

1. On the "Transformation Matrix" Wikipedia page linked below, there are listed six different types of linear transformations

[Transformations on Wikipedia](#)

⇒ Rotation, ⇒ rotation with an angle Θ clockwise in matrix becomes :

$$\Rightarrow \begin{pmatrix} x'_1 \\ x'_2 \end{pmatrix} = \begin{pmatrix} \cos\Theta & \sin\Theta \\ -\sin\Theta & \cos\Theta \end{pmatrix} \begin{pmatrix} x_1 \\ x_2 \end{pmatrix}$$

⇒ and for a rotation counterclockwise we have:

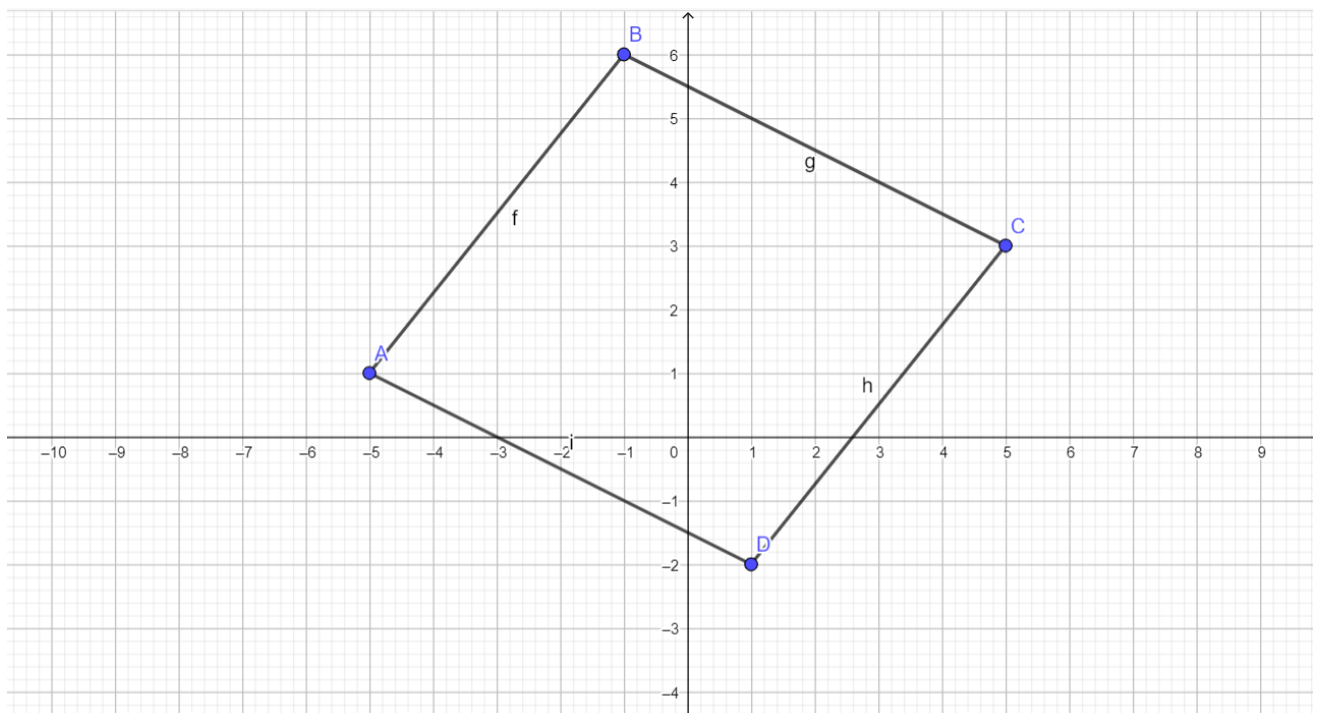
$$\Rightarrow \begin{pmatrix} x'_1 \\ x'_2 \end{pmatrix} = \begin{pmatrix} \cos\Theta & -\sin\Theta \\ \sin\Theta & \cos\Theta \end{pmatrix} \begin{pmatrix} x_1 \\ x_2 \end{pmatrix}$$

2. Using the GeoGebra graphs tool linked below to create a simple quadrilateral (a shape defined by four points). Using the four points, and draw this new shape.

[GeoGebra Graphs Tool.](#)

3. Share a screenshot of the original and transformed shape in the forum below, giving details of the linear transformation

ORIGINAL DRAWING



WE TRANSFORM THE ABOVE DRAW VIA A 45 DEGREE ROTATION IN CLOCKWISE DIRECTION

WITH A',B',C' AND D'

