CHAPTER-7
COORDINATE GEOMETRY

EXERCISE - 7.2

State whether the following statements are true false. Justify your answer

1. $\triangle\mathbf{ABC}$ with vertices $\mathbf{A}(-2,0), \mathbf{B}(2,0)$ and $\mathbf{C}(0,2)$ is similar to $\triangle\mathbf{DEF}$ with vertices $\mathbf{D}(-4,0), \mathbf{E}(4,0)$ and $\mathbf{F}(0,4)$
2. Point $(-4,2)$ lies on the line segment joining the points $\mathbf{A}(-4,6)$ and $\mathbf{B}(-4,-6)$
3. The points $(0,5), (0,-9)$ and $(3,6)$ are collinear
4. Point $\mathbf{P}(0,2)$ is the point of intersection of y-axis and perpendicular bisector of line segment joining the points $\mathbf{A}(-1,1)$ and $\mathbf{B}(3,3)$
5. Points $\mathbf{A}(3,1), \mathbf{B}(12,-2)$ and $\mathbf{C}(0,2)$ cannot be the vertices of a triangle
6. Points $\mathbf{A}(4,3), \mathbf{B}(6,4), c(5,-6)$ and $\mathbf{D}(-3,5)$ are the vertices of a parallelogram
7. A circie has its centre at the origin and a point $\mathbf{P}(5,0)$ lies on it The point $\mathbf{Q}(6,8)$ lies outside the circle
8. The point $\mathbf{A}(2,7)$ lies on the perpendicular bisector of line segment joining the points $\mathbf{P}(6,5)$ and $\mathbf{Q}(0,-4)$
9. Point $\mathbf{P}(5,-3)$ is one of the two points of trisection of line segment joining the points $\mathbf{A}(7,-2)$ and $\mathbf{B}(1,-5)$
10. Points $\mathbf{A}(-6,10), \mathbf{B}(-4,6)$ and $\mathbf{C}(3,-8)$ are collinear such that $\mathbf{AB} = \frac{2}{9}\mathbf{AC}$
11. The point $\mathbf{P}(-2,4)$lies on circie of radius 6 and center $\mathbf{C}(3,5)$
12. The points $\mathbf{A}(-1,-2), \mathbf{B}(4,3), \mathbf{C}(2,5)$ and $\mathbf{D}(-3,0)$ in that order a rectangle