THE LINE (Q 2, PAPER 2)

2011

- 2. (a) Verify that the point (2, -4) is on the line 3x y = 10.
 - (b) P(2, 8), Q(4, -1) and R(6, 0) are three points.
 - (i) Find the slope of *PR*.
 - (ii) Show that PR is perpendicular to RQ.
 - (iii) Find the equation of RQ.
 - (iv) Find the co-ordinates of the point at which RQ intersects the y-axis.
 - (c) A(-1, -6), B(6, 8) and C(2, 5) are three points.
 - (i) Find the area of the triangle *ABC*.
 - (ii) Find the co-ordinates of two possible points D on the x-axis such that area of triangle ABD = area of triangle ABC.

Answers 2 (b) (i) -2 (iii) x - 2y - 6 = 0 (iv) (0, -3) (c) (i) $\frac{35}{2}$ square units (ii) $D(-\frac{1}{2}, 0), (\frac{9}{2}, 0)$