# Problem 1 - The Hunting Games



*A group of friends has decided to participate in a game. The first stage of the game is to gather some supplies. They have a list, and your job is to help them follow it and make the needed calculations.*

Write a program that calculates the needed provisions for a quest in the woods.

First, you will receive **the days of the adventure**, **the count of the players,** and the **group's energy**. Afterward, you will receive **provisions for a day for one person**:

* **Water**
* **Food**

The group calculates how many supplies they'd need for the adventure and takes that much water and food.

**Every day** they chop wood and **lose** **a certain amount of energy**. For each of the days, you are going to receive the amount of **energy lost** from chopping wood. The program should **end** if the energy reaches **0** or **less**.

**Every second day** they **drink water**, which **boosts** their **energy** with **5% of their current energy** and at the same **time drops their water** **supplies** by **30% of their current water.**

**Every** **third** day they **eat**, which **reduces their food supplies (all food they have) by the following amount:**

{currentFood} / {countOfPeople} and at the same time **raises** their group's **energy** by **10%**.

**The chopping of wood, the drinking of water, and the eating happen in the order above.**

If they have **enough** **energy** to finish the quest, print the following message:

"You are ready for the quest. You will be left with - {energyLevel} energy!"

If they **run out of energy**, print the following message and the **food** and **water** they were left with **before** they ran out of energy:

"You will run out of energy. You will be left with {food} food and {water} water."

### Input / Constraints

* **On the 1st line**, you will receive a number **N** - the days of the adventure – **an integer** in the range **[1…100].**
* **On the 2nd line** – the number of players – **an integer** in the range **[1 – 1000].**
* **On the 3rd line** - the group's energy – **a real number** in the range **[1 - 50000].**
* **On the 4th line** – water per day for one person – **a real number** **[0.00 – 1000.00].**
* **On the 5th line** – food per day for one person – **a real number** **[0.00 – 1000.00].**
* On the next **N** lines – one for each of the days – the amount of **energy loss**– **a real number** in the range **[0.00 - 1000.00].**
* You will **always** have **enough** **food** and **water**.

## **Output**

* The final numbers should be **formatted** to the **second** **digit** after the decimal separator.

### Examples

|  |  |  |
| --- | --- | --- |
| **Input** | | **Output** |
| 10  7  5035.5  11.3  7.2  942.3  500.57  520.68  540.87  505.99  630.3  784.20  321.21  456.8  330 | | You are ready for the quest. You will be left with - 658.72 energy! |
| **Comments** | | |
| The **days** are **10,** and the **players** are **7**. The **energy** of the whole **group** is **5035.5**. We receive the **water** and **food,** and we can **calculate** the needed amount of both for the whole quest:  **Total water: 10 \* 7 \* 11.3 = 791**  **Total food: 10 \* 7 \* 7.2 = 504**  The energy lost on the first day: **5035.5 – 942.3 = 4093.2**  The first time we reach the **second** **day**, the energy will become **3772.26,** and the water will become **553.7**.  The first time we reach the **third** **day**, the energy will become - **3576.74** and the food **432**.  Make all the calculations, and in the end, you must have **658.72** energy left and **132.94** water, and **317.39** food left. | | |
| **Input** | **Output** | |
| 12  6  4430  9.8  5.5  620.3  840.2  960.1  220  340  674  365  345.5  212  412.12  258  496 | You will run out of energy. You will be left with 229.17 food and 118.59 water. | |

### JS Examples

The input will be provided as an array of strings.

|  |  |
| --- | --- |
| **Input** | **Output** |
| (["10",  "7",  "5035.5",  "11.3",  "7.2",  "942.3",  "500.57",  "520.68",  "540.87",  "505.99",  "630.3",  "784.20",  "321.21",  "456.8",  "330"]) | You are ready for the quest. You will be left with - 658.72 energy! |
| **Comments** | |
| The **days** are **10,** and the **players** are **7**. The **energy** of the whole **group** is **5035.5**. We receive the **water** and **food,** and we can **calculate** the needed amount of both for the whole quest:  **Total water: 10 \* 7 \* 11.3 = 791**  **Total food: 10 \* 7 \* 7.2 = 504**  The energy lost on the first day: **5035.5 – 942.3 = 4093.2**  The first time we reach the **second** **day**, the energy will become **3772.26,** and the water will become **553.7**.  The first time we reach the **third** **day**, the energy will become - **3576.74** and the food **432**.  Make all of the calculations, and in the end, you must have **658.72** energy left and **132.94** water, and **317.39** food left. | |

|  |  |
| --- | --- |
| **Input** | **Output** |
| (["12",  "6",  "4430",  "9.8",  "5.5",  "620.3",  "840.2",  "960.1",  "220",  "340",  "674",  "365",  "345.5",  "212",  "412.12",  "258",  "496"]) | You will run out of energy. You will be left with 229.17 food and 118.59 water. |