Assignment 2

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vector

***Abstract*—This assignment deals with basic linear form.**

Download all python codes from

https://github.com/stanzinyangdol/Assignment2–EE5600

and latex codes from

https://www.overleaf.com/project/614345a6bf02a0749cba133f

Problem

Vector-2, Example-5, Question-3

Find the equation to the straight line cutting off an intercept -5 from the axis of Y and being equally inclined to the axis.

Solution:

From the given information we have, y intercept b =-5 and is being equally inclined to the axis , so x intercept a = 5 The Equation of a straight line is

$$\begin{pmatrix} x \\ a \end{pmatrix} + \begin{pmatrix} y \\ b \end{pmatrix} = \mathbf{1} \tag{0.0.1}$$

$$\begin{pmatrix} x \\ 5 \end{pmatrix} + \begin{pmatrix} y \\ -5 \end{pmatrix} = \mathbf{1} \tag{0.0.2}$$

$$\implies \big((x + y) = 5\big) \tag{0.0.3}$$

Therefore the required equation of a straight line is:

$$\implies \big(y = (x - 5)\big) \tag{0.0.4}$$

We get the required equation of the straight line to plot of the line

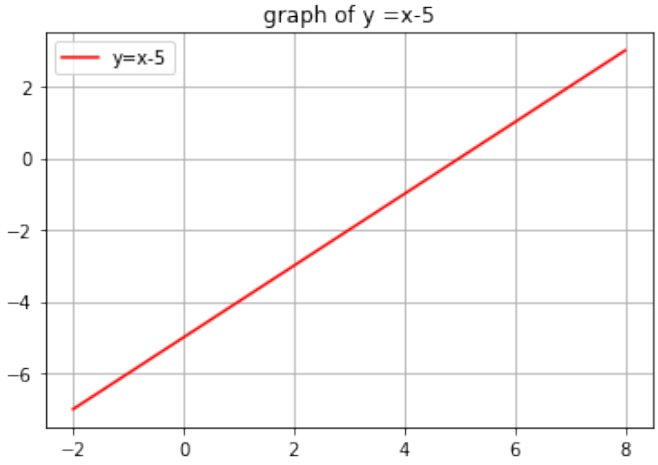

Fig. 0: Plot obtained from python code