

9.1 Reflections

Transformation

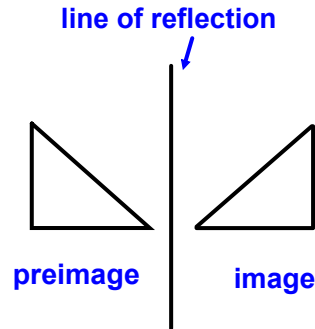
Maps an initial figure (preimage) onto a final figure (image)

Reflection

Transformation that uses a line like a mirror, with an image reflected in the line.

Line of Reflection

The mirror line

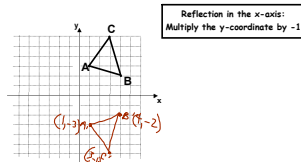


A reflection is an isometry
What does that mean??

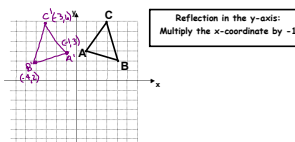
Isometry: A congruence transformation - preserving distance and angle measures.

Triangle ABC: A (1,3) B(4,2) C(3,6)

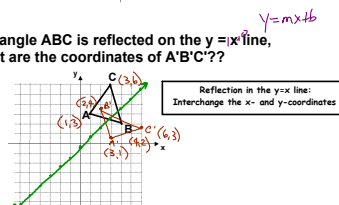
If triangle ABC is reflected on the x-axis, what are the coordinates of A'B'C'??



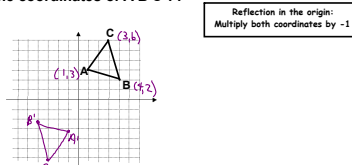
If triangle ABC is reflected on the y-axis, what are the coordinates of A'B'C'??



If triangle ABC is reflected on the $y = x$ line, what are the coordinates of A'B'C'??

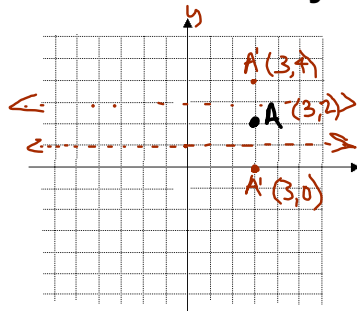


If triangle ABC is reflected in the origin, what are the coordinates of A'B'C'??

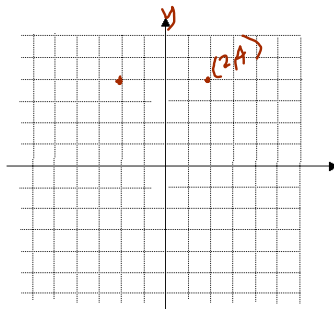


9.1 reflections notes

Find the coordinates of A (3,2) reflected in the line $y = 1$.



Find the coordinates of B(-2,4) reflected in the y-axis.



Symmetry

Line of symmetry: A line that can be drawn through a plane figure so that the figure on one side is the reflection image of the figure on the opposite side. (splits in half - mirror image on each side)

Point of symmetry: The common point of reflection for all points of a figure.