ASSIGNMENT 1

EE22BTECH11050 - Snehil Singh

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

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

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

$$\mathbf{n} = \begin{pmatrix} 1 \\ -11 \end{pmatrix} \tag{2}$$

$$\mathbf{p} = \mathbf{A} \tag{3}$$

$$= \begin{pmatrix} 1 \\ -1 \end{pmatrix} \tag{4}$$

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

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

$$\implies \begin{pmatrix} 1 \\ -11 \end{pmatrix} \mathbf{x} - 12 = 0 \tag{6}$$