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THE LINE (Q 2, PAPER 2)

2002

2 (a) Find the co-ordinates of the point of intersection of the line and the line $4x + y = 5$ and $3x - 2y = 12$.

(b) The line L has equation $4x - 5y = -40$.

$a(0, 8)$ and $b(-10, 0)$ are two points.
(i) Verify that a and b lie on L.

(ii) What is the slope of L?

(iii) The line K is perpendicular to L and it contains b. Find the equation of K.

(iv) K intersects the y-axis at the point c. Find the co-ordinates of c.

(v) d is another point such that $abcd$ is a rectangle. Calculate the area of $abcd$.

(vi) Find the co-ordinates of d.

ANSWERS

2   (a) $(2, -3)$

(b) (ii) $\frac{4}{5}$ (iii) $5x + 4y + 50 = 0$

(iv) $c(0, -\frac{25}{2})$ (v) 205

(vi) $d(10, -\frac{41}{2})$