

Challenge - Slope Calculator

The object of this challenge is to create functions that can accept arguments and return values.

Mild 🌶️

Create a function for calculating slope with the following inputs and output:

Function	Input	Output
Calculate <code>m</code> (slope)	<code>Δx</code> <code>Δy</code>	<code>m</code> (slope)

Then create a program that satisfies the following requirements:

- The user provides input.
- The program uses your function to calculate slope.
- The program outputs a message displaying the calculated slope of the line.

Medium 🌶️🌶️

Create the following 3 functions for calculating slope with the following inputs and outputs:

Function	Input	Output
Calculate <code>m</code> (slope)	<code>Δx</code> <code>Δy</code>	<code>m</code> (slope)
Calculate <code>Δx</code>	<code>m</code> (slope) <code>Δy</code>	<code>Δx</code>
Calculate <code>Δy</code>	<code>Δx</code> <code>m</code> (slope)	<code>Δy</code>

Then create a program that satisfies the following requirements:

- For each function you created:
 - The user provides input.
 - The program uses your function to calculate slope.
 - The program outputs a message displaying the calculated value and what the value is (*for example, the change in x*).

Spicy 🌶️🌶️🌶️

Create a function for calculating the y-intercept of a slope:

Function	Input	Output
Calculate <code>b</code> (y-intercept)	<code>x</code> <code>y</code> <code>m</code> (slope)	<code>b</code> (y-intercept)

For your function create 3 tests using `pytest`:

- The function must have at least one test that `asserts` that 2 values are equal.
- The function must have at least one test that `asserts` that 2 values are not equal.

Then create a program that satisfies the following requirements:

- The user provides input.
- The program uses your function to calculate the y-intercept of the slope.
- The program outputs a message displaying the y-intercept of the slope.