Exercise: Expressions and Statements

1. Currency Converter

Write a program, which converts an amount of money from one currency to another. The following currencies should be supported: **BGN**, **USD**, **EUR**, **GBP.** Use the following fixed exchange rates:

BGN	USD	EUR	GBP
1	1.79549	1.95583	2.53405

The input consists of three lines:

1. **An amount to convert – a real number**
2. **Input currency - text**
3. **Output currency - text**

The converted output should be **rounded to 2 decimal places** with the **currency abbrev.**

Examples

input	output	hints
20 USD BGN	11.14 BGN	20 * (1 / 1.79549) = 11.1390
100 BGN EUR	195.58 EUR	100 * (1.95583 / 1) = 195.583
12.35 EUR GBP	16.00 GBP	
150.35 USD EUR	163.78 EUR	

2. Dance Hall

A group of dancers is looking for a new dance hall. The hall they like has a **rectangle shape** and its measurements are: **L - length и W- width (in meters).** The hall has **a square wardrobe** with a side of **A** and a **rectangle bench with an area 10 times less than the area of the hall.**

A dancer takes **40 cm² of space and additionally he or she needs 7000 с м²** to be able to move freely.

Write a program, which calculates **the number of dancers**, which the hall can hold. Keep in mind that all of them will need **space to move freely**.

The result should be **rounded down to the nearest integer**.

Input

The input consists of **3 lines:**

1. **L – the length of the hall in meters – a real number in the range [10.00 ... 100.00]**
2. **W – the width of the hall in meters – a real number in the range [10.00 ... 100.00]**
3. **A – the side of the wardrobe in meters – a real number in the range [2.00... 20.00]**

Output

Print a single line on the console – the number of dancers, which can move freely in the free space of the hall, **rounded down to the nearest integer.**

Examples

Input	Output	Explanation
50 25 2	1592	The size of the hall in square centimeters: (**50** * 100) * (**25** * 100) = **12 500 000**; Wardrobe size: (**200 * 200**) = **40 000**; Bench size: **12 500 000** / 10 = **1 250 000**; Free space = **12 500 000** – **40000** – **1 250 000** = **11210000**; Number of dancers = **11210000** / (40 + 7000) = **1592**;
40 32 1	1635	The size of the hall in square centimeters: (**40** * 100) * (**32** * 100) = **12 800 000**; Wardrobe size: (**100 * 100**) = **10 000**; Bench size: **12 800 000** / 10 = **1 280 000**; Free space = **12 800 000** – **10000** – **1 280 000** = **11510000**; Number of dancers = **11510000** / (40 + 7000) = **1635**;

3. Charity Campaign

A bakery is organizing a charity fundraiser, in which bakers from all around the country take part.

Initially we will read from the console **the number of days of the campaign** and the number of **bakers**, which will take part. Afterwards, **on separate lines we will read the amount of cakes**, **waffles** and **pancakes**, made **by one baker per day.**

Have in mind the following pricelist:

- **Cake - $45**
- **Waffle - $5.80**
- **Pancake – $3.20**

1/8 of the final amount of money will be used to cover the costs of the products used during the campaign.

Write a program, which calculates the total amount raised for charity.

Input

The input consists of **5 lines:**

1. **Number of days of the campaign – an integer in the range [0 ... 365]**
2. **Number of bakers – an integer in the range [0 ... 1000]**
3. **Number of cakes – an integer in the range [0... 2000]**
4. **Number of waffles – an integer in the range [0 ... 2000]**
5. **Number of pancakes – an integer in the range [0 ... 2000]**

Output

Print **a single line** on the console:

- **The amount of money, which was raised for charity – formatted to two decimal places.**

Examples

Input	Output	Explanation
20 8 14 30 16	119728.00	Calculate the amount of money **raised for each product every day by one baker**: **Cakes**: 14 * 45 = **630 USD** **Waffles**: 30 * 5.80 = **174 USD** **Pancakes:** 16 * 3.20 = **51.20 USD** **Total amount per day:** (630 + 174 + 51.20) * 8 = **6841.60 USD** **Total amount for the whole campaign:** 6841.60 * 20 = **136832 USD** **The amount after covering the costs:** 136832 - 1/8 o т 136832 = **119728 USD**
Input	**Output**	
131 5 9 33 46	426175.75	

4. Alcohol Market

Peter is having a party and he goes to the alcohol market to buy beer, wine, rakia and whiskey. **The price of the whiskey in USD per liter as well as the amount of beer, wine, rakia and whiskey he will buy will be read from the console. Write a program, which calculates the amount of money Peter needs to buy everything.**

Keep in mind that:

- **The price of the rakia is half the price of the whiskey;**
- **The price of the wine is 40% less than the price of the rakia;**
- **The price of the beer is 80% less than the price of the rakia;**

Input

The input consists of **5 lines**:

1. **The price of the whiskey in USD – a real number in the range [0.00 ... 10000.00]**
2. **The amount of beer in liters – a real number in the range [0.00 ... 10000.00]**
3. **The amount of wine in liters – a real number in the range [0.00 ... 10000.00]**
4. **The amount of rakia in liters – a real number in the range [0.00 ... 10000.00]**
5. **The amount of whiskey in liters – a real number in the range [0.00 ... 10000.00]**

Output

Print **a single number** on the console:

- **The amount of money, which Peter will need, formatted to two decimal places.**

Examples

Input	Input	Explanation
50 10 3.5 6.5 1	315.00	**The price of the rakia per liter**: 50 / 2 = **25** USD **The price of the wine per liter**: 25 – (0.4 * 25) = **15** USD **The price of the beer per liter**: 25 – (0.8 * 25) = **5** USD **Total amount for rakia**: 6.5 * 25 = **162.50** USD **Total amount for wine**: 3.5 * 15 = **52.50** USD **Total amount for beer**: 5 * 10 = **50** USD **Total amount for whiskey**: 1 * 50 = **50** USD **Total amount of money**: 162.50 + 52.50 + 50 + 50 = **315** USD
Input	**Input**	
63.44 3.57 6.35 8.15 2.5	560.62	