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, Δ*EFG* is the reflection of Δ*ABC* over the *y*-axis, so Δ*EFG* is a mirror image of Δ*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, Δ*ABC*, has been rotated 180° about the origin to get the image, Δ*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, Δ*ABC*, has been translated 10 units to the left and 3 units up to get the image, Δ*JKL*.