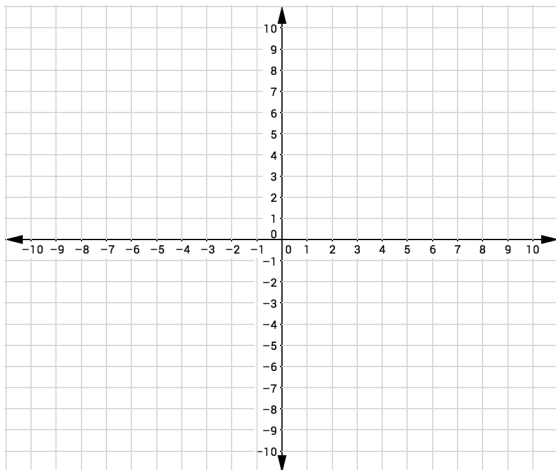## Section 4 – Topic 5
## Reflections of Polygons

Think back to what you know about reflections to answer the questions below.

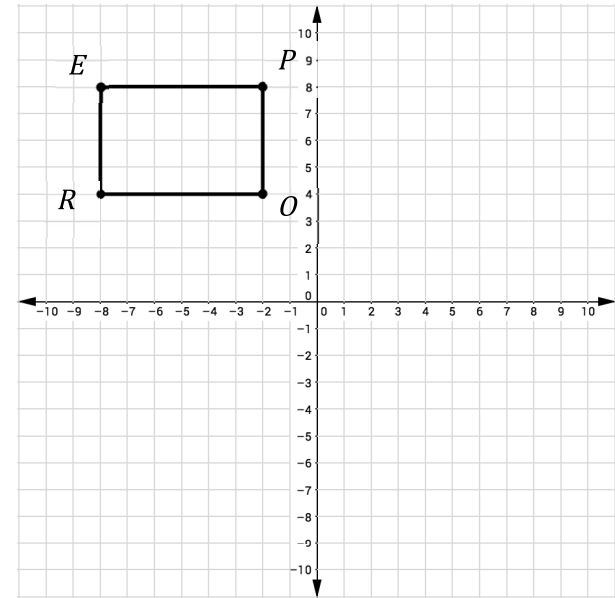*What are the mirror lines? Draw a representation of a mirror line.*

*What is a mirror point? Draw representation of a mirror point.*

*What are the most common mirror point(s) and line(s)?*

1. Consider rectangle $ROPE$ on the coordinate plane.

a. Draw a reflection over the $x-$axis. Write down the coordinates of the reflected figure.

b. Draw a reflection over the $y-$axis. Write down the coordinates of the reflected figure.

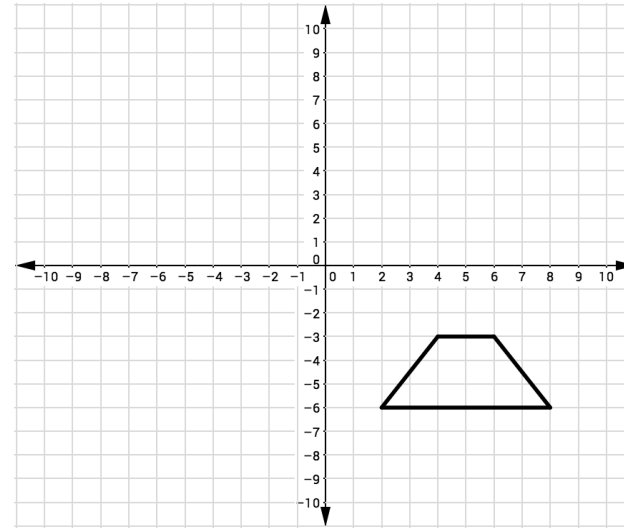2.  The pentagon below was reflected three different times and results in the dashed pentagons labeled as 1, 2, and 3.
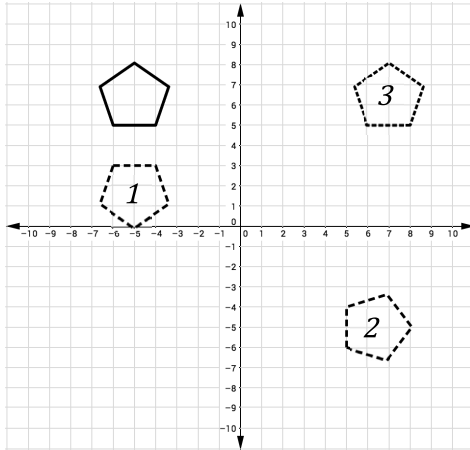


Describe each reflection in the table below.
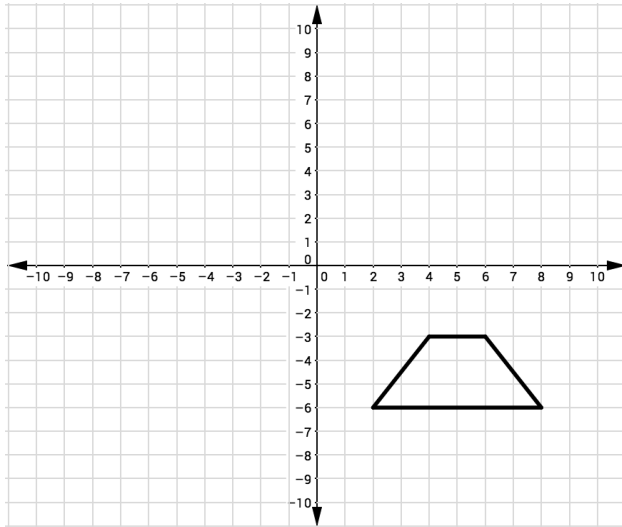
| Reflection 1 | Reflection 2 | Reflection 3 |
|---|---|---|
|  |  |  |

*Let's Practice!*

3.  Reflect the following image over $y = x$.

Section 4: Introduction to Polygons – Part 1

**_Try It!_**

4.   Reflect the following image over $y = -x$.



   What are the similarities and differences between reflecting over the axis and reflecting over other linear functions?

5.   Pentagon $CALOR$ is the result of a reflection of pentagon $FRISA$ over $y = x$. $CALOR$ has vertices at $C(2, -2), A(0, -4),$ $L(1, -6), O(3, -6),$ and $R(4, -4)$. In which quadrant was pentagon $FRISA$ located before being reflected to create $CALOR$?

Section 4: Introduction to Polygons – Part 1
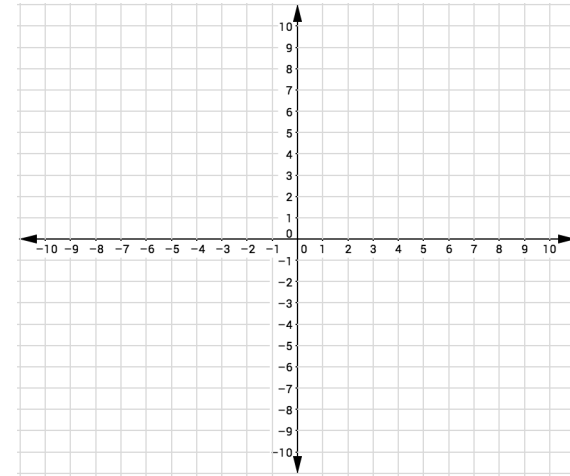
1.  Draw the line(s) of reflection of the following figures.

Section 4: Introduction to Polygons – Part 1