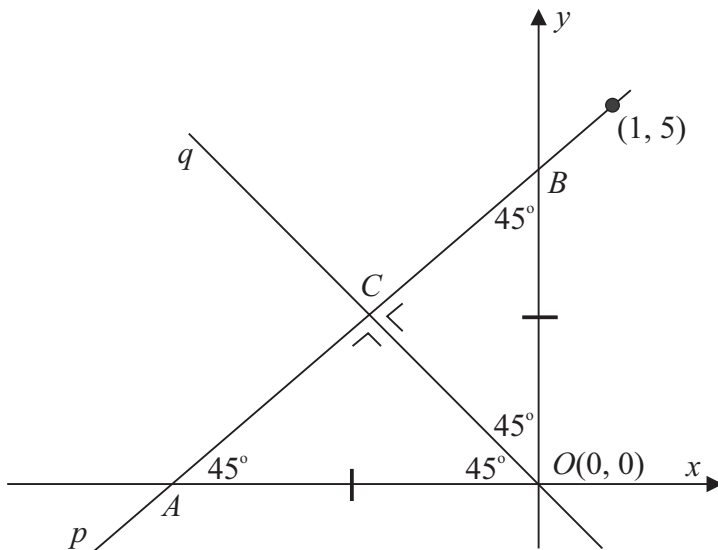


LC 2015 (SET B): PAPER 2

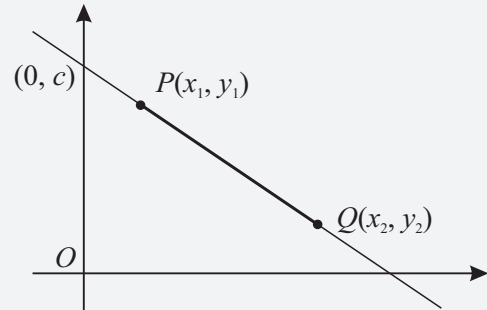
QUESTION 2 (25 MARKS)

Question 2 (a)



- (i) Slope of $p = \tan 45^\circ = 1$
 (ii) $m = 1, (x_1, y_1) = (1, 5)$
 Equation of $p: y - 5 = 1(x - 1)$
 $y - 5 = x - 1$
 $x - y + 4 = 0$

FORMULAE AND TABLES BOOK Co-ordinate geometry: Line



Slope of PQ [page 18]

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

Equation of PQ [page 18]

$$y - y_1 = m(x - x_1)$$

Finding the perpendicular slope:

$$m = \frac{a}{b} \Rightarrow m_{\perp} = -\frac{b}{a}$$

MARKING SCHEME NOTES

Question 2 (a) (i) (ii) [Scale 10C (0, 4, 9, 10)]

- 4: • Writes a correct relevant formula e.g. [Slope or equation of line]
 • Identifies slope and stops
 9: • One incorrect or omitted substitution into equation of line formula e.g. [$y - 5 = \#(x - 1)$]

Question 2 (b)

$m = -1, (x_1, y_1) = O(0, 0)$
 Equation of $q: y - 0 = -1(x - 0) \leftarrow$ Multiply out the bracket.
 $y = -x \leftarrow$ Bring all terms to the left-hand side.
 $x + y = 0$

MARKING SCHEME NOTES

Question 2 (b) [Scale 10B (0, 4, 10)]

- 4: • Writes equation of line formula.
 • Indicates $m_1 \times m_2 = -1$

Question 2 (c)

Triangles OCA and OBC are congruent because:

$|OA| = |OB|$ [Given] (Side S)

$|OC| = |OC|$ [Common] (Side S)

$|\angle AOC| = |\angle BOC| = 45^\circ$ (Angle A)

Two sides and an included angle are equal (SAS).

MARKING SCHEME NOTES

Question 2 (c) [Scale 5C (0, 3, 4, 5)]

- 3:**
- Correctly identifies any one pair of corresponding sides or angles.
 - States SSS, SAS, RHS, ASA
- 4:**
- Correctly identifies either two or three of the corresponding sides or angle.
 - Fails to finish
 - Any 2 elements identified
 - Diagram marked with 3 elements identified
- 5:**
- Accept correct explanation on basis of diagram information
-