

Assignment 1

SHOW ALL CODE FOR YOUR ANSWER. USE WHAT WE LEARNED ABOUT DECLARING VARIABLES IN LESSON 1 & THE LAST CLASS TO DO THIS ASSIGNMENT.

Using the following points (0,1) (2,4)

1. Using Mathematica show the slope formula?

The slope m of the line through the points (x_1, y_1) and (x_2, y_2) is given by

$$m = \frac{y_2 - y_1}{x_2 - x_1} \quad (x_1 \neq x_2)$$

2. Using Mathematica show the distance formula?

$$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

3. Using Mathematica show the midpoint formula?

$$\left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$$

4. Using the answer in question 1 for slope and one of the points provided above find the y-intercept of the equation $y=mx+b$

After finding the linear equation graph it in Mathematica?