

**OCR C1 June 2013**

8.  $A$  is the point  $(-2, 6)$  and  $B$  is the point  $(3, -8)$ . The line  $l$  is perpendicular to the line  $x - 3y + 15 = 0$  and passes through the mid-point of  $AB$ . Find the equation of  $l$ , giving your answer in the form  $ax + by + c = 0$ , where  $a$ ,  $b$  and  $c$  are integers.

**OCR C1 January 2012**

8. The line  $l$  has gradient  $-2$  and passes through the point  $A(3, 5)$ .  $B$  is a point on the line  $l$  such that the distance  $AB$  is  $6\sqrt{5}$ . Find the coordinates of each of the possible points  $B$ .

(7)

(6)

**Edexcel C1 June 2006**

11. The line  $l_1$  passes through the points  $P(-1, 2)$  and  $Q(11, 8)$ .

- (a) Find an equation for  $l_1$  in the form  $y = mx + c$ , where  $m$  and  $c$  are constants.

(4)

The line  $l_2$  passes through the point  $R(10, 0)$  and is perpendicular to  $l_1$ . The lines  $l_1$  and  $l_2$  intersect at the point  $S$ .

- (b) Calculate the coordinates of  $S$ .

(5)

- (c) Show that the length of  $RS$  is  $3\sqrt{5}$ .

(2)

- (d) Hence, or otherwise, find the exact area of triangle  $PQR$ .

(4)