## Final Transformation Project

## General Instruction:

$\square$ Cut out 5 different shapes out of cardstock (approximately the size of post-it notes)

$\square$Trace each shape on an $11^{\prime \prime \times 17^{\prime \prime}}$ page, each shape will be a different colour
$\square$ Perform 4 successive transformations on each shape. Each repetition of the shape will be traced in the same colour as the original. (In total there will be 25 shapes on your page when you are complete.)

$\square$Please number the order of the transformations and label what transformations have been made in short form.

## Required Transformations (short form in brackets):

## Translations:

$\square$

| Translation to the left | $(\operatorname{Tr} \leftarrow)$ | $\square$ | Diagonal up left | $(\operatorname{Tr} \nwarrow)$ |
| :--- | :--- | :--- | :--- | :--- |
| Translation to the right | $(\operatorname{Tr} \rightarrow)$ | $\square$ | Diagonal up right | $(\operatorname{Tr} \nearrow)$ |
| Translation up | $(\operatorname{Tr} \uparrow)$ | $\square$ | Diagonal down left | $(\operatorname{Tr} \downarrow)$ |
| Translation down | $(\operatorname{Tr} \downarrow)$ | $\square$ | Diagonal down right | $(\operatorname{Tr} \searrow)$ |

Reflections (draw reflection line with same colour as shape):

Horizontal reflection line ( RL )
(RL)
(RL)
Vertical reflection line


Reflection line inside shape


Reflection line on perimeter of shape


Reflection line outside of shape

Rotations (draw rotation axis with same colour as shape):

| $\square$ | $90^{\circ}$ rotation $\left(90^{\circ}\right)$ | $\square$ |
| :--- | :--- | :--- | | Rotation axis inside shape |
| :--- |
| $\square$ |
| $\square$ | | $180^{\circ}$ rotation $\left(180^{\circ}\right)$ | $\square$ | Rotation axis on perimeter <br> of shape |
| :--- | :--- | :--- |
| $\square$ | $270^{\circ}$ rotation $\left(270^{\circ}\right)$ | $\square$ | | Rotation axis outside of shape |
| :--- |

