Exercise Questions for Module-1

1. Find the point on the x-axis which is equidistance from the points (7,6) and (3,4).

2. Draw the quadrilateral in the Cartesian plane, whose vertices are (-4,5),(0,7), (5,-5) and (-4,-2). Also find its area.

3. Find the angle between the line joining the points (-1,2),(3,-5) and (-2,3),(5,0).

4. If the angle between two lines is $\frac{\pi}{4}$, and the slope of one of the line is $\frac{1}{2}$,find the slope of the other line.

5. Line through the points (-2,6) and (4,8) is perpendicular to the line through the points (8,12) and (x,24). Find the value of x.

6. Using slopes, show that the following points A(6,-1),B(5,0) and C(2,3) are collinear.

7. If the points A(0,6),B(2,1) and C(7,3) are three corners of a square ABCD, find
    (i)   The slope of the diagonal BD
    (ii)   The coordinate of the fourth point D.

8. Without using Pythagoras theorem, show that the points (-2,2),(8,2) and (-4,-3)are the vertices of the right angled triangle.

9. Using slopes, find the value of x for which the points (x,-1),(2,1)and (4,5) are collinear.

10. The slope of a line is double of the slope of the other line. If the tangent of the angle between them is $\frac{1}{3}$, find the slope of the lines.