1	Translation $\begin{pmatrix}-4\\3\end{pmatrix}$	**2**	**B1** for translation or $\begin{pmatrix}-4\\3\end{pmatrix}$ with no further properties
2	Correct coordinates (-2,-2), (-2, -3), (-5,-3)		
3	Translation $\begin{pmatrix}4\\-2\end{pmatrix}$	**2**	**B1** for each
4(a)	Translation $\begin{pmatrix}-3\\4\end{pmatrix}$	**2**	**B1** for translation **B1** for $\begin{pmatrix}-3\\4\end{pmatrix}$
5(a)(i)	Triangle *B* at (4, –1), (4, –4), (5, –4)	**2**	**B1** For triangle B the correct size and orientation
6(a)	Correct reflection (5, 2), (5, 5), (4, 2)	**2**	**B1** for reflection in $y = 1$ or reflection in $x = m$ where $-4 \leqslant m \leqslant 1.5$
7(a)(i)	Reflection x-axis or $y = 0$	**2**	**B1** for each
7 (ii)	$\begin{pmatrix}1&0\\0&-1\end{pmatrix}$	**2**	**B1** for second column correct or **SC1** for answer $\begin{pmatrix}-1&0\\0&1\end{pmatrix}$
8	Reflection $y = -1$	**2**	**B1** for either
9	$y = -1$ oe	**1**	
10 a	$\begin{pmatrix}1&0\\0&-1\end{pmatrix}$	**1**	
b	$\begin{pmatrix}-1&0\\0&1\end{pmatrix}$		
c	$\begin{pmatrix}0&1\\1&0\end{pmatrix}$		
d	$\begin{pmatrix}0&-1\\-1&0\end{pmatrix}$		
11	Triangle at (–1, –2), (–1, 4), (–4, –2)	**2**	**B1** for correct size and orientation but wrong centre

12 (a)	Triangle at (2, 0), (1, 0), (1, 2)	**2**	**B1** for two vertices correct or two correct pairs of coordinates soi
13(a)	Triangle *C* at (–4, 1), (–4, 2), (–6, 2)	**2**	**B1** for triangle correct size and orientation, wrong centre or **SC1** for a triangle with vertices at (0, 2), (0, 3), (2, 2) or (–4, 4), (–4, 5), (–6, 4)
14(a)	Enlargement Scale factor –3 Centre (–3, 2)	**3**	**B1** for each
15(a)	Correct enlargement, vertices (2, 5), (6, 5), (6, 3)	**2**	**B1** for correct size and orientation, incorrect position or for enlargement scale factor 2, centre (0, 3)
16(a)	Triangle at (4, 2), (4, 3), (2, 3)	**2**	**B1** for correct size and orientation but wrong position or **SC1** for triangle at (–4, –2), (–2, –3), (–4, –3)
17(a)	Rotation 90° clockwise oe (1, –1)	**3**	**B1** for each
18(a)	$\begin{pmatrix} 0 & -1 \\ 1 & 0 \end{pmatrix}$	**2**	**B1** for one correct row or column or Rotation, 90° anticlockwise about (0, 0)
19(a)	Correct transformation, vertices (5, –1), (6, –1), (6, –3), (5, –2)	**2**	**B1** for three vertices correct or three correct pairs of coordinates soi
20(a)	Correct transformation, vertices (-1,4), (-1, 6), (-2, 6)	**2**	**B1** for three vertices correct or three correct pairs of coordinates soi