

Section 2.5 – Proving Right Triangles Congruent

Hypotenuse – the side opposite the right angle in a right triangle

Legs – the other two sides of the right triangle

Ways to Prove Right Triangles Congruent:

Leg-Angle (LA): If a leg and an acute angle of one right triangle are congruent, respectively, to a leg and an acute angle of a second right triangle, then the right triangles are congruent.

Hypotenuse-Angle (HA): If the hypotenuse and an acute angle of one right triangle are congruent, respectively, to the hypotenuse and an acute angle of a second right triangle, then the right triangles are congruent.

Leg-Leg (LL): If the two legs of one right triangle are congruent, respectively, to the two legs of a second right triangle, then the right triangles are congruent.

Hypotenuse-Leg (HL): If the hypotenuse and a leg of one right triangle are congruent, respectively, to the hypotenuse and a leg of a second right triangle, then the right triangles are congruent.

NOTE: LA and HA are special cases of ASA.
LL is a special case of SAS.
We must prove the HL Theorem.