Question	Scheme	Marks	AOs
1(a)(i)	Rotation	B1	1.1b
	90 degrees anticlockwise about the origin	B1	1.1b
(ii)	Stretch	B1	1.1b
	Scale factor 3 parallel to the *y*-axis	B1	1.1b
		(4)	
(b)	$\mathbf{QP} = \begin{pmatrix} 1 & 0 \\ 0 & 3 \end{pmatrix}\begin{pmatrix} 0 & -1 \\ 1 & 0 \end{pmatrix} = \begin{pmatrix} 0 & -1 \\ 3 & 0 \end{pmatrix}$	B1	1.1b
		(1)	
(c)(i)	$\left|\mathbf{R}\right| = 3$	B1ft	1.1b
(ii)	The **area** scale factor of the transformation	B1	2.4
		(2)	
			(7 marks)

Notes

(a)(i)

B1: Identifies the transformation as a rotation

B1: Correct angle (allow equivalents in degrees or radians), direction and centre the origin

(ii)

B1: Identifies the transformation as a stretch

B1: Correct scale factor and parallel to/in/along the *y*-axis/*y* direction

(b)

B1: Correct matrix

(c)(i)

B1ft: Correct value for the determinant (follow through their **R**)

(ii)

B1: Correct explanation, must include **area**

Note: scale factor of the transformation is B0