

# Problem K

## The Sum Equals the Product

Time Limit: 4 seconds

One day in a supermarket I witnessed the following scene. A young man put 3 items onto the conveyor belt and watched the cashier entering the numbers. He noticed that the cashier did not add the 3 prices but multiplied them! He of course was not willing to pay the final outcome which appeared on the electronic display and asked for the manager to come. In the mean time the young man took a piece of paper, wrote down the 3 prices and added them up. For some strange reason the result was precisely the same. He paid the sum (which was also the product) and left. This equality only appears with very special triplets of numbers. I remember the sum (or product) being within a certain range (between \$ 5.90 and \$ 6.10). But, what were the 3 prices?

### Input

The input contains two numbers specifying the range, separated by a space. The sum (or product) is to be within this range. Both numbers are positive ( $< 256.00$ ) and have 2 digits after the decimal point.

### Output

For each special triplet found (with the sum of the 3 prices being the same as their product) with sum (and product) within the range, the output contains one line in the format:

$$\text{sum} = a + b + c = a * b * c$$

Where a, b and c are the 3 prices in ascending order. The output lines shall start with the smallest sum (or product) within the range and also be in ascending order. In the special case of multiple solutions for one and the same sum (or product), the first line shall be the one containing the smallest price (a).

All numbers (sum, a, b, c) are printed with 2 digits after the decimal point.

### Sample Input

### Output for Sample Input

5.70 6.10	5.70 = 1.25 + 1.60 + 2.85 = 1.25 * 1.60 * 2.85
	5.85 = 1.00 + 2.25 + 2.60 = 1.00 * 2.25 * 2.60
	5.88 = 0.98 + 2.40 + 2.50 = 0.98 * 2.40 * 2.50
	6.00 = 1.00 + 2.00 + 3.00 = 1.00 * 2.00 * 3.00

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(Problem-setter: Eric Schmidt, Former student of Technical University of Vienna, Now working at BOSCH)

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