

1.1.2.2

EE24BTECH11024 - G. Abhimanyu Koushik

Question:

Find the values of x, y, z so that the vectors $x\hat{i} + 2\hat{j} + z\hat{k}$ and $2\hat{i} + y\hat{j} + \hat{k}$ are equal

Solution:

Variable	Description
\mathbf{v}_1	$x\hat{i} + 2\hat{j} + z\hat{k}$
\mathbf{v}_2	$2\hat{i} + y\hat{j} + \hat{k}$

TABLE 0: Variables Used

$$\begin{pmatrix} x \\ 2 \\ z \end{pmatrix} = \begin{pmatrix} 2 \\ y \\ 1 \end{pmatrix} \quad (0.1)$$

$$x = 2 \quad (0.2)$$

$$y = 2 \quad (0.3)$$

$$z = 1 \quad (0.4)$$

The values of x, y, z are 2, 2, 1 respectively.

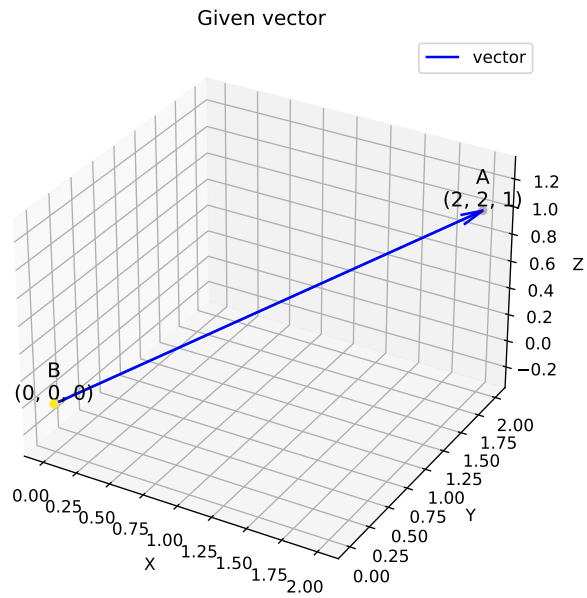


Fig. 0.1: Line segment represent the vector