

Harder Coordinate Geometry

(a)	(b)	(c)
<p>Find an equation of the line that passes through the points $(4, 2)$ and $(-8, 11)$. Give your answer in the form $ax + by = c$ where a, b and c are integers.</p>	<p>The straight line L has equation $5x - 3y = 18$. Find an equation of the line that is parallel to L and crosses the x-axis at $(4, 0)$.</p>	<p>The straight line L_1 has equation $x + 2y - 7 = 0$. The straight line L_2 passes through the points $(-2, -6)$ and $(5, 8)$. Show that the lines L_1 and L_2 are perpendicular to each other.</p>
(d)	(e)	(f)
<p>The straight line L passes through the points $(1, -1)$ and $(5, 9)$. Find an equation of the line that is parallel to L and passes through the point $(2, 4)$. Give your answer in the form $ax + by + c = 0$ where a, b and c are integers.</p>	<p>The straight line L_1 has equation $2x - 3y = 4$. The straight line L_2 is perpendicular to L_1 and passes through the point $(1, 2)$. Find the equation of the line L_2 and the coordinates of the point where it crosses the x-axis.</p>	<p>ABC is a triangle, where $\widehat{BAC} = 90^\circ$. The point C has coordinates $(9, 5)$ and points A and B lie on the line with equation $2x + 3y = 7$. Find the equation of the line that passes through A and C, giving your answer in the form $ax + by = c$ where a, b and c are integers.</p>