

Paper: 1MA1/1F				
Question	Answer	Mark	Mark scheme	Additional guidance
19 Q3	Shape drawn	B2 (B1)	for shape with vertices at $(4, -3)$, $(5, -4)$, $(5, -5)$, $(4, -5)$ for rotation of 180° about wrong centre)	Shape does not have to be shaded. Allow some tolerance on vertices as long as they are nearest to the desired points. This is shown by the orientation of the shape.

Paper: 1MA1/2F				
Question	Answer	Mark	Mark scheme	Additional guidance
16 Q4	Reflection in x -axis	B1 B1	for reflection for x -axis or $y = 0$	Award no marks if more than one transformation is given

Paper: 1MA1/3F				
Question	Answer	Mark	Mark scheme	Additional guidance
10 Q5	Reflection drawn	C1	for accurate reflection drawn	Can be hand drawn. Need not be shaded.

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Question	Answer	Mark	Mark scheme	Additional guidance
18 Q6	Correct description	B2 (B1)	reflectio and y axis or reflection and $x = 0$ reflection or y axis or $x = 0$)	If more than 1 transformation given award B0

Paper: 1MA1/2F				
Question	Answer	Mark	Mark scheme	Additional guidance
13 Q7	enlargement	B2 (B1)	for correct enlargement for any two sides correct or a correct enlargement with scale factor other than 3 or 1)	Any orientation

Paper: 1MA1/3F				
Question	Answer	Mark	Mark scheme	Additional guidance
18	Correct reflection	B2	correct triangle drawn with vertices (1, 2) (2, 2) (1, -1)	
Q8		(B1)	for a correct reflection in the line $y = a$ or a correct reflection in the line $x = 3$, or triangle in correct orientation with 2 of 3 vertices correct)	

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Question	Answer	Mark	Mark scheme	Additional guidance
26	$c = -6$ $d = -1$	M1	for reflection in x -axis shown on diagram	Vertices (3, -2), (5, -2), (3, -5)
Q9		A1	for $c = -6$ or $d = -1$	One correct value is M1A1 regardless of second value or diagram
		A1	for both $c = -6$ and $d = -1$	
			SCB2 for $c = -1$ and $d = -6$	

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Question	Answer	Mark	Mark scheme	Additional guidance
11	Reflection	M1	for a correct reflection of the shape in any line or a correct reflection of at least 3 vertices	Allow hand-drawn
Q10		A1	ca	

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Question	Answer	Mark	Mark scheme	Additional guidance
18	Rotation 180° about (-1, 0)	C2	rotation 180° about (-1, 0) or enlargement sf -1 centre (-1, 0)	Award no marks if more than one transformation is given
Q11		(C1	rotation 180° or rotation about (-1, 0) OR enlargement sf -1 or enlargement centre (-1, 0))	

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Question	Answer	Mark	Mark scheme	Additional guidance
11	Reflection	M1	for a correct reflection of the shape in any horizontal line other than the given mirror line	Allow free hand drawing
Q12		A1	for a fully correct reflection	

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Question	Answer	Mark	Mark scheme	Additional guidance	
11 Q13	(a)(i)	2	B1	for 2	Accept $2\times$ or $\times 2$ oe Accept line of any length, dotted or dashed and/or drawn freehand Accept labelled on the diagram
	(ii)	cross placed	B1	for cross correctly placed or indicated by intersection of construction lines	
	(b)(i)	line drawn	B1	for line $y = x$ drawn	
	(ii)	$y = x$	B1	for $y = x$ oe, eg. $x = y$ or $y - x = 0$ or $x - y = 0$ or ft their line drawn in (b)(i)	

Paper: 1MA1/3F				
Question	Answer	Mark	Mark scheme	Additional guidance
18 Q14	Rotation drawn	B2	correct shape drawn at $(2,-1)$, $(2,-4)$, $(4,-2)$, $(4,-1)$	
		(B1	for a correct shape drawn clockwise 90° about $(0,0)$ or a shape drawn in the correct quadrant with the correct orientation or a shape with at least 3 vertices correct	

Paper: 1MA1/1F				
Question	Answer	Mark	Mark scheme	Additional guidance
3 Q15	Reflection shown	B1	cao	

Paper: 1MA1/2F				
Question	Working	Answer	Mark	Notes
20 (a) Q16		$(-2, 1) (-4, 1)$ $(-2, 2) (-5, 2)$	B1	Shap labelled A
(b)		$(1, -4) (3, -4)$ $(1, -5) (4, -5)$	B1	Shap labelled B

Paper: 1MA1/3F				
Question	Answer	Mark	Mark scheme	Additional guidance
16 Q17	Enlargement centre (1,1) scale factor 4	B2 (B1)	Enlargement, centre (1,1) and scale factor 4 two of Enlargement, centre (1,1), scale factor 4 with nothing incorrect)	No extras. Accept <i>A</i> as centre. If there is a clear reference to a different transformation award no marks

Paper: 1MA1/2F				
Question	Answer	Mark	Mark scheme	Additional guidance
22 Q18	translation $\begin{pmatrix} -5 \\ 6 \end{pmatrix}$	B1 B1	for translation for vector $\begin{pmatrix} -5 \\ 6 \end{pmatrix}$	Award no marks if more than one transformation is given Do not accept as a coordinate $(-5, 6)$