Problem 1. Experience Gaining

Write a program, that helps a player figure how many battles he will need to play in a battle video game, in order to unlock the next tank in the line.

On **the first line** you will **receive the amount of experience** that is needed to unlock the tank. On **the second line** you will **receive the count of battles**. On **the next lines,** you will receive the experience the player can gain in every battle.

Calculate if he **can unlock** the tank. Keep in mind that he **gets 15%** more experience for every **third battle** and **10% less** for every **fifth battle**. You also need to **stop the program** as soon as he **collects the needed experience**.

If he managed to gather the experience, **print how many battles it took him** in the following format:

- **`"Player successfully collected his needed experience for {battleCount} battles."`**

If he was not able to do it, **print** the following message:

- **`"Player was not able to collect the needed experience, {neededExperience} more needed."`**

Format the needed experience to **the second decimal place**.

Input

- On the **first line** you will receive the **needed experience** amount – a **real number** in the range [0.0….400000.0]
- On the **second line** you will receive the **count of battles** – an **integer number** in the range
  [0….500]
- On the **next lines** you will receive the **experience earned per battle** – a **real number** in the range
  [0.0….5000.0]

Output

- If he **managed to gather** the experience**:**
  - **`"Player successfully collected his needed experience for {battleCount} battles."`**
- If he was **not able** to do it**:**
  - **`"Player was not able to collect the needed experience, {neededExperience} more needed."`**

NOTE: Format the needed experience to **the second decimal place**.

Examples

Input	Output
500 5 50	Player successfully collected his needed experience for 5 battles.

100 200 100 30	

Comments
The first line is the amount of the wanted experience. – "500" The second line is the expected battles for which he has to collect the experience. – "5" After that is the experience received for every battle: **50 + 100 + (200 + (200 * 15 %)) + 100 + (30 – (30 * 10 %)) = 507** So on the console is printed : **"Player successfully collected his needed experience for 5 battles."**

Input	Output
500 5 50 100 200 100 20	Player was not able to collect the needed experience, 2.00 more needed.

Input	Output
400 5 50 100 200 100 20	Player successfully collected his needed experience for 4 battles.