

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 the **prices of each item**. You have to help George **calculate** if the **budget** is **enough to buy all of the items**, or how much more money he needs. Because the **aprons** get dirty often, 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 **exactly 5 lines**:

- **budget** – floating-point number in range [0.00...1,000.00]
- **students** – integer in range [0...100]
- **price of flour** for a package – floating-point number in range [0.00...100.00]
- **price of egg** for a single egg – floating-point number in range [0.00...100.00]
- **price of apron** for a single apron – floating-point number in range [0.00...100.00]

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

* If you are using JavaScript, you receive the input as an array with 5 elements: [budget, students, flour, egg, apron]

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 rounded 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 : $\text{apronPrice} * (\text{students} + 20\%) + \text{eggPrice} * 10 * (\text{students}) + \text{flourPrice} * (\text{students} - \text{freePackages})$ $10 * (3) + 0.10 * 10 * (2) + 1 * (2) = 34.00$ $34.00 \leq 50$ – 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. |

... 36 Uses for baking soda, I love baking soda ...