Combinations of Transformations

1	Reflection in the line $y=x$ followed by an enlargement about the origin of scale factor 3	
2	Rotation 90° anti-clockwise about the origin followed by a reflection in the y -axis	
3	Stretch parallel to y -axis of scale factor 3 followed by a reflection in the line $y=-x$	
4	Rotation 45° anti-clockwise about the origin followed by an enlargement of scale factor $\sqrt{2}$	
5	Stretch parallel to the y -axis of scale factor $\sqrt{3}$ followed by a reflection in the x -axis	
6	Enlargement of scale factor -3 followed by a rotation 90° anti-clockwise about the origin	
7	Reflection in the line $y=x$ followed by a stretch parallel to the y -axis of scale factor -1	
8	Rotation 180° clockwise about $(0,0)$ followed by a second rotation 180° clockwise about $(0,0)$	
9	Rotation 180° about the origin followed by a stretch parallel to the x -axis of scale factor 3	
10	Enlargement of scale factor -2 followed by a rotation 120° anti-clockwise about the origin	
11	Rotation 135° clockwise about the origin followed by a stretch parallel to the x -axis of scale factor $-\sqrt{2}$	
12	Rotation 60° clockwise about $(0,0)$ followed by an enlargement of scale factor 2 followed by a reflection in the line $y=x$	

A	$\begin{pmatrix} -3 & 0 \\ 0 & -1 \end{pmatrix}$
В	$\begin{pmatrix} 1 & -1 \\ 1 & 1 \end{pmatrix}$
С	$\begin{pmatrix} 1 & 0 \\ 0 & 1 \end{pmatrix}$
D	$\begin{pmatrix} 0 & -3 \\ -1 & 0 \end{pmatrix}$
E	$\begin{pmatrix} 1 & \sqrt{3} \\ -\sqrt{3} & 1 \end{pmatrix}$
F	$\begin{pmatrix} 0 & 3 \\ 3 & 0 \end{pmatrix}$
G	$\begin{pmatrix} 1 & -1 \\ -\frac{\sqrt{2}}{2} & -\frac{\sqrt{2}}{2} \end{pmatrix}$
Н	$\begin{pmatrix} 0 & 1 \\ 1 & 0 \end{pmatrix}$
I	$\begin{pmatrix} -\sqrt{3} & 1\\ 1 & \sqrt{3} \end{pmatrix}$
J	$\begin{pmatrix} 0 & 3 \\ -3 & 0 \end{pmatrix}$
K	$\begin{pmatrix} 1 & 0 \\ 0 & -\sqrt{3} \end{pmatrix}$
L	$\begin{pmatrix} 0 & 1 \\ -1 & 0 \end{pmatrix}$

1	2	3	4	5	6	7	8	9	10	11	12