orc warrior**. Additionally, on every **third wave**, the people build a **new plate** (**extra** line with a single integer) **before** the Sauron**'**s warriors attack. In order to enter the city, the orcs have to **destroy all the plates**.

**Until** there are **no more plates** or **orcs**, the **last orc warrior** attacks **the first plate**:

* If the **warrior's** value is **greater**, he **destroys** the plate and **lowers** his value by the plate**'**s value, then attacks the **next** plate, **until** his value reaches 0.
* If the **plate's** value is **greater**, the warrior **dies** and the plate **decreases** its value by the warrior**'**s value.
* If their values are **equal**, the warrior **dies** and the plate is **destroyed**.

### Input

* **First** line: integer- the number of **waves**
* **Second** line: integers, representing the **plates**, **separated by a single space**.
* For each **wave:** integers, representing the **warrior orcs**, **separated by a single space**.
  + On every **third** wave, you will be given an **extra line** with a **single** integer, which will be the **plate you need to add**. **[!]** Add the plate **before** processing the attacks. **[!]**

### Output

* On the first line of output – print if the orcs destroyed the Gondor**'**s defense:
  + True: "**The orcs successfully destroyed the Gondor's defense.**"
  + False: "**The people successfully repulsed the orc's attack.**"
* On the second line - print all plates or orcs left, separated by comma and a white space:
  + If there are warriors: "**Orcs left: {orc1}, {orc2}, {orc3},** **…**"
  + If there are plates: "**Plates left: {plate1}, {plate2}, {plate3}, …**"

### Constraints

* All of the given numbers will be valid integers in the range [1, 100].
* **Not all waves** may be needed to destroy the defense.
* There will **always** be a **winning side**, meaning either no orcs or plates left.

### Examples

|  |  |  |
| --- | --- | --- |
| ****Input**** | ****Output**** | ****Comment**** |
| **3**  **10 20 30**  **4 5 1**  **10 5 5**  **10 10 10**  **4** | **The people successfully repulsed the orc's attack.**  **Plates left: 4** | * First wave (4 5 1):   + Orc (1) attacks Plate (10) => dies and plate is now 9.   + Orc (5) attacks Plate (9) => dies and plate is now 4.   + Orc (4) attacks Plater (4) => dies and plate is gone. * Second wave (10 5 5):   + Orc (5) attacks Plate (20) => dies and plate is now 15.   + Orc (5) attacks Plate (15) => dies and plate is now 10.   + Orc (10) attacks Plate (10) => dies and plate is gone. * Third wave (10 10 10):   + People build a new plate (4), plates are now: 30 4   + Orc (10) attacks Plate (30) => dies and plate is now 20.   + Orc (10) attacks Plate (20) => dies and plate is now 10.   + Orc (10) attacks Plate (10) => dies and plate is gone. * We have no more waves and one plate left (4) => see the output. |
| **5**  **10 30 10**  **3 3 4**  **10 10 10**  **5 5**  **5**  **7 6**  **8 6 7** | **The orcs successfully destroyed the Gondor's defense.**  **Orcs left: 1, 7** | * First wave (3 3 4):   + Orc (4) attacks Plate (10) => dies and plate is now 6.   + Orc (3) attacks Plate (6) => dies and plate is now 3.   + Orc (3) attacks Plater (3) => dies and plate is gone. * Second wave (10 10 10):   + Orc (10) attacks Plate (30) => dies and plate is now 20.   + Orc (10) attacks Plate (20) => dies and plate is now 10.   + Orc (10) attacks Plate (10) => dies and plate is gone. * Third wave (5 5):   + People build a new plate (5), plates are now: 10 5   + Orc (5) attacks Plate (10) => dies and plate is now 5.   + Orc (5) attacks Plate (5) => dies and plate is gone. * Fourth wave (7 6):   + Orc (6) attacks Plate (5) => the orc is now 1 and the plate is gone. * We have no more plates, so the waves stop coming => see the output. Also, we stop the input. (8 6 7 is not proceeded, but is in the input because the waves are 5) |