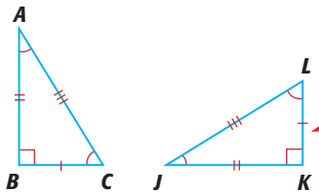
Section Overview

Professional Development

Congruent Figures — Lesson 8-9

Why? You can use the properties of congruent figures in many proofs in geometry.

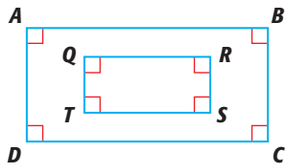


Two figures are **congruent** when their corresponding sides and corresponding angles are congruent.

Congruent

$\triangle ABC \cong \triangle JKL$

Their positions are different, but the triangles are the same size and shape.



Not congruent

$ABCD \ncong QRST$

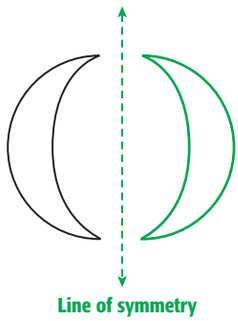
The rectangles are not the same size.

Transformations and Symmetry — Lessons 8-10, 8-11

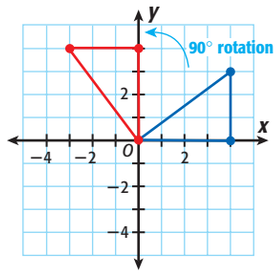
Why? Transformations of, and symmetry in, geometric figures occurs often in art, architecture, and engineering.

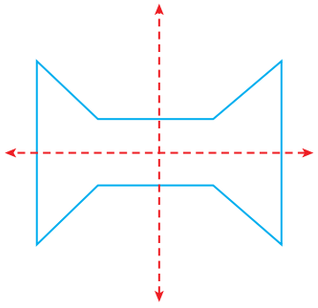
Translation

Reflection

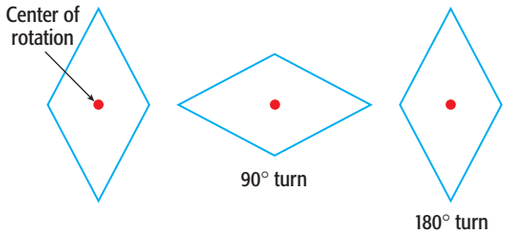


Rotation





A figure has **line symmetry** if it can be folded so that its halves coincide. This figure has both vertical and horizontal line symmetry.



A figure has **rotational symmetry** if it can be rotated a specific measure less than 360° and still look like the original figure. This figure has rotational symmetry with a 180° rotation.