

Teaching ideas:

Cut out the 21 cards and give a set to each group of students.

The task is to match the transformation to the matrix it represents.

This activity encourage discussion and demonstration of methods, to reinforce learning.

Solution:

a 3	b 8, 10	c 2	d 11	e 4
f 7	g 9	h 6	i 1	j 5

a $\begin{pmatrix} 3 & 0 \\ 0 & 3 \end{pmatrix}$	b $\begin{pmatrix} -1 & 0 \\ 0 & -1 \end{pmatrix}$	c $\begin{pmatrix} 0 & -1 \\ -1 & 0 \end{pmatrix}$
d $\begin{pmatrix} -1 & 0 \\ 0 & 1 \end{pmatrix}$	e $\begin{pmatrix} 1 & 0 \\ 0 & -1 \end{pmatrix}$	f $\begin{pmatrix} 1 & 0 \\ 0 & 1 \end{pmatrix}$
g $\begin{pmatrix} 0 & 1 \\ 1 & 0 \end{pmatrix}$	h $\begin{pmatrix} 0 & -1 \\ 1 & 0 \end{pmatrix}$	i $\begin{pmatrix} 0 & 1 \\ -1 & 0 \end{pmatrix}$

j $\begin{pmatrix} -2 & 0 \\ 0 & -2 \end{pmatrix}$	1. Rotation 90° clockwise about (0, 0)	2. Reflection in $y = -x$
3. Enlargement Scale factor 3 Centre (0, 0)	4. Reflection in $y = 0$	5. Enlargement Scale factor -2 Centre (0, 0)
6. Rotation 90° anticlockwise about (0, 0)	7. Identity	8. Enlargement Scale factor -1 Centre (0, 0)
9. Reflection in $y = x$	10. Rotation 180° about (0, 0)	11. Reflection in $x = 0$

