

# ASSIGNMENT 1

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We know that normal form of the equation of a line is given as

$$\mathbf{n}(\mathbf{x} - \mathbf{p}) = 0 \quad (1)$$

where  $\mathbf{n}$  is the normal vector of line and  $\mathbf{p}$  is the point on line

From the previous question

$$\mathbf{n} = \begin{pmatrix} 1 \\ -11 \end{pmatrix} \quad (2)$$

$$\mathbf{p} = \mathbf{A} \quad (3)$$

$$= \begin{pmatrix} 1 \\ -1 \end{pmatrix} \quad (4)$$

Hence the equation of  $\mathbf{AD}_1$  is given as

$$\Rightarrow \begin{pmatrix} 1 \\ -11 \end{pmatrix} (\mathbf{x} - \begin{pmatrix} 1 \\ -1 \end{pmatrix}) = 0 \quad (5)$$

$$\Rightarrow \begin{pmatrix} 1 \\ -11 \end{pmatrix} \mathbf{x} - 12 = 0 \quad (6)$$