### Experience Gaining

Mitko wants you to help him figure out **how many battles** he will need to play in order to unlock the next tank in the line. On **the first line** you will **receive the amount of experience** that is needed in order to unlock the tank. On **the second line** you will **receive the count of battles** in which Mitko expects to unlock the next tank. On **the** **next lines** you will receive the experience Mitko is able to gain in every battle.

Calculate if he **will be able to unlock** the tank in the **expected battle count**. Have in mind that he **gets 15 %** more experience for every **third fight** and **10 % less** for every **fifth fight**.

If he managed to gather the experience in the battle count than **print** on the console:

**“Mitko successfully collected his needed experience for {battleCount} battles.”**

If he is not able to do it **print** on console:

**“Mitko 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 **expected 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

* In the end **print** if he managed to collect the experience within the expected count of battles or not following the format :
  + **If successful**:

**“Mitko successfully collected his needed experience for {battleCount} battles.”**

* + **If not successful**:

**“Mitko was not able to collect the needed experience, {neededExperience} more needed.”**

### Examples

|  |  |
| --- | --- |
| **Input** | **Output** |
| 500  5  50  100  200  100  30 | Mitko successfully collected his need experience for 5 battles. |
| **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 on the console is printed :  **“Mitko successfully collected his need experience for 5 battles.”** | |
| 500  5  50  100  200  100  20 | Mitko was not able to collect the needed experience, 2.00 more needed. |
| **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 + (20 – (20 \* 10 %)) = 498**  So on on the console is printed :  **“Mitko was not able to collect the needed experience, 2.00 more needed.”** | |