

1	(a)		Correct mirror line $x = -1.5$	1	B1 Correct line drawn at $x = -1.5$ allow freehand with intention to draw at -1.5
	(b)		Shape drawn	2	B2 for correct shape with vertices at $(-1, 2)$, $(-1, 4)$, $(-3, 2)$ and $(-3, 5)$ (B1 for a correct orientation or 90° clockwise turn about correct point)
Total 3 marks					

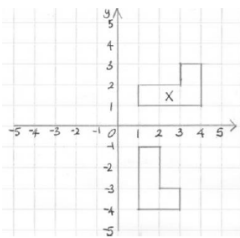
2	(a)		$(3, 5)$ $(5, 5)$ $(5, 8)$	2	B2 If not B2 then award B1 for a reflection in $x = 2$ [[$(1, -1)$ $(-1, -1)$ $(-1, -4)$]] or for correct shape in the correct orientation
	(b)			3	B1 Rotation (with none of reflection, translation, enlargement, mirrored, flipped or moved (up, right, left, down etc) stated) (centre) $(0, 0)$ or origin (O) (award if no vector or equation of line or SF mentioned)
			Rotation of 90° anticlockwise about $(0, 0)$		B1 90° anticlockwise or 270° clockwise
Total 5 marks					

3	a		Rotation $(0, 0)$		B1
			90° clockwise	3	B1 or O or origin B1 NB award no marks if more than one transformation is described
	b		Shape R in correct position	2	B2 Vertices at $(-4, 1)$ $(-4, 4)$ $(-5, 4)$ $(-5, 2)$ $(-6, 2)$ $(-6, 1)$ B1 for a correct reflection in the line $x = k$ where $k \neq -1$ OR at least 4 vertices in the correct position
Total 5 marks					

4			Trapezium with vertices at $(6, 3)$ $(8, 3)$ $(8, 6)$ $(4, 6)$	2	B2 If not B2 then award B1 for shape of correct size and orientation or 3 or 4 points plotted correctly
Total 2 marks					

5			Rotation 180° and $(0, 0)$	2	B1 Rotation (with none of reflection, translation, enlargement, mirrored, flipped or moved stated) B1 180° centre $(0, 0)$ or O (award if no vector or equation of line or SF mentioned) (B2 for enlargement SF -1 centre O)
Total 2 marks					

6	(a)		shape with vertices $(6, 4)$ $(10, 5)$ $(11, 1)$ $(9, 3)$	2	B2 if not B2 then award B1 for a correct reflection in a vertical line or for 3 correct points of the correct shape or for a correct reflection $y = 6$
	(b)		Enlargement	3	B1 Enlargement (with none of reflection, rotation, translation, mirrored, flipped or moved (up, right, left, down etc) stated)
			Scale factor 3		B1 Scale factor 3 or sf 3
			[Centre] $(0, 0)$		B1 [centre] $(0, 0)$ or origin or O (with no column vector or equation of line)
Total 5 marks					

12	(a)			2	B2 for a correct rotation (B1 for a shape of the correct orientation in the incorrect position or for the correct shape in the correct position for a 90° anticlockwise rotation)
	(b)		Translation with vector $\begin{pmatrix} 4 \\ -2 \end{pmatrix}$	2	B1 Translation (with none of reflection, rotation, enlargement, mirrored, turned or flipped stated) B1 $\begin{pmatrix} 4 \\ -2 \end{pmatrix}$ (award if no equation of line or angle of rotation or centre of rotation or scale factor or centre of enlargement mentioned)
Total 4 marks					

13	(a)		Triangle drawn at $(-1, -3)$ $(-1, -4)$ $(-3, -3)$	2	B2 for a correct triangle with correct orientation and position If not B2 then award B1 for a correct triangle drawn with correct orientation in wrong position or triangle drawn with 2 out of 3 correct vertices
	(b)		Triangle drawn at $(-4, 4)$ $(-4, 5)$ $(-2, 4)$	1	B1 cao
Total 3 marks					

14	(a)		Correct rotation	2	B2 for a fully correct rotation at $(1, 2)$ $(3, 2)$ $(3, 5)$ (B1 for the triangle in correct orientation and size or rotated 90° clockwise about the origin $(-1, -2)$ $(-3, -2)$ $(-3, -5)$)
	(b)		Enlargement, scale factor 3 and $(0, 0)$	2	B2 for enlargement, scale factor 3 and $(0, 0)$ (B1 for 2 correct from for enlargement, enlarge, etc so long as no mention of rotation, reflection or translation, flip, move etc. or SF 3, three times etc. or $(0, 0)$ or Origin or 0 stated. Accept about, from etc. with no mention of line, or column vector.)
Total 4 marks					

15			Triangle with vertices $(3, 6)$ $(3, 9)$ $(5, 6)$	2	B2 for a fully correct shape with correct orientation and in the correct position. (B1 for a shape of correct size and orientation or 2 or 3 points plotted correctly)
Total 2 marks					

16	(b)		Enlargement	3	B1	with no mention of any other transformation or words such as move, flip, shift
			Scale factor 3		B1	with no mention of a vector, angle of rotation or line of symmetry
			Centre (0, 2)		B1	