Problem 1 - Cooking Masterclass

George is starting his own course, a Cooking Masterclass. So, he asked you to buy the needed items.

The number of **items** depends on **how many students will sign up for the course**. The educational set for **one student** consists of 1 package of **flour**, **10 eggs**, and an **apron**.

You will be given **George's budget**, the **number of students signed, and each item's price**. You should help George **calculate** if the **budget** is **enough to buy all the items** or how much more money he needs.

You should know that the **aprons** get dirty often, so George should **buy 20% more**, **rounded up** to the next integer. Also, every **fifth package of flour is free**.

Input / Constraints

The input data will consist of:

- **budget** - a **floating-point number** in the **range [0.00…1000.00]**
- **students** - an **integer** in the **range [0…100]**
- **price** for a **package of flour** - a **floating-point number** in the **range [0.00…100.00]**
- **price** for a **single egg** - a **floating-point number** in the **range [0.00…100.00]**
- **price** for a **single apron** - a **floating-point number** in the **range [0.00…100.00]**

The **input data will always be valid**. **There is no need to check it explicitly**.

Output

The output should be printed on the console.

- If the calculated price of the items **is less or equal to the budget**:
  - `"Items purchased for {the cost of the items}$."`
- If the calculated price is more than the budget:
  - `"{neededMoney}$ more needed."`
- **All prices** must be **formatted to two digits after the decimal point.**

Examples

Input	Output	Comments
50 2 1.0 0.10 10.0	Items purchased for 34.00$.	Needed items for 2 students : apronPrice * (students + 20%) + eggPrice * 10 * (students) + flourPrice * (students - freePackages) 10 * (3) + 0.10 * 10 * (2) + 1 * (2) = 34.00 34.00 <= 50 - the budget is enough.
Input	**Output**	**Comments**

100 25 4.0 1.0 6.0	410.00$ more needed.	Needed items for 25 students: 6 * 30 + 10 * 25 + 4 * 20 = 510.00 510 > 100 - need 410$ more.
Input	**Output**	
946 20 12.05 0.42 27.89	0.16$ more needed.	