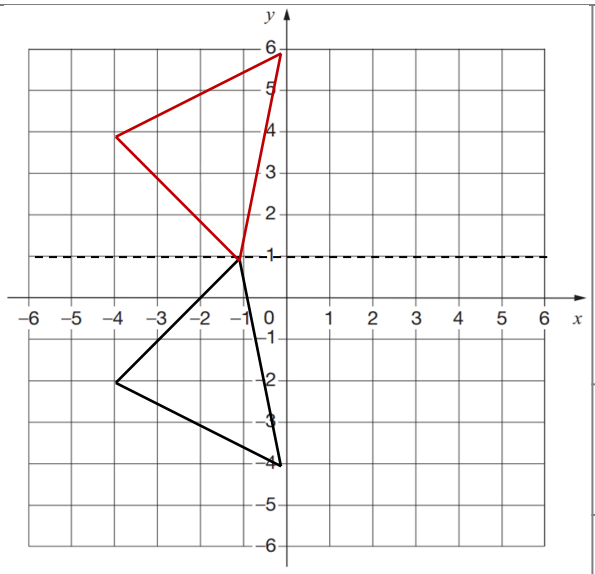
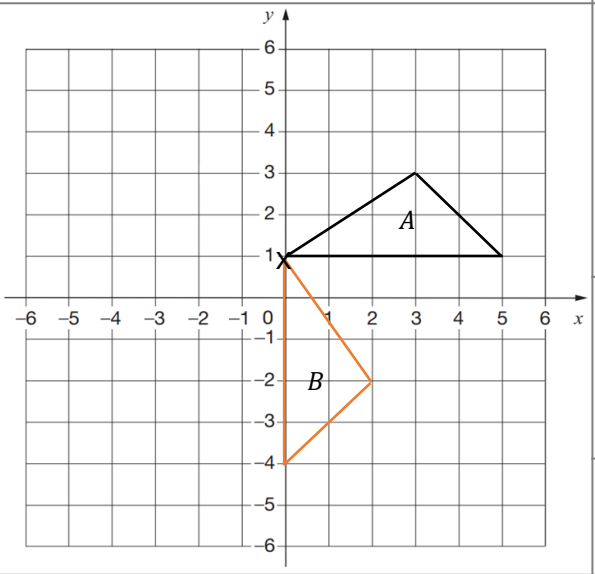
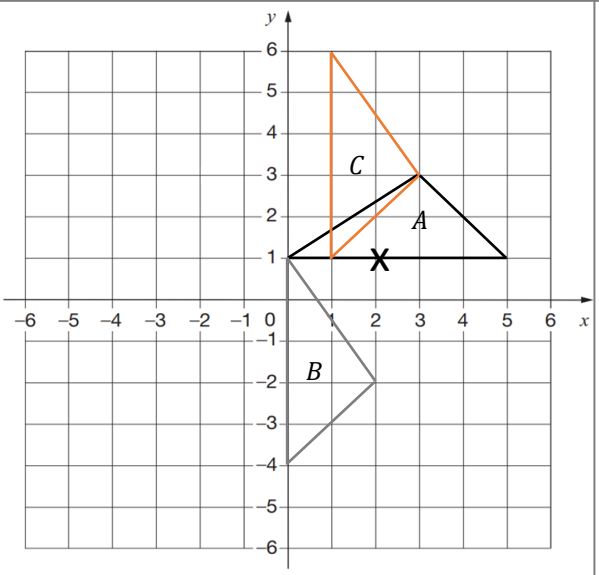
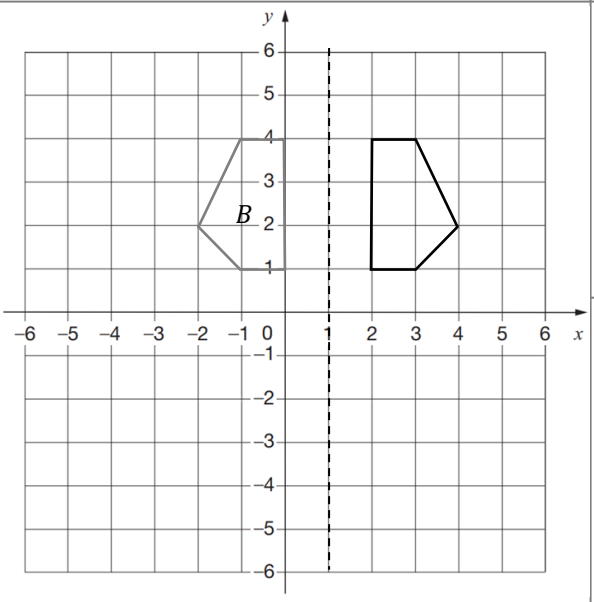
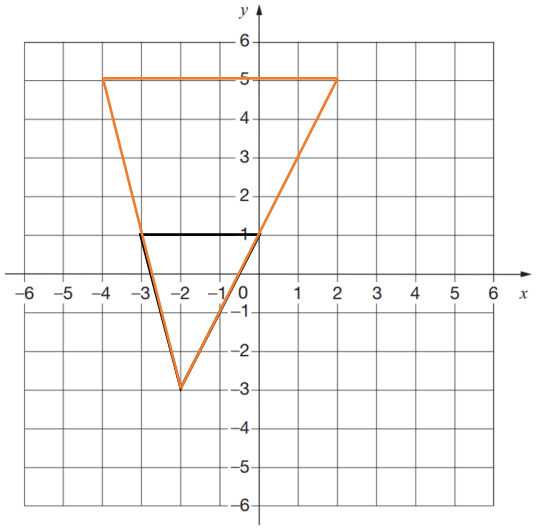
	Invariant Points Mark Scheme	
1(a)		[1] reflection line on y=1
1(b)		[1] All points are equidistant from y=1; reflection, not translation
		[1] invariant point at (-1,1)
2(a)		[1] Some indication of where (0,1) is.
		[1] Proper rotation of shape, 90° clockwise.
		[1] Invariant point $(0,1)$
2(b)		[1] Correct position of C [1] invariant point is $(3,3)$

3(a)	The triangle will have one invariant point because only one point stays in place Optional, were the triangle to be rotated $360°$, it would be where it started.	[1]
3(b)	Shape is returned to same position. So all vertices are invariant. 4	[1]
4(a)		[1] Indication of $x = 1$ [1] all points on shape B maintain distance from $x = 1$
4(b)	Translation $\binom{6}{0}$	[1]
5(a)		[1] vertex at (-2,-3) is unmoved [1] other points are extended so that x and y coordinate are two times farther away from (-2,-3)
5(b)	One invariant point at (-2,-3)	[1]
6(a)	$(-1,3)$	[1]
6(b)	$(-1,3)$ and $(-5,3)$	[2] 1 mark for each correct coordinate
6(c)	$(-1,3)$ and $(-3,5)$	[2] 1 Mark for each correct coordinate

END