Matrix Transformations

Name:	Class:	Date:

Mark	/ 10	%

1) Find the 2 by 2 matrix which represents a reflection in the line y=0.

[1]

2) Find the 2 by 2 matrix which represents a reflection in the y axis.

[1]

3) Find the 2 by 2 matrix which represents a reflection in the line y=x.

[1]

4) Find the 2 by 2 matrix which represents a rotation of 90° clockwise about centre (0,0).

[1]

5) Find the 2 by 2 matrix which represents a rotation of 90° anticlockwise about centre (0,0).

[1]

6) Find the 2 by 2 matrix which represents a rotation of 180° about centre (0,0).

[1]

7) Find the 2 by 2 matrix which represents an enlargement of scale factor 4 from centre (0,0).

[1]

8) Find the 2 by 2 matrix which represents an enlargement of scale factor -2 from centre (0,0).

[1]

9) Find the 2 by 2 matrix which represents a stretch of scale factor 4, x axis invariant.

[1]

10) Find the 2 by 2 matrix which represents a shear of scale factor 2, y axis invariant.

[1]

Solutions for the assessment Matrix Transformations

1) $\begin{bmatrix} 1 & 0 \\ 0 & -1 \end{bmatrix}$

2) $\begin{bmatrix} -1 & 0 \\ 0 & 1 \end{bmatrix}$

3) $\begin{bmatrix} 0 & 1 \\ 1 & 0 \end{bmatrix}$

4) $\begin{bmatrix} 0 & 1 \\ -1 & 0 \end{bmatrix}$

5) $\begin{bmatrix} 0 & -1 \\ 1 & 0 \end{bmatrix}$

6) $\begin{bmatrix} 0 & -1 \\ -1 & 0 \end{bmatrix}$

7) $\begin{bmatrix} 4 & 0 \\ 0 & 4 \end{bmatrix}$

8) $\begin{bmatrix} -2 & 0 \\ 0 & -2 \end{bmatrix}$

9) $\begin{bmatrix} 4 & 0 \\ 0 & 1 \end{bmatrix}$

10) $\begin{bmatrix} 1 & 0 \\ 2 & 1 \end{bmatrix}$