Problem 163: Leak Loss

Difficulty: Easy

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Problem Background

Your family has an above-ground pool which you'd drained before the winter so it wouldn't freeze over and get damaged. Summer is approaching, and your parents have asked you to use the garden hose to fill it back up again. The pool is filling a lot more slowly than usual, but eventually you get it filled up. When you go to pull the hose back out of the pool, you notice that the drain valve is still open, and spewing water everywhere! You're able to close the valve, but how much water have you just wasted?

Problem Description

You'll need to calculate how much water spilled out of the pool while it was being filled. Since the pool did get filled eventually, you know that the amount of water going into the pool was greater than the amount leaking out of it. As a result, you can use this formula to determine the amount lost:

$$\frac{Volume\ of\ Pool}{(Rate\ of\ Fill - Rate\ of\ Leak)} * Rate\ of\ Leak = Volume\ of\ Waste$$

Sample Input

The first line of your program's input, received from the standard input channel, will contain a positive integer representing the number of test cases. Each test case will include a single line containing three positive decimal numbers, separated by spaces:

- The volume of the pool, in liters
- The rate at which water was entering the pool, in liters per minute
- The rate at which water was leaving the pool, in liters per minute

```
2
700 10 3
2000 100 20
```

Sample Output

For each test case, your program must print the amount of water that leaked out of the pool while it was being filled, rounded to the nearest liter.

```
300
500
```