

1.11.4

AI25BTECH11002 - Ayush Sunil Labhade

Question:

A vector of magnitude 9 units in the direction of the vector $-2\hat{i} - \hat{j} + 2\hat{k}$

Solution: The vector with magnitude 9 in the same direction would be:

$$\|c(-2 - 12)^T\| = 9 \quad (1)$$

$$\therefore |c| = 3 \quad (2)$$

Thus, the vector is:

$$\begin{pmatrix} -6 \\ -3 \\ 6 \end{pmatrix} \quad (3)$$

Graph:

