

1-1.2-28

EE24BTECH11036 - Krishna Patil

Question :-

In which quadrant or on which axis do each of the points $(-2, 4)$, $(3, -1)$, $(-1, 0)$, $(1, 2)$ and $(-3, -5)$ lie ? Verify your answer by locating them on the Cartesian plane.

Solution:

| Sign of X coordinate | Sign of Y coordinate | Quadrant or Axis |
|----------------------|----------------------|------------------|
| + | + | Q_1 |
| - | + | Q_2 |
| - | - | Q_3 |
| + | - | Q_4 |
| any | 0 | x-axis |
| 0 | any | y-axis |

TABLE 0: Quadrant Decoder

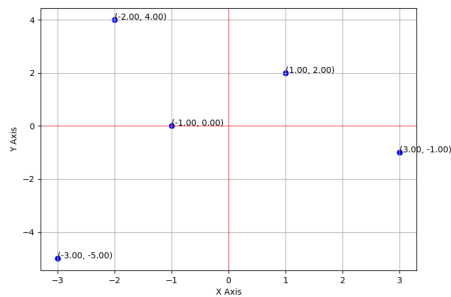


Fig. 0.1: X-Y plot

So , By Fig. 0.1 ,the table 0 gives the answers.

| Point | Vector | Quadrant or Axis |
|-------|--|------------------|
| A | $\begin{pmatrix} -2 \\ 4 \end{pmatrix}$ | Q_2 |
| B | $\begin{pmatrix} 3 \\ -1 \end{pmatrix}$ | Q_4 |
| C | $\begin{pmatrix} -1 \\ 0 \end{pmatrix}$ | x-axis |
| D | $\begin{pmatrix} 1 \\ 2 \end{pmatrix}$ | Q_1 |
| E | $\begin{pmatrix} -3 \\ -5 \end{pmatrix}$ | Q_3 |

TABLE 0: Answers