

Assignment No.1

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Download all python codes from

<https://github.com/Ganeshyadav712/AI-ML>

and latex-tikz codes from

<https://github.com/Ganeshyadav712/AI-ML/tree/main/Assignment%201>

$$4x = 8$$

$$x = 2$$

The coordinates are

$$\mathbf{x} = \begin{pmatrix} 0 \\ 2 \end{pmatrix}$$

$$\mathbf{y} = \begin{pmatrix} -8 \\ 0 \end{pmatrix}$$

1 QUESTION No.11

Draw the graphs of the equations:

$$4x - y - 8 = 0$$

and

$$2x - 3y + 6 = 0$$

Also determine the vertices of the triangle formed by the lines and the x -axis.

Solution:

Given equations are

$$4x - y - 8 = 0$$

and

$$2x - 3y + 6 = 0$$

Consider the equation of line

$$4x - y - 8 = 0$$

If $x = 0$

$$4(0) - y - 8 = 0$$

$$0 - y - 8 = 0$$

$$y = -8$$

If $y = 0$

$$4x - 0 - 8 = 0$$

Consider the equation of line

$$2x - 3y + 6 = 0$$

If $x = 0$

$$2(0) - 3y + 6 = 0$$

$$3y = 6$$

$$y = 2$$

If $y = 0$

$$2x - 3(0) + 6 = 0$$

$$2x = -6$$

$$x = -3$$

The coordinates are

$$\mathbf{x} = \begin{pmatrix} 0 \\ -3 \end{pmatrix}$$

$$\mathbf{y} = \begin{pmatrix} 2 \\ 0 \end{pmatrix}$$