

1. If two lines are perpendicular to one another then the relation between their slopes m_1 and m_2 is:
 - (a) $m_1 = m_2$
 - (b) $m_1 = \frac{1}{m_2}$
 - (c) $m_1 = -m_2$
 - (d) $m_1 \times m_2 = -1$
2. The coordinates of the point $P(-3, 5)$ on reflecting on the x -axis are:
 - (a) $(3, 5)$
 - (b) $(-3, -5)$
 - (c) $(3, -5)$
 - (d) $(-3, 5)$
3. $A(1, 4)$, $B(4, 1)$ and $C(x, 4)$ are the vertices of $\triangle ABC$. If the centroid of the triangle is $G(4, 3)$ then x is equal to:
 - (a) 2
 - (b) 1
 - (c) 7
 - (d) 4
4. Find ' a ', if $A(2a + 2, 3)$, $B(7, 4)$ and $C(2a + 5, 2)$ are collinear.
5. Find a point P which divides internally the line segment joining the points $A(-3, 9)$ and $B(1, -3)$ in the ratio $1 : 3$.
6. Use a graph paper for this question. Take $2cm = 1$ unit along both the axes
 - (a) Plot the points $A(0, 4)$, $B(2, 2)$, $C(5, 2)$ and $D(4, 0)$. $E(0, 0)$ is the origin.
 - (b) Reflect B, C, D on the y -axis and name them as B', C', D' respectively.
 - (c) Join the points $ABCD D' C' B'$ and A in order and give a geometrical name to the closed figure.
7. Find the equation of a line parallel to the line $2x + y - 7 = 0$ and passing through the intersection of the lines $x + y - 4 = 0$ and $2x - y = 8$.
8. Line AB is perpendicular to CD . Coordinates of B, C and D are respectively $(4, 0)$, $(0, -1)$ and $(4, 3)$. Find:
 - (a) Slope of CD
 - (b) Equation of AB

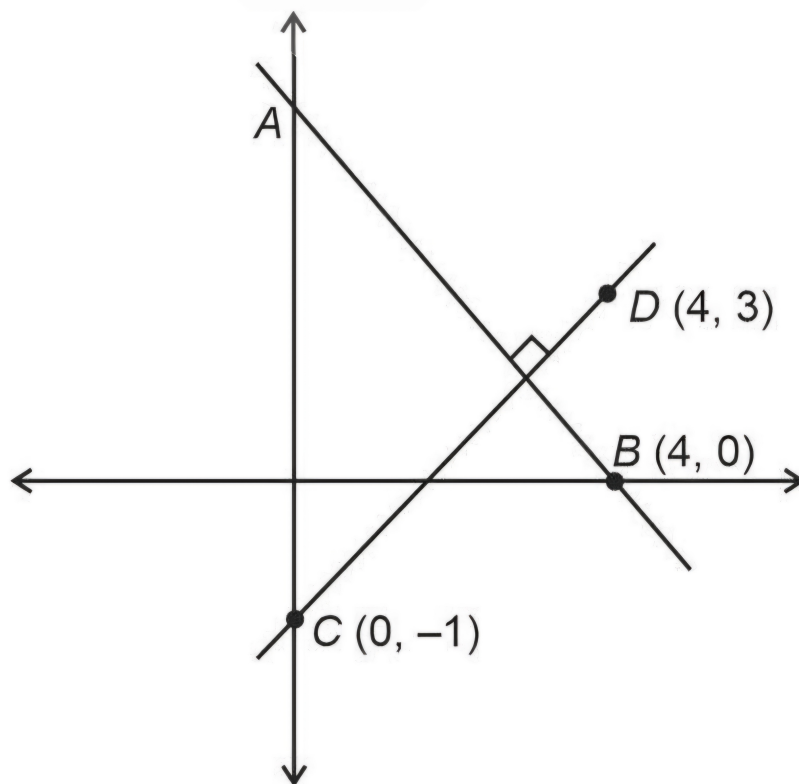


Figure 1: