Paper: 1MA1/1H				
Question	**Working**	**Answer**	**Mark**	**Notes**
7 **Q1**		Comment	B1	for correct mathematical comment eg line segments not a curve **or** should draw freehand **or** should not use a ruler, **or** should be a curve NB Do not accept statements about scale or plotting accuracy.

Paper: 1MA1/1H					
Question		**Working**	**Answer**	**Mark**	**Notes**
11	(a)		1, −3	B1	cao
Q2	(b)		−0.75, 2.75	B1	accept −0.7 to −0.8, 2.7 to 2.8
	(c)		−2.8	B1	cao

Paper: 1MA1/2H				
Question	**Working**	**Answer**	**Mark**	**Notes**
20 (a) **Q3**		–0.4 to –0.2 and 3.2 to 3.4	M1 A1	for (y =) x + 4 for answers in the range –0.4 to –0.2 and 3.2 to 3.4
(b)		1.6 to 2.5	M1 M1 A1	for drawing a tangent to the curve at x = 2 for method to find gradient of their tangent for answer in the range 1.6 to 2.5

Paper: 1MA1/2H				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
17 **Q4**	– 12, – 7	B1	cao	

Paper: 1MA1/2H				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
21 (a)	Graph drawn	C2	for graph reflected in the y-axis	Key points: (0, 0), (1, 2), (2, 1), (3, 0), (4, 2) Award C1 if line segments but goes through all key points
		(C1	for a graph reflected in the x-axis **or** for a correct graph through four of the five key points)	
(b)	$y = 5 + 2(x – 3) – (x – 3)^2$	C2	for $y = 5 + 2(x – 3) – (x – 3)^2$ oe eg $y = –x^2 + 8x – 10$, $y = −[(x−4)^2 −6]$	For either C mark accept equivalent expressions
		(C1	for $y = 5 + 2(x + 3) – (x + 3)^2$ **or** $y = 5 + 2(x – a) – (x – a)^2$, $a \neq 3$, $a \neq 0$) **or** $y = f(x – 3)$ **or** $y = (x – 4)^2 + 6$ **or** correct expression missing "$y =$"	If a correct answer for C2 is given and is then incorrectly simplified, award C1 a need not be positive

Q5

Paper: 1MA1/1H				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
17 **Q6**	(2, –9)	P1	substitutes $x = 0$, $y = –5$ into $y = x^2 + ax + b$ ($b = -5$) **or** substitutes $x = 5$, $y = 0$ into $y = x^2 + ax + b$ ($0 = 25 + 5a + b$) **or** starts process to find other intercept, eg writes $y = (x – 5)(x – k)$	
		P1	for complete process to find two intercepts, eg. substitutes the second point into $y = x^2 + ax + b$ and solves to find a ($= –4$) and b ($= –5$) **or** substitutes $x = 0$, $y = –5$ into $y = (x – 5)(x – k)$ and solves to find k ($= –1$)	
		P1	(dep on P2) for factorising or completing the square of $x^2 +$ "–4" $x +$ "–5" and identifying the x-coordinate of the turning point **or** for a complete process to find the x-coordinate of the turning point, eg $(5 +$ "–1"$)/2$	
		A1	cao	x-coordinate of 2 with no or incorrect working gets NO marks

Paper: 1MA1/3H				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
17 **Q7**	2.7 and −0.7	M1 M1 M1 A1	for $x^2-3 = 2x-1$ oe **or** $x^2-3-2x+1$ (=0) **or** completing the square eg $(y=)(x-1)^2-1-2$ (dep M1) draws graph of $y = 2x-1$ **or** drawing the translated graph **or** describing the translation in words **or** −1.7 + 1 (= −0.7) **or** 1.7 + 1 (=2.7) shows the points of intersection clearly for the given quadratic graph and linear graph **or** for one correct solution from appropriate supportive working for x in the range 2.6 to 2.8 **and** −0.6 to −0.8 SCB2 for plotting $y = 2x + 1$ **and** values for x in the range −1.1 to −1.3 **and** 3.1 to 3.3	Line segments required For 1.7 allow from 1.6 to 1.8 For −1.7 allow from −1.8 to −1.6 Points indicated or attempt to read off x-axis at the appropriate points – maybe indicated by dashes No marks will be awarded for correct answers only

Paper: 1MA1/2H				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
7 (a)	4	B1	for 4	Condone (0,4) or 0,4
(b)	(3, −5)	B1	cao	
Q8 (c)	5.1 to 5.3 and 0.7 to 0.9	M1	for a correct method, eg marking both intercepts with *x*-axis **or** one correct solution	**Accept** both solutions given as a coordinate for M1 eg (5.2, 0.8) **or** (0.8, 5.2) **or** (5.2, 0) **and** (0.8, 0)
		A1	for answers in the range 5.1 to 5.3 and 0.7 to 0.9	