1		comparison	M1 A1	starts to manipulate expression e.g. $3y = 9x - 6$ or $3y = 9x - 5$ gives equation(s) which can be used to show that the gradients of the two lines are the same e.g. $y = 3x - 5/3$

2		$y = -2x + 21$	P1 P1 P1 A1	shows evidence of understanding that AC is perpendicular to DB, or states the gradient of DB as 0.5 oe shows a process to find the gradient of a perp. line e.g. use of $-\frac{1}{m}$ or states $y = -2x + c$ or states the gradient of AC as -2 (dep on P2) for sub. of $x = 5$, $y = 11$ into $y = mx + c$ where m is their found gradient for AC. oe

3		$y = \frac{-3}{\sqrt{7}}x + \frac{8}{\sqrt{7}}$	M1 M1 A1	for method to find gradient of OP, eg $\frac{\sqrt{7}}{2} \div \frac{3}{2}\left(= \frac{\sqrt{7}}{3} \text{ or } 0.88 \ldots\right)$ oe (dep) for method to find gradient of tangent, m, eg. $\frac{\frac{\sqrt{7}}{2}}{\frac{3}{2}} \times m = -1 \left(m = \frac{-3}{\sqrt{7}} \text{ or } -1.13..\right)$ for $y - \frac{\sqrt{7}}{2} = \frac{-3}{\sqrt{7}}(x - \frac{3}{2})$ or $y = \frac{-3\sqrt{7}}{7}x + \frac{8\sqrt{7}}{7}$ oe or $y - 1.32.. = -1.13..(x - 1.5)$

4		$y = 2x + 36$	P1 P1 P1 A1	starts process, eg by rearranging to find gradient, eg $y = 6 - \frac{x}{2}$ **or** $\frac{-1}{2}$ **or** positions of B and E complete process to find position of A **or** uses $\frac{-1}{m}$ to find the gradient of **M** complete process to find equation of **M** $y = 2x + 36$ oe

5	$y = -\frac{3}{4}x - \frac{11}{4}$	M1 M1 A1	for identifying gradient of $\frac{4}{3}$ for beginning a method to find the gradient of the perpendicular line eg $\frac{4}{3} \times m = -1$ **or** identifies gradient of perpendicular line as $-\frac{3}{4}$ for $y = -\frac{3}{4}x - \frac{11}{4}$ or any equivalent equation	Ignore constant term Can ft providing gradient is clearly stated $4y + 3x = -11$ $y + 5 = -\frac{3}{4}(x - 3)$

6	9.75	P1 P1 B1 P1 A1	process to find the gradient of **L** $\left(= -\frac{3}{2}\right)$ process to find the gradient of the perpendicular line **M** eg use of $-\frac{1}{m}$ or states gradient as $\frac{2}{3}$ **or** $y = \frac{2}{3}x + c$ (indep) gives y coordinate of $B = 8.5$ oe (dep P2) process to find x coordinate of C (= 3) or y coordinate of C (= 4) eg the first stage of solving equations or using elimination by substitution, to find a coordinate of C. 9.75 oe	 Could be indicated other ways, eg 8.5 on the y axis of a diagram ft their linear equation for M with L; allow some error in manipulation of these linear equations as long as the overall process is correct. Award 0 marks for a correct answer with no supportive working.

7	$y=-\frac{1}{3}x+8$	M1	for a method for finding the gradient of L_2 eg use of $-\frac{1}{m}$ **or** $-\frac{1}{3}$	
		M1	(dep) for substitution of (9, 5) into $y="-\frac{1}{3}"x+c$	
		A1	for $y=-\frac{1}{3}x+8$ oe	$y-5=-\frac{1}{3}(x-9)$ gets M2A1