# MATRIX TRANSFORMATIONS

Practice questions:

Describe each matrix transformation using provided statement.

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

Identity matrix

Rotation 180° at origin

Enlargement with scale factor 3 at origin

Rotation about origin at 90° anticlockwise directions

Reflection at x axis

Rotation at origin 270° anticlockwise direction

Reflection at y = x

Reflection at y = -x

Reflection at y axis