

Chapter - 7

Coordinate Geometry

(Assertion and Reasoning Questions)

In the following questions, a statement of assertion (A) is followed by a statement of reason (R). Mark the correct choice as:

- (a) Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A).
- (b) Both assertion (A) and reason (R) are true but reason (R) is not the correct explanation of assertion (A).
- (c) Assertion (A) is true but reason (R) is false.
- (d) Assertion (A) is false but reason (R) is true.

Q.1. Assertion (A) : The point $(-1, 6)$ divides the line segment joining the points $(-3, 10)$ and $(6, -8)$ in the ratio $2 : 7$ internally.

Reason (R) : Given three points, i.e. A, B, C form an equilateral triangle, then $AB = BC = AC$.

Q.2. Assertion (A) : The point $(0, 4)$ lies on y-axis.

Reason (R) : The x-coordinate on the point on y-axis is zero.

Q.3. Assertion (A) : The value of y is 6, for which the distance between the points $P(2, -3)$ and $Q(10, y)$ is 10.

Reason (R) : Distance between two given points A (x_1, y_1) and B (x_2, y_2) is given by

$$AB = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

Q.4. Assertion (A) : Mid-point of a line segment divides line in the ratio $1 : 1$.

Reason (R) : The ratio in which the point $(-3, k)$ divides the line segment joining the points $(-5, 4)$ and $(-2, 3)$ is $1 : 2$.

-X-X-X-

ANSWER KEY

Q.1 : (b)

Q.2 : (a)

Q.3 : (d)

Q.4 : (c)