



4.3 Relate Transformations and Congruence

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Transformations in the plane move or change a figure to produce a new figure. A **rigid motion** is a transformation that preserves length, angle measure, and area. A rigid motion is also called an *isometry*. *Translations*, *reflections*, and *rotations* are examples of rigid motions.

Reflection

Congruent Figures and Transformations

Two figures are congruent if **and only if** one or more rigid motions can be used to move one figure onto the other. If any combination of translations, reflections, and rotations can be used to move one shape onto the other, the figures are congruent.

