

# 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 $m$ (slope)	$\Delta x$ $\Delta y$	$m$ (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 $m$ (slope)	$\Delta x$ $\Delta y$	$m$ (slope)
Calculate $\Delta x$	$m$ (slope) $\Delta y$	$\Delta x$
Calculate $\Delta y$	$\Delta x$ $m$ (slope)	$\Delta y$

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 $b$ (y-intercept)	$x$ $y$ $m$ (slope)	$b$ (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.