Lesson 2.1.4B Resource Page

Theorem Graphic Organizer Key

These converses were proved in Lesson 2.1.4:

same-side interior angles supplementary \rightarrow lines are parallel (problem 2-35) corresponding angles congruent \rightarrow lines are parallel (problem 2-38) alternate interior angles congruent \rightarrow lines are parallel (problem 2-38)

These converses were proved previously:

 $leg^2 + leg^2 = hypotenuse^2 → right triangle (previous course)$ ≅ parts → ≅ Δs (previous course)

This converse of a theorem is *not* true:

two angles congruent \rightarrow vertical angles

These converses of theorems can be proved using $\Delta s \cong \Rightarrow \cong$ parts:

Triangles congruent \rightarrow all three pairs of corresponding sides are congruent (SSS \cong).

Triangles congruent \rightarrow two pairs of corresponding sides are congruent *and* the angles between them (the included angle) are congruent (SAS \cong).

Triangles congruent \rightarrow two angles and the side between them are congruent to the corresponding angles and side in the other triangle (ASA \cong).

Triangles congruent \rightarrow two pairs of corresponding angles *and* a pair of corresponding sides that are not between them are congruent (AAS \cong).

Triangles congruent \rightarrow the hypotenuse and a leg of one right triangle are congruent to the hypotenuse and a leg of another right triangle (HL \cong).