Subject: Optional Mathematics   **Topic: Transformation by using matrix**

Name: class.:   section:

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

1. Drag and Drop the above matrices in the given boxes, which represents the corresponding single transformation correctly

   a. Reflection on y axis ⟶

   b. Reflection on y =x ⟶

   c. Enlargement by E [O, 2] ⟶

   d. Rotation through +90°about origin ⟶

2. By equating the corresponding elements of equal matrices, insert the value of a, b, c and d.

   i) If $\begin{bmatrix} 2 & 7 & 12 & 7 \\ 2 & 3 & -4 & -5 \end{bmatrix} = \begin{bmatrix} 2a & 5a+b & 4a+4b & a+3b \\ 2c & 5c+d & 4c+4d & c+3d \end{bmatrix}$, then

   a = ☐   b = ☐   c = ☐   & d = ☐

   ii) If $\begin{bmatrix} 0 & 4 & c & 2 \\ 0 & 1 & 3 & d \end{bmatrix} = \begin{bmatrix} 0 & a & a+2 & 2 \\ 0 & b & b+2 & 2 \end{bmatrix}$, then

   a = ☐   b = ☐   c = ☐   & d = ☐

Thank you