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IG-0607
International Maths

Co-ordinate Geometry
Paper-2 - Exercise

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Co-ordinate Geometry

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Q1. Point A has co-ordinates (2, 12). Point B has co-ordinates (4, 2). Find the co-ordinates of the mid point of AB. S-18/22/Q8 ---[2]

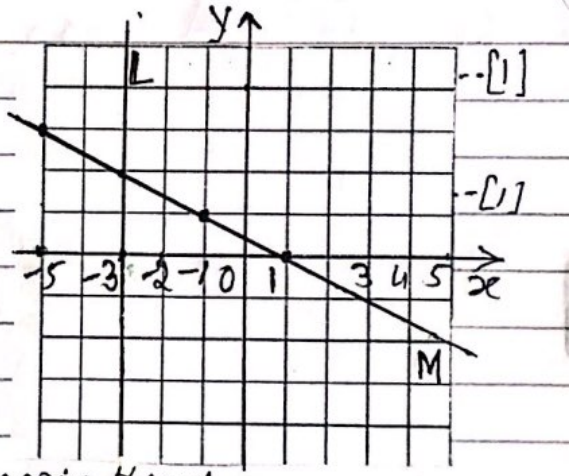
Q2. Point A has coordinates (2, 3). Point B has Co-ordinates (4, 11). Find the equation of the line AB. Give your answer in the form $y = mx + c$. S-18/22/Q14 --[3]

Q3 (a) Write down the equation of line L. --[1]

(b) Write down the co-ordinates of the point of intersection of line L and line M. -[1]

(c) Find the gradient of line M, ---[2]

S-18/23/Q1



Q4 Find the equation of the straight line passing through, (−2, −4) and (2, 0). SP-20/02/Q16 -[3]

Q5 A is the point (3, 11) and B is the point (7, 3), Find the equation of the line AB, giving your answer in the form $y = mx + c$. S-17/21/Q11 ....[3]

Q6. A is the point (3, 6) and B is the point (−5, 10). W-17/21/Q6

(a) Work out the co-ordinates of the midpoint of AB. ---[2]

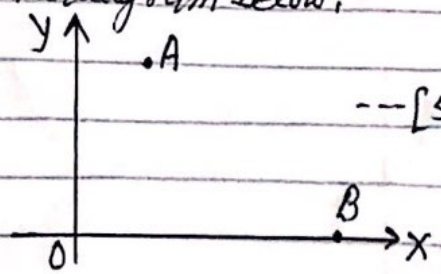
(b) Find the length of AB, giving your answer in the form $a\sqrt{5}$. --[3]

Q7. A is the point (1, 8) and B is the point (5, 0) ---[4]

Find the equation of the perpendicular bisector of AB in the form $y = mx + c$

W-17/23/Q13

Q8. The points A(3, 8) and B(9, 0) are shown on the diagram below. Find the equation of the perp. bisector of the line AB. ---[5]



W-16/22/Q11

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Q9 The point A has coordinate (2,8) and the point B has coordinate (6,6). Find the equation of the perp. bisector of the line AB. S-15/21/Q11 ---[4]

Q10. A is the point (2,8) and B is the point (6,0)

(a) Find the co-ordinates of the mid point of AB. ---[1]

(b) Find the gradient of AB. S-15/22/Q5 ---[2]

Q11. A is the point (-4,4) and B is the point (4,10). Find the equation of the perp. bisector of AB. W-15/21/Q13 ---[4]

Q12. The co-ordinates of three points are A(-2,6), B(6,2), and C(-2,-2)

(a) Find the gradient of AB, ---[1]

(b) D is the mid point of AB. S-12/22/Q12

By using gradients show that the straight lines AB and CD are not perp. ---[3]

Answers

Q1. (3,7)

Q2. $y = 4x - 5$

Q3. (a) $x = -3$

(b) $(-3, 2)$

(c) $-\frac{1}{2}$

Q4. $y = x - 2$

Q5. $y = -2x + 17$

Q6. (a) $(-1, 8)$

(b) $4\sqrt{5}$

Q7. $y = \frac{1}{2}x + \frac{5}{2}$

Q8. $4y = 3x - 2$

Q9. $y = 2x - 1$

Q10. (a) $(4, 4)$

(b) -2

Q11. $y = -\frac{4}{3}x + 7$

Q12. (a) $-\frac{1}{2}$

(b) $D(2, 4)$

$m_1 = \text{Grad of } CD = \frac{6}{4}$

$m_2 = \text{Grad of } AB = -\frac{1}{2}$

$m_1 \times m_2 = \frac{6}{4} \times -\frac{1}{2}$

$= -\frac{3}{4} \neq -1$

$\therefore$ AB and CD are not perpendicular.