1.1.2.13

AI24BTECH11020 - RISHIKA KOTHA

Question: The fourth vertex **D** of a parallelogram ABCD whose three vertices are **A**$(-2, 3)$, **B**$(6, 7)$ and **C**$(8, 3)$ is

Solution:

Vertices	Values
A	$(2, 3)$
B	$(6, 7)$
C	$(8, 3)$

TABLE 0: Vertices

we know that, in a parallelogram,

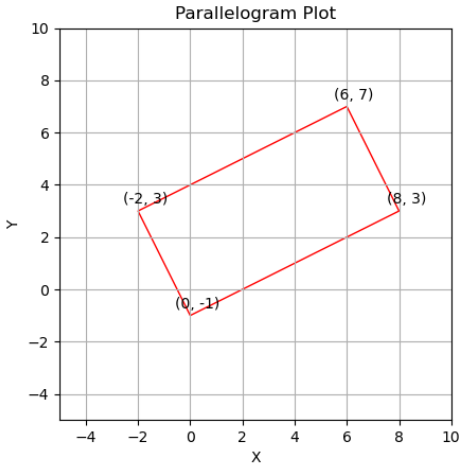
$$D = A + C - B \tag{0.1}$$

$$D = \begin{pmatrix} -2 + 8 - 6 \\ 3 + 3 - 7 \end{pmatrix} \tag{0.2}$$

$$D = \begin{pmatrix} 0 \\ -1 \end{pmatrix} \tag{0.3}$$

$$\tag{0.4}$$

D=$\begin{pmatrix} -2 + 8 - 6 \\ 3 + 3 - 7 \end{pmatrix}$



$\Longrightarrow$ to find the vertex D of the parallelogram: D=$\left(0,-1\right)$