Lab: Simple Calculations

Submit your solutions here: https://judge.softuni.org/Contests/4626/Simple-Calculations-Lab

1. Convertor: USD to EUR

Write a program to convert from USD to EUR:

- Read a **floating-point** number: **the dollars to be converted**
- Convert **dollars to euro** (use fixed rate of dollars to euro: **0.88**)
- Print the **converted value in euro formatted to the 2nd digit**

Example

Input	Output
17	14.96
87.2	76.74

2. Four Operations

Write a program that:

- Read **two floating-point numbers**: **first number** and **second number**
- Performs **4 arithmetic operations** on the given 2 numbers, in the following order:
  - Addition (**+**)
  - Subtraction (**-**)
  - Multiplication (*****)
  - Division (**/**)
- Print the **results, all formatted to the 2nd digit**, in the following format:
  - **"{first number} + {second number} = {addition result}"**
  - **"{first number} - {second number} = {subtraction result}"**
  - **"{first number} * {second number} = {multiplication result}"**
  - **"{first number} / {second number} = {division result}"**

Example

Input	Output
5 10	5.00 + 10.00 = 15.00 5.00 - 10.00 = -5.00 5.00 * 10.00 = 50.00 5.00 / 10.00 = 0.50
15 2.2	15.00 + 2.20 = 17.20 15.00 - 2.20 = 12.80 15.00 * 2.20 = 33 15.00 / 2.20 = 6.82

3. Market

Write a program that:

- You have a farmer sells **tomatoes** and **cucumbers** at the market
- Read **four floating-point numbers:**
  - First represents **tomato price**
  - Second represents **tomato quantity**
  - Third represents **cucumber price**
  - Forth represents **cucumber quantity**
- Calculate the total cost of the production by given **quantities** and **prices**
- Print the **total cost, formatted to the 2nd digit**

Example

Input	Output	Comment
42.50 3.30 60.80 1.80	249.69	Tomatoes: 42.50 * 3.30 = 140.25 Cucumbers: 60.80 * 1.80 = 109.44 Total cost: 140.25 + 109.44 = 249.69

4. Tiles

Write a program that:

- You have a **rectangular bathroom** of size **W** x **H**
- We want to cover it with **tiles** of size **Wt** x **Ht**
- Read **four floating-point numbers:**
  - First represents **bathroom width (W)**
  - Second represents **bathroom height (H)**
  - Third represents **tile width (Wt)**
  - Forth represents **tile height (Ht)**
- Calculate **how many tiles** will be needed **(add 10% surplus)**
- Print the **count of the needed tiles, rounded to the nearest integer**

Example

Input	Output	Comment
3.3 2.2 0.25 0.75	43	Bathroom area = 3.3 * 2.2 = 7.26 Add surplus = 7.26 + 10% = 7.986 Tile area = 0.25 * 0.75 = 0.1875 Tiles needed = 7.986 / 0.1875 = 42.592 ~ 43

5. Deposit Calculator

Write a program that calculates how **much you** will receive at the end of **the deposit period** at a certain **interest rate**. Use the following formula:

amount = deposited amount + term of deposit * (deposited amount * annual interest rate) / 12

Input

From the console read **3 lines**:

1. **Deposited amount – real number in the range [100.00 ... 10000.00]**
2. **Term of the deposit (in months) – an integer in the range [1... 12]**
3. **Annual interest rate – real number in the range [0.00 ... 100.00]**

Output

Print the amount on the console at the end of the term.

Example

Input	Output	Comment
200 3 5.7	202.85	1. We calculate the accumulated interest: 200 * 0.057 (5.7%) = 11.40 BGN. 2. We calculate the interest for 1 month: 11.40 BGN / 12 months = 0.95 BGN. 3. The total amount is: 200 BGN + 3 * 0.95 BGN = 202.85 BGN
2350 6 7	2432.25	1. We calculate the accumulated interest: 2350 * 0.07 (7%) = 164.50 BGN. 2. We calculate the interest for 1 month: 164.50 BGN / 12 months = 13.7083... Lv. 3. The total amount is: 2350 BGN + 6 * 13.7083... = 202.85 BGN

6. Mandatory Literature

For the summer holidays, there are a certain number of books on Joro's list of mandatory literature. Since Joro prefers to play with friends outside, your task is to help him calculate how many **hours a day** he should devote to reading the necessary literature.

Input

Read **3 lines** from the console:

1. **Number of pages** in the current book **– an integer in the range [1... 1000].**
2. **Pages** that he reads **in 1 hour – an integer in the range [1... 1000].**
3. **The number of days** he needs to finish the book – **an integer in the range [1... 1000].**

Hint: For the operands of integer types, the result of the **/** operator is of an integer type and equals the quotient of the two operands rounded towards zero**.**

Output

Print on the console the **number of hours** that Joro has to spend reading each day.

Example

Input	Output	Comments
212 20 2	5	Total reading time of the book: 212 pages / 20 pages per hour = 10 hours total Required hours per day: 10 hours / 2 days = 5 hours per day
432 15 4	7	Total reading time of the book: 432 pages / 15 pages per hour = 28 hours total Required hours per day: 28 hours / 4 days = 7 hours per day

7. Supplies for School

The school year has already started and the 10B grade manager - Annie has to buy a certain number of **packets of pens**, **packets with markers,** as well as **board cleaner.** She is a regular client of a bookstore, so there is **a discount** for her, which represents **some discount percentage of the total amount**. **Write a program that calculates how much money Annie will need to collect to pay the bill, keeping in mind the following price list:**

- **Package of pens - 5.80 lv.**
- **Package of markers - 7.20 lv.**
- **Board cleaner - 1.20 BGN (per liter)**

Input

From the console read **4 numbers**:

- **Number of packages of pens - integer in the range [0...100].**
- **Number of packets of markers - integer in the range [0...100].**
- **Liters of board cleaner - an integer in the range [0... 50].**
- **Discount percentage - integer in the range [0...100].**

Output

Print on the console **how much money will Annie need** to pay the bill.

Example

Input	Output	Comments
2 3 4 25	28.5	**Price of packages of pens** => **2** * **5.80** = 11.60 BGN **Price of marker packages** => **3** * 7.20 **= 21.60 BGN** **Price of the board cleaner** => 4 * 1.20 **= 4.80 BGN** **Price for all materials** => 11.60 + 21.60 + 4.80 = **38.00 BGN** **Calculating the discount 25% = 0.25** **Price after discount** = 38.00 – (**38.00** * **0.25**) = 28.50 BGN
4 2 5 13	37.932	**Price of packages of pens** => **4** * **5.80** = 23.20 BGN **Price of marker packages** => **2** * **7.20** = 14.40 BGN **Price of the board cleaner** => **5** * **1.20** = 6.00 BGN **Price for all materials** => 23.20 + 14.40 + 6.00 = 43.60 **BGN** **Calculating the discount 13% = 0.13** **Price after discount** = 43.60 – (**43.60** * **0.13**) = 37.932 BGN