

Problem 187: What Is the Operation?

Difficulty: Easy

Author: Chuck Nguyen, Rockville, Maryland, United States

Originally Published: Code Quest Community College Outreach 2022

Problem Background

Have you ever wondered how a number came about? Here's your chance to solve the mystery.

Problem Description

Given a set of three numbers, your team must write a program that can determine the arithmetic operation required for the first two numbers to produce the third number. For example, given the numbers 7, 3, and 4 (in that order) the correct operation is subtraction; $7 - 3 = 4$.

Possible operations may include:

- Addition (+)
- Subtraction (-)
- Multiplication (*)
- Division (/) (integer division, discarding any remainders)
- Modulo (%) (the remainder left after performing integer division)

In the event multiple operations could yield the third number (for example, $2 + 2 = 4$ and $2 * 2 = 4$), use the operation listed first on the list above.

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 non-negative integers, separated by spaces.

```
2
7 3 4
2 2 4
```

Sample Output

For each test case, your program must print a single line containing one of the words, "Addition," "Subtraction," "Multiplication," "Division," or "Modulo," indicating the operation to use with the first two input numbers to produce the third input number.

Subtraction
Addition