## EXPLORING RIBBONWORK (PART B)

Reflect Over the $y$-Axis
The transformation from the preimage in Quadrant I to image 2 in Quadrant II is known as a reflection over the $y$-axis.

| Preimage | Image 2 | Do your best to write an algebraic rule to describe the <br> reflection over the $y$-axis. |
| :---: | :---: | :---: |
| $A(1,0)$ |  |  |
| $B(1,1)$ |  |  |
| $C(2,1)$ |  |  |
| $D(2,2)$ |  |  |
| $E(3,2)$ |  |  |
| $F(3,3)$ |  |  |
| $G(9,0)$ |  |  |

4) Does your rule apply when image 4 is reflected over the $y$-axis to get image 3? Explain.
5) Does your rule apply when image 2 is reflected over the $x$-axis to get image 3? Explain.

Reflect Over the $x$-Axis
There must be a different rule to follow when a figure is reflected over the $\boldsymbol{x}$-axis. Select any two images that are a reflection over the $x$-axis and complete the table below.

| Image \#__ | Image \#__ | Do your best to write an algebraic rule to describe the <br> reflection over the $x$-axis. |
| :--- | :--- | :--- |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

6) Does your rule apply to the other pair of reflections over the $x$-axis?
7) What else do you think we could reflect a figure over?
