Problem 1 – Cake Tycoon

Young Ivancho really likes cakes, in fact he likes them so much he decided to open his own cake factory and since Ivancho's father is a big mafia boss, he apparently can do that. However there is one problem, Ivancho really hates math, so he asked his father to get him a programmer who will make a program which would calculate his expenses for him. Unluckily for you, you are that programmer, needless to say Ivancho's father made you an offer you can't refuse, so you better make sure the program works.

Since Ivancho is very whimsical he decides the **kilograms of flour needed to make a cake** and the **number of cakes** he wants, every day**.** First thing Ivancho needs for his cakes is flour, however it turns out there is only one provider of flour in the city and he can only deliver a specific amount of **kilograms of flour** per day, luckily though he's a friend of Ivancho's father so Ivancho **doesn't have to pay for the flour**. The second thing Ivancho likes the most after cakes is truffles, so Ivancho decided he wants all his cakes to have truffles in them, as much truffles as he can buy, which he will then **divide evenly amongst all cakes he can make that day**, but since truffles are so rare the **amount of truffles** available and the **price for a truffle** changes each day. Lastly Ivancho has to make a profit, so he decided that the price at which he will sell one cake will be equal to the price of the ingredients for one cake **increased by 25%.**

Your task is to write a program to **calculate** the amount of cakes that Ivancho can make that day and the price for one cake. You'll be given some **numbers**. The **number of cakes** Ivancho wants that day, the **kilograms of flour needed to make one cake**, the **kilograms of flour** which the provider can give you, the **amount of truffles** you can buy and the **price for each truffle**. If Ivancho has enough flour to make the amount of cakes he wants, he will make **exactly that amount**, the leftover flour will be **discarded** and you should print on the console "**All products available, price of a cake: {price of one cake}**". Alternatively if there is not enough flour you should **round down** the **number of cakes that can be produced** to a whole number (since Ivancho only wants whole cakes) and print them on the console in the format "**Can make only {number of cakes that can be produced} cakes, need {kilograms of flour needed} kg more flour"** where **kilograms of flour needed** is the difference between the kilograms of flour required to make the amount of cakes Ivancho wanted and the kilograms of flour available.

Input

The input data should be read from the console. It consists of five input values, each at a separate line:

- The number **n** – amount of cakes Ivancho wants.

- The number **c** – kilograms of flour needed to make one cake.

- The number **f** – kilograms of flour available.

- The number **t** – amount of truffles available.

- The number **p** – price of one truffle.

The input data will always be valid and in the format described. There is no need to check it explicitly.

Output

The output should be printed on the console.

- **If there isn't enough flour to make the amount of cakes Ivancho wants print on the console:**
  - "Can make only {number of cakes that can be produced} cakes, need {kilograms of flour needed} kg more flour"
- **If there is enough flour:**
  - "All products available, price of a cake: {price of one cake}"

- The number of cakes that can be produced must be a whole number; the price of the cake and the kilograms of flour needed must be rounded to two digits after the decimal point.

Constraints

- The number **n** will be a valid integer **in the range [1 … 18 446 744 073 709 551 615]**
- The number **c** will be a floating-point numbers **in the range [0 … 7.9 x 10^{28}].**
- The numbers **f, t** and **p** will be valid integers **in the range [0 ... 4 294 967 295]**.
- Allowed working time for your program: 0.25 seconds.
- Allowed memory: 16 MB.

Examples

Input	Output	Comments
123 1.2 150 15 2000	All products available, price of a cake: 304.88	Kilograms -> 150 / 1.2 kg/cake = **125 cakes** 125 > 123 => Truffles cost = 15(truffles) * 2000(truffle price) = **30000** Cake price = (**30000 / 123) * 1.25** = 304.88

Input	Output	Comments
20000 0.54321 1000 2436 57732	Can make only 1840 cakes, need 9864.20 kg more flour	Kilograms -> 1000 / 0.54321 kg/cake = **1840.9086 cakes** **1840 < 20000 => 1840** Since the cakes are less than the required amount we round the number down and get **1840 cakes** Total flour required for all cakes = 20000 * 0.54321 kg/cake = **10864.2 kg** Kilograms needed = 10864.2 – 1000 = **9864.20 kg**

Input	Output
4455 1.223446335689 5654 445999 5778829	All products available, price of a cake: 723162725.92