Exercise 3.3

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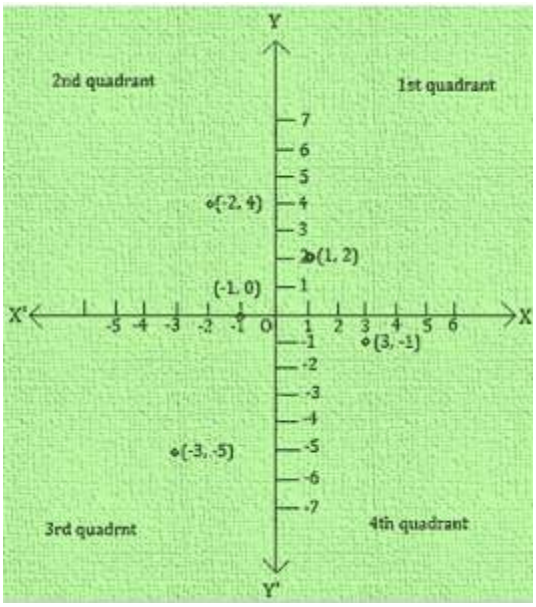
1. In which quadrant or on which axis do each of the points (– 2, 4), (3, – 1), (– 1, 0), (1, 2) and (– 3, – 5) lie? Verify your answer by locating them on the Cartesian plane.

Solution:



- (– 2, 4): Second Quadrant (II-Quadrant)
- (3, – 1): Fourth Quadrant (IV-Quadrant)
- (– 1, 0): Negative x-axis
- (1, 2): First Quadrant (I-Quadrant)
- (– 3, – 5): Third Quadrant(III-Quadrant)

2. Plot the points (x, y) given in the following table on the plane, choosing suitable units of distance on the axes.

x	**-2**	**-1**	**0**	**1**	**3**
y	**8**	**7**	**-1.25**	**3**	**-1**

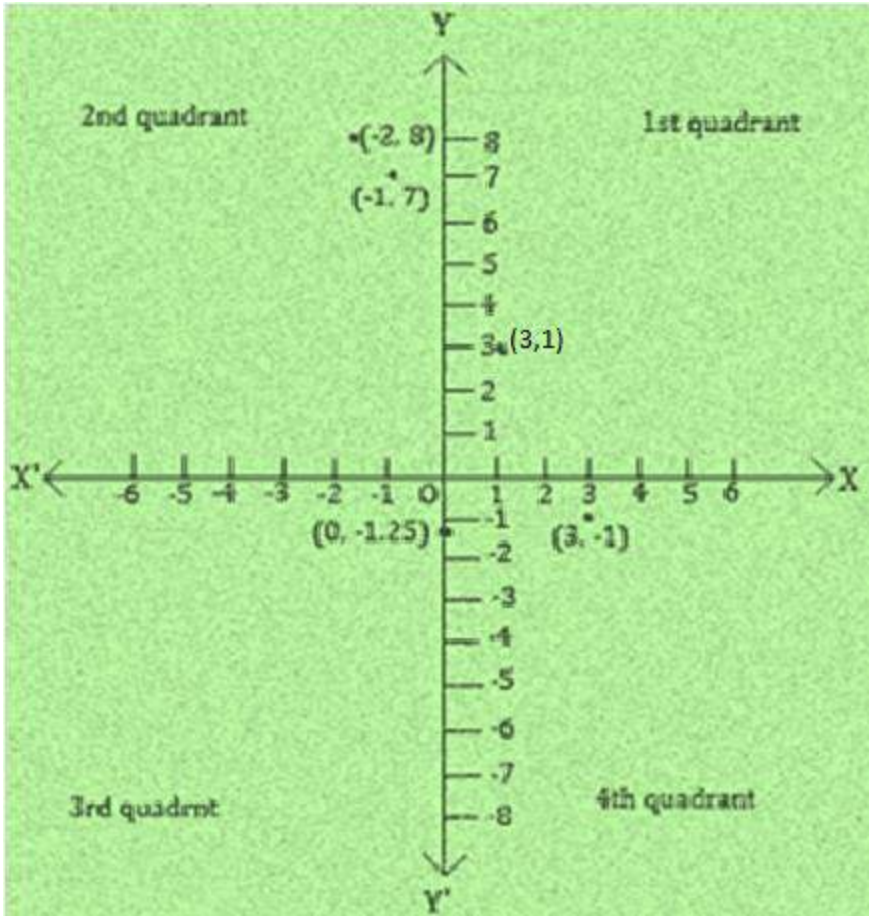
Solution:

The points to plotted on the (x, y) are:

- (-2, 8)
- (-1, 7)
- (0, -1.25)
- (1, 3)
- (3, -1)

On the graph mark X-axis and Y-axis. Mark the meeting point as O.

Now, Let 1 unit = 1 cm



- (-2, 8): II- Quadrant, Meeting point of the imaginary lines that starts from 2 units to the left of origin O and from 8 units above the origin O
- (-1, 7): II- Quadrant, Meeting point of the imaginary lines that starts from 1 units to the left of origin O and from 7 units above the origin O
- (0, -1.25): On the x-axis, 1.25 units to the left of origin O
- (1, 3): I- Quadrant, Meeting point of the imaginary lines that starts from 1 units to the right of origin O and from 3 units above the origin O
- (3, -1): IV- Quadrant, Meeting point of the imaginary lines that starts from 3 units to the right of origin O and from 1 units below the origin O