Paper 1MA1: 1F				
Question	**Working**	**Answer**	**Mark**	**Notes**
29 **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: 1MA1/3F				
Question	**Working**	**Answer**	**Mark**	**Notes**
13 (a)		(–2) **–1.5** **–1** **–0.5** (0) **0.5**	B2 [B1	for a fully correct table for 2 or 3 correct entries]
(b) **Q2**		Correct line	M1 A1	for correctly plotting at least 5 of their points (provided B1 scored in part (a)) or for a straight line with gradient 0.5 or for a straight line through (0,–1) with a positive gradient for a correct line between $x = -2$ and $x = 3$
(c)		2.6	B1	for answer in the range 2.5 to 2.7 or ft a single straight line with positive gradient

Paper: 1MA1/3F				
Question	**Working**	**Answer**	**Mark**	**Notes**
22 (a) **Q3**		12, 4, 2, 1.2, 1	B2 (B1)	for fully correct table (allow fractions or decimals) for 3 or 4 of 12, 4, 2, 1.2, 1
(b)		Correct curve	M1 A1	ft (dep on B1 in (a)) for plotting at least 6 points from their table correctly for a fully correct curve

Paper: 1MA1/3F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
22 (a)	2, −4, 2, 8	B2	all 4 values correct	
		(B1	for 2 or 3 correct values)	
(b)	Graph	M1	(dep B1) for at least 5 points plotted correctly ft from part a	
		A1	for a fully correct curve drawn	Accept freehand curves drawn that are not line segments; there must be some attempt to draw the minimum point below $y = -4$.
(c)	−2.6 or 1.6	B1	for 1 correct value, ft a non linear graph	Award for −2.6 or 1.6 or both values but do not award the mark if a correct value is given with an incorrect value. Accept 1.56 or −2.56 Note for ft to be applied the graph may be joined by line segments.
Q4				

Paper: 1MA1/1F

Question	Answer	Mark	Mark scheme	Additional guidance
25 **Q5**	Line drawn	B3 (B2 (B1	for a correct line between $x = -3$ and $x = 3$ for a correct straight-line segment through at least 3 of (−3, 13), (−2, 9), (−1, 5), (0, 1), (1, −3), (2, −7), (3, −11) **or** for all of these points plotted but not joined **or** for a line drawn with a negative gradient through (0, 1) **and** clear intention to use a gradient of −4, eg line through (0,1) and (0.5, −1) for at least 2 correct points stated or plotted **or** for a line drawn with a negative gradient through (0, 1) **or** a line with gradient −4)	Ignore any incorrect points Table of values x | −3 | −2 | −1 | 0 | 1 | 2 | 3 y | 13 | 9 | 5 | 1 | −3 | 7 | 11 Ignore any incorrect points coordinates may be in a table or in working

Paper: 1MA1/2F

Question		Answer	Mark	Mark scheme	Additional guidance
24	(a)	0, –4, –6, –4, 0	B2 (B1	fully correct figures At least 2 correct figures)	
	(b)	Graph	M1 A1	(dep B1) for at least 5 points correctly plotted ft from (a) fully correct graph	Must be a curve
Q6	(c)	2.6 and –1.6	M1 A1	for $y = -2$ drawn **or** intersections with $y = -2$ **or** $y = x^2 - x - 4$ drawn **or** 1 correct value ft a quadratic graph **or** for answers in the range 2.5 to 2.7 **and** –1.5 to –1.7	If answers stated as coordinates, award M1 for both coordinates and M0 for one coordinate

Paper: 1MA1/2F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
24 (a)	(10), 5, (2), 1, 2, (5), 10	B2	for all 4 values correct	
		(B1	for 2 or 3 correct values)	
(b)	Graph	M1	ft (dep on B1) for plotting at least 5 of their points correctly	
Q7		A1	for a fully correct curve drawn	Accept a freehand curve drawn that is not made of line segments
(c)	–0.65 to –0.8 and 2.65 to 2.8	M1	for $y = 4$ drawn **or** intersection with $y = 4$ **or** $y = x^2 - 2x - 2$ drawn **or** 1 correct value (ft a quadratic)	If answers stated as coordinates, award M1 for both coordinates and M0 for one coordinate
		A1	ft a quadratic graph **or** for answers in the range 2.65 to 2.8 **and** –0.65 to –0.8	

Paper: 1MA1/2F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
25 (a)	F	B1	cao	
Q8 (b)	D	B1	cao	

Paper: 1MA1/3F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
17 (a)	−10, −6, 2, 6	B2	for 4 values correct −10, −6, (−2), 2, 6, (10)	
Q9		(B1	for 2 or 3 values correct)	
(b)	Graph drawn	M1	(ft from (a) if B1 awarded) for at least 5 points correctly plotted.	
		A1	correct graph drawn from $x = -1$ to 4	

Paper: 1MA1/2F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
21	Graph	B3	for a correct line between $x = -2$ and $x = 4$	
		(B2	for a correct straight line segment through at least 3 of (−2, −7), (− 1, −5), (0, −3), (1, −1), (2, 1), (3, 3), (4, 5)	Ignore any incorrect points. Points need not be plotted for a correct line (segment) drawn
			or for all of these points plotted but not joined	Table of values
			OR for a line drawn with a positive gradient through (0, −3) **and** clear intention to use a gradient of 2, eg line through (0,−3) going across 2 squares and up 4 squares)	
Q10		(B1	for at least 2 correct points stated or plotted	Ignore any incorrect points Coordinates may be in a table or in working
			OR for a line drawn with a positive gradient through (0, −3)	
			OR a line with gradient 2)	

x	–2	–1	0	1	2	3	4
y	–7	–5	–3	–1	1	3	5

Paper: 1MA1/1F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
22 **Q11**	B C D A	B2 (B1	cao for two or three correct)	

Paper: 1MA1/2F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
24 (a)	13, (6), 5, 4, –3	B2 (B1	for all 4 values correct for 2 or 3 correct values)	
(b) **Q12**	Correct graph	M1 A1	ft (dep on B1) for plotting at least 4 of the points from their table correctly for a fully correct curve drawn	Accept a freehand curve drawn that is not made of line segments Line sections outside the required range can be ignored.

<table>
<tr><th colspan="4">Paper: 1MA1/1F</th></tr>
<tr><th>Question</th><th>Answer</th><th>Mark</th><th>Mark scheme</th><th>Additional guidance</th></tr>
<tr>
<td>18

Q13</td>
<td>Line Drawn</td>
<td>B3

(B2

(B1</td>
<td>for a correct line drawn between $x = -2$ and $x = 3$

for a correct straight-line segment through at least 3 of
(–2, –6), (–-1, –4), (0, –2), (1, 0), (2, 2), (3, 4)

or for all of the above points plotted but not joined

or for a single line drawn with a positive gradient through (0, –2) and clear intention to use a gradient of 2,
eg a line through (0, –2) and (0.5, 0)

for at least 2 correct points stated or plotted

or a single line drawn with positive gradient through (0, –2)

or a single line with gradient 2)</td>
<td>Accept freehand line drawn

Ignore any incorrect points

Table of values
<table>
<tr><td>x</td><td>–2</td><td></td><td></td><td>1</td><td>2</td><td>3</td></tr>
<tr><td>y</td><td>–6</td><td></td><td>–2</td><td></td><td>2</td><td>4</td></tr>
</table>

Ignore any incorrect points
Coordinates may be in a table or working

Do not accept $y = -2$ drawn</td>
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Paper: 1MA1/3F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
28 **Q14**	Sketch	M1 A1	correct shape in one of the required quadrants **or** correct graph where the lines touch the axes fully correct shape	 Lines do not need to extend to the ends of the axes if the intention is clear

Paper: 1MA1/1F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
28 (a)	5,(1),(-1),-1,1,5	B2 (B1	for all 4 values correct for 2 or 3 correct values)	
(b)	Graph drawn	B2 (B1	for a fully correct graph ft (dep on B1in (a)) for plotting at least 5 of the points from their table correctly)	Accept a freehand graph drawn that is not made of line segments Ignore anything drawn outside the required range
(c) **Q15**	0.3 to 0.5 and 2.5 to 2.7	M1 A1	for a correct method, eg marking intercepts with *x*-axis **or** one correct solution **or** both solutions given as a coordinates, eg (0.4, 2.6) **or** (0.4, 0) **and** (2.6, 0) for answers in the range 0.3 to 0.5 and 2.5 to 2.7 **or** ft their graph with at least 2 solutions	ft their graph for this mark Accept these coordinates reversed