

Mock Test-ICSE  
Co-ordinate Geometry-Straight Line

Full Marks-45

Time: 1hr-30mins

1. Find the co-ordinates of the point of intersection of the lines  $x = a$  and  $x = b$ . Draw a rough diagram assuming that  $a$  and  $b$  are positive. [4]
2. Find a relation between  $x$  and  $y$ , if the points  $(x, y)$ ,  $(1, 2)$  &  $(7, 0)$  are collinear. [4]
3. Find the equation of the straight line passing through the intersection of  $y = 3x - 1$  and  $x - 2y + 3 = 0$ , and parallel to  $3x - 2y + 7 = 0$ . [4]
4. Show that the four straight lines  $x + 2y - 1 = 0$ ,  $x + 2y + 5 = 0$ ,  $2x + y + 1 = 0$  &  $2x + y + 7 = 0$  form a rhombus. [6]
5. Find the equation of the perpendicular bisector of  $(-1, 3)$  &  $(4, 6)$ . Find the same for the points  $(k, 0)$  &  $(-k, 0)$ . [6]
6. Find the equation of the median of the  $\triangle ABC$ , where  $A = (3, 4)$ ,  $B = (-3, -4)$  &  $C = (2, -1)$ . [4]
7. If the point  $(3, k)$  lies on the line  $x + y + 1 = 0$ , find the value of  $k$ . [2]
8. Find the co-ordinates of the middle point of the portion of the straight line  $2x + y = 4$  intercepted between the axes. Also find the equation of a line passing through the above point and origin. [6]
9. Find the  $x$ -axis and  $y$ -axis intercept of the line  $1.5x - 3.2y - 7 = 0$  [4]
10. Find the equation of a line whose angle of inclination is 3 times of half-right Angle and passing through  $(\pi, -\pi)$  [5]

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Best of luck!

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