

Programming Basics Exam

Problem 2. Going Home

Five guys attend a gaming event to take part in a tournament, but after that they have to go back to their hometown. You have to find out the distance to their city in **kilometers**, **calculate the gasoline consumption in liters per 100 km**, and the **amount they have to pay for gasoline in total**. They only **have the money earned** from the tournament. Help them calculate whether **they will be able to get back home with their money earned** and what **amount they will be left with**. If they **don't have enough money**, they can not go back and the amount is **split between them**.

Input

The input is read from the console and contains exactly **4** lines:

- On the first line is the **distance in kilometers** - an **integer** in the range **[0..100000]**
- On the second line is the **gasoline consumption per 100 kilometers** - an **integer** in the range **[0...100]**
- On the third line **gasoline price per liter** - **real number** in the range **[0.0...50.0]**
- The fourth row is **the money they have won** from the tournament - an **integer** in the range **[0...100000]**

Output

The console prints **1** line where **{earned money}** and **{share of each}** are real numbers **rounded to the second decimal point**:

- If the money earned is **more than or equal** to the cost:

"You can go home. {earned money} money left."

- If it is not enough:

"Sorry, you cannot go home. Each will receive {share of each} money."

Sample Input and Output

Input	Output	Constraints
100 5 1.2 6	You can go home. 0.00 money left.	$100 * 5 / 100 = 5$ liters consumption of the car $5 * 1.2$ price per liter = 6 money total cost $6 - 6$ available = 0.00 money
120 5 1.2 4	Sorry, you cannot go home. Each will receive 0.80 money.	$120 * 5 / 100 = 6$ liters consumption of the car $6 l. * 1.2$ price per liter = 7.20 total cost in money $7.20 - 4 = 3.2$ less than needed Therefore, they will be distributed 4 money / 5 people = 0.80 each person
100 8 1.2 20	You can go home. 10.40 money left.	

