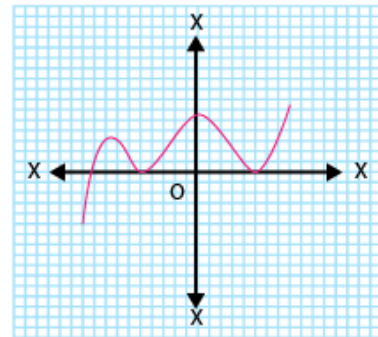
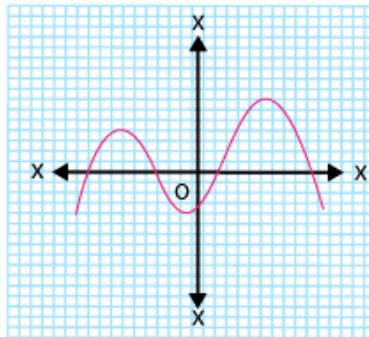
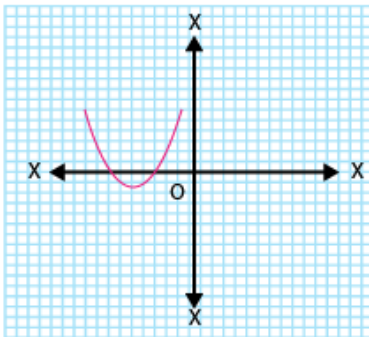
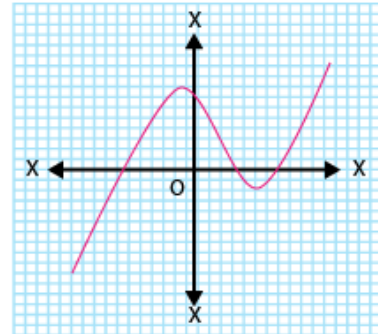
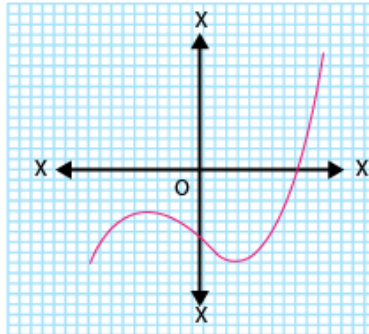
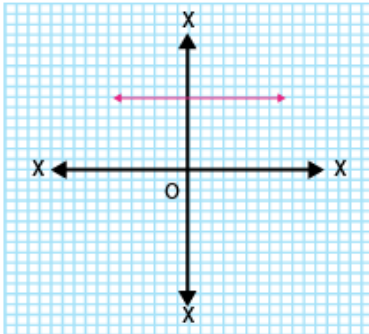


EXERCISE 2.1

1. The graphs of $y = p(x)$ are given in Fig. 2.10 below, for some polynomials $p(x)$. Find the number of zeroes of $p(x)$, in each case.



Solutions:

Graphical method to find zeroes:-

Total number of zeroes in any polynomial equation = total number of times the curve intersects x-axis.

- (i) In the given graph, the number of zeroes of $p(x)$ is 0 because the graph is parallel to x-axis does not cut it at any point.
- (ii) In the given graph, the number of zeroes of $p(x)$ is 1 because the graph intersects the x-axis at only one point.
- (iii) In the given graph, the number of zeroes of $p(x)$ is 3 because the graph intersects the x-axis at any three points.
- (iv) In the given graph, the number of zeroes of $p(x)$ is 2 because the graph intersects the x-axis at two points.
- (v) In the given graph, the number of zeroes of $p(x)$ is 4 because the graph intersects the x-axis at four points.
- (vi) In the given graph, the number of zeroes of $p(x)$ is 3 because the graph intersects the x-axis at three points.