

# Challenge: Write your First Higher-Order Function

Test yourself and implement what you have learned so far in this challenge.

## We'll cover the following



- Problem Statement
  - Input
  - Output
  - Sample Input
  - Sample Output
  - Test Yourself

## Problem Statement #

You need to create a higher-order function, `arithmeticCalculator`, which returns the result of an arithmetic function that has two parameters of type `int` and returns a value of type `num`.

In this challenge, you will assume that the following arithmetic functions have been declared:

```
num add(int a, int b) {  
    return a + b;  
}  
  
num subtract(int a, int b) {  
    return a - b;  
}  
  
num multiply(int a, int b) {  
    return a * b;  
}  
  
num divide(int a, int b) {  
    return a / b;  
}
```

For instance, the `arithmeticPrinter` will take the `add` function as input and return its result.

## Input #

`arithmeticPrinter` has three parameters.

1. A function, `f`
2. An integer, `x`
3. An integer, `y`

The input will be a function and two integers that will be passed to the function.

## Output #

The output will be the result of the arithmetic function.

## Sample Input #

```
add, 4, 9
```

## Sample Output #

```
13
```

## Test Yourself #

Write your code in the given area. Try the exercise by yourself first, but if you get stuck, the solution has been provided. Good luck!

```
num arithmeticCalculator(Function f, int x, int y){  
    // Write your code here  
  
    return -1; // Remove this line after writing your code  
}
```



Let's go over the solution review in the next lesson.

