**Problem 3 – Endurance Rally**

The goal of the Endurance Rally is, simply, to finish the race.

You are given **the names of the participants**, **the track layout** and **the** **checkpoint** indexes.

The starting fuel of each participant is **equal to the ASCII code** of the **first character** of his name.

Track layout consists of zones represented by numbers, given on a single line separated by a single space. Every number **represents** the **fuel given** or the **fuel taken** by the current zone of the track:

* If the current zone **is a checkpoint**, the value of the zone is **added** to the driver's **fuel**.
* If the current zone **is not a checkpoint**, the value of the zone is **subtracted** from the driver's fuel.

Zones are **indexed**. Indexes are sequential and always **start from zero** (like an array).

The **checkpoints** are numbers, representing indexes that show if **a zone of the track** **is a checkpoint**. For example, you are given checkpoints 0, 3 and 5, that means that zones at index 0, 3 and 5 of the track are checkpoints and therefore provide fuel for the driver.

Given this information, you need to **check if a driver can finish** and **print the fuel that he is left with**. If a driver **can't finish** you need to **print the zone he managed to reach**.

**Input**

The input will be read from the console. The input consists of **exactly three lines**:

* The first line holds the drivers' names separated by a space: **"{driver 1} {driver 2} … {driver N}"**
* On the second line is the track layout (zones) in the form of numbers separated by a space: **"{zone 0} {zone 1} … {zone N}"**
* On the third line are the checkpoint indexes also separated by a space: **"{index 0} {index 1} … {index N}"**

**Output**

Print all drivers **in the order of their appearance**, each on a separate line:

* If the driver finished, print his name and fuel left to the second digit after the decimal point in the format: **"{driver name} - fuel left {fuel points}"**
* If the driver could not finish, print: **"{driver name} - reached {zone index}"**

**Constrains**

* Drivers count will be in the range [0 … 200]
* Zone fuel will be a floating-point number
* Checkpoints will be integers in the range [-231 … 231 - 1]

**Examples**

|  |  |  |
| --- | --- | --- |
| **Input** | **Output** | **Comments** |
| Garry Clark  69 **1** **15** 5  1 2 | Garry - fuel left 13.00  Clark - reached 0 | Zones 1 and 2 -> checkpoints.  Garry ('G' = 71)  -> 71 - 69 + 1 + 15 - 5 = 13.00  Garry finished with 13 fuel  Clark ('C' = 67)  -> 67 - 69 = -2  Clark reached 0 |
| Garry Clark Larry  **4** 5 12 **0** 8 **7** 13 22 **5,5** 26  0 3 5 8 | Garry - fuel left 1.50  Clark - reached 9  Larry - fuel left 6.50 |  |
| Garry  -29 **-5,0** **-5,0**  1 2 | Garry - fuel left 90.00 |  |