

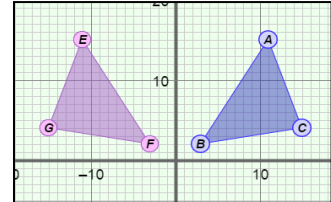
Vocabulary: Rotations, Reflections, and Translations



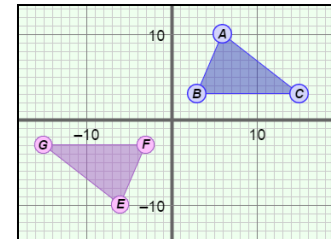
Vocabulary

- **Image** – a figure that has been transformed, compared to the original figure (the preimage).
- **Preimage** – the original figure, before being transformed.

- **Reflection** – a mirror image.
 - In the figure shown to the right, $\triangle EFG$ is the reflection of $\triangle ABC$ over the y -axis, so $\triangle EFG$ is a mirror image of $\triangle ABC$.
 - The y -axis is called the *line of reflection*.



- **Rotation** – a turn of a figure about a point.
 - In the figure shown to the right, the preimage, $\triangle ABC$, has been rotated 180° about the origin to get the image, $\triangle EFG$.



- **Transformation** – a change in the size, shape, direction, or position of a figure.
 - Transformations that don't change the size or shape of images are *isometric*, and include reflections, rotations, and translations.
 - Other transformations such as dilating (resizing) are not isometric.

- **Translation** – a movement of a figure from one place to another.
 - In the figure shown to the right, the preimage, $\triangle ABC$, has been translated 10 units to the left and 3 units up to get the image, $\triangle JKL$.

