Problem 1 - Guinea Pig

Problem for exam preparation for the Programming Fundamentals Course @SoftUni.

Submit your solutions in the SoftUni judge system at https://judge.softuni.org/Contests/Practice/Index/2031#0.

Merry has a guinea pig named Puppy, that she loves very much. Every month she goes to the nearest pet store and buys him everything he needs – food, hay, and cover.

On the **first three lines**, you will receive **the quantity of food**, **hay**, and **cover**, which Merry buys for a **month (30 days)**. On the **fourth line**, you will receive the **guinea pig's weight**.

Every day Puppy eats **300 gr of food**. **Every second** day Merry **first feeds the pet**, then gives it a **certain amount of hay equal to 5%** of the rest of the **food**. On **every third** day, Merry puts Puppy **cover** with **a quantity of 1/3** of its **weight**.

Calculate whether the quantity of **food, hay, and cover**, will be enough for a **month**.

If Merry runs out of food, hay, or cover, stop the program!

Input

- **On the first line – quantity food in kilograms** - a floating-point number in the range **[0.0 – 10000.0]**
- **On the second line – quantity hay in kilograms** - a floating-point number in the range **[0.0 – 10000.0]**
- **On the third line – quantity cover in kilograms** - a floating-point number in the range **[0.0 – 10000.0]**
- **On the fourth line – guinea's weight in kilograms** - a floating-point number in the range **[0.0 – 10000.0]**

Output

- If the food, the hay, and the cover are enough, print:
  - **"Everything is fine! Puppy is happy! Food: {excessFood}, Hay: {excessHay}, Cover: {excessCover}."**
- If one of the things is not enough, print:
  - **"Merry must go to the pet store!"**

The output values must be formatted to the second decimal place!

Examples

Input	Output
10 5 5.2 1	Everything is fine! Puppy is happy! Food: 1.00, Hay: 1.10, Cover: 1.87.
You receive food – **10000**, hay – **5000**, cover – **5200**, weight – **1000** (in grams). On the first day, Merry gives Puppy 300gr food – 9700gr food left. On the second day, the food left is **9400gr**, so the needed hay is **9400 * 5% = 470**, and the hay left is **4530.**	

On the third day, the cover left is **4866.67,** and the food left is **9100**, and so on.

On the last day, Merry has: food – 1.00, hay – 1.10, and cover – 1.87.

1 1.5 3 1.5	Merry must go to the pet store!
9 5 5.2 1	Merry must go to the pet store!

JS Examples

Input	Output
(["10", "5", "5.2", "1"])	Everything is fine! Puppy is happy! Food: 1.00, Hay: 1.10, Cover: 1.87
(["1", "1.5", "3", "1.5"])	Merry must go to the pet store!
(["9", "5", "5.2", "1"])	Merry must go to the pet store!

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