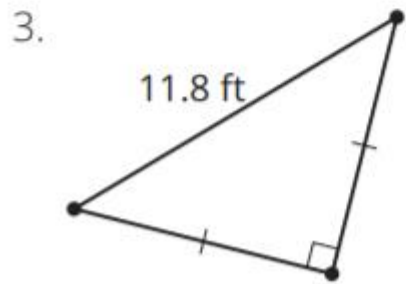
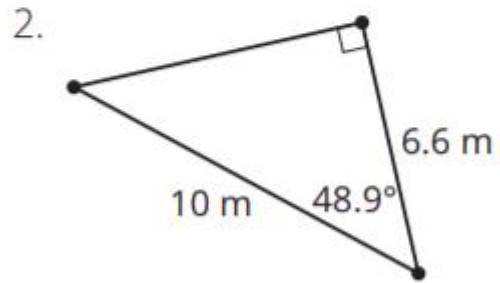
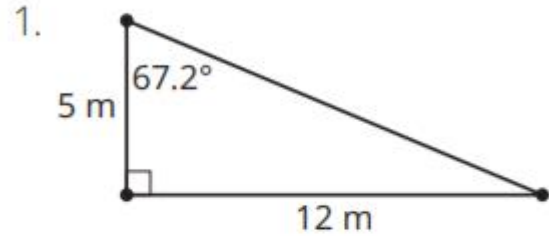
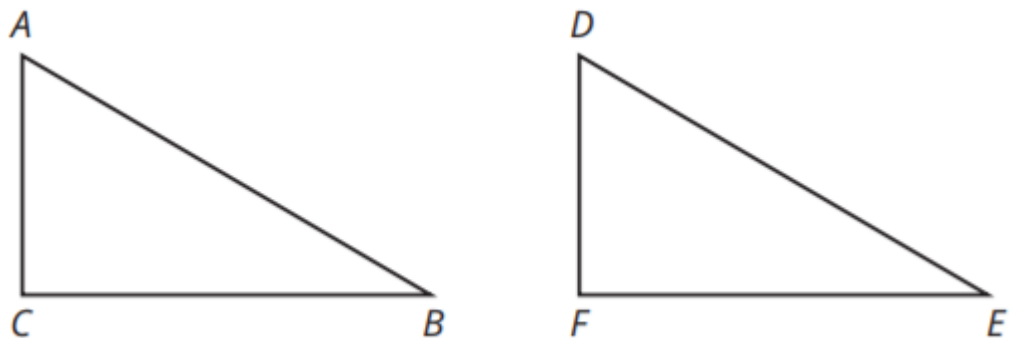


## Warm Up

Determine all the angle measures and side lengths of each right triangle.





**Given:**

**Right triangle  $ABC$  with right angle  $C$ .**

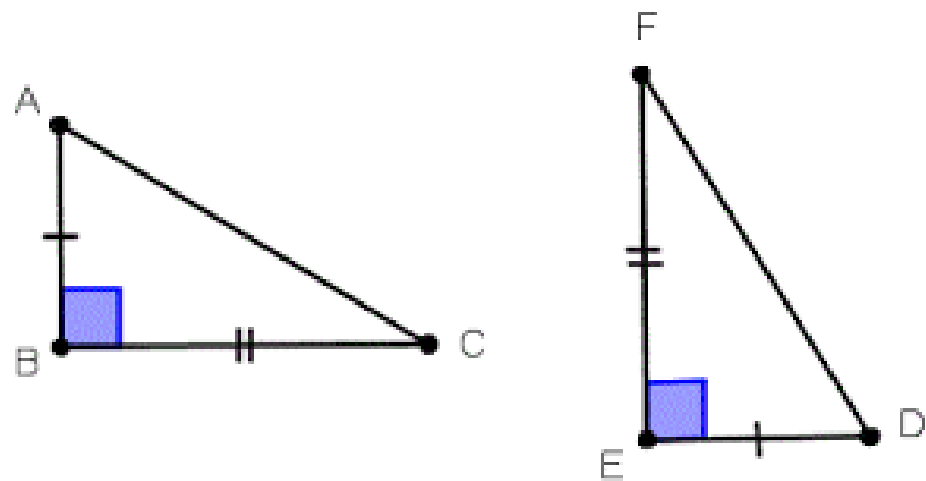
**Right triangle  $DEF$  with right angle  $F$ .**

$$\overline{AC} \cong \overline{DF}$$

$$\overline{AB} \cong \overline{DE}$$

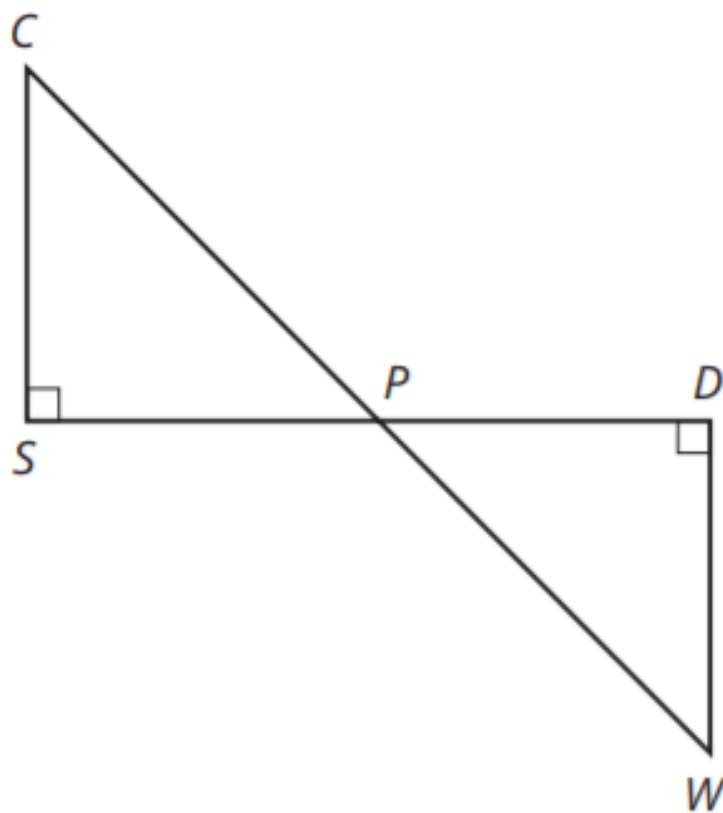
The **Hypotenuse-Leg (HL) Congruence Theorem** states: "If the hypotenuse and leg of one right triangle are congruent to the hypotenuse and leg of another right triangle, then the triangles are congruent."

You have learned about the Hypotenuse-Angle Congruence Theorem and the Hypotenuse-Leg Congruence Theorem. There are two other right angle theorems that can be proved with similar reasoning. The **Leg-Leg (LL) Congruence Theorem** states: "If the two corresponding shorter legs of two right triangles are congruent, then the two triangles are congruent." The **Leg-Angle (LA) Congruence Theorem** states: "If the leg and an acute angle of one right triangle are congruent to the corresponding leg and acute angle of another right triangle, then the triangles are congruent."

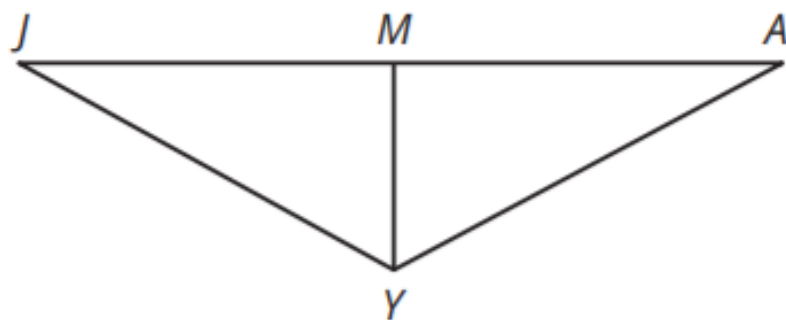


Determine whether there is enough information to prove that the two triangles are congruent. If so, name the congruence theorem used.

2. If  $\overline{CS} \perp \overline{SD}$ ,  $\overline{WD} \perp \overline{SD}$ , and  $P$  is the midpoint of  $\overline{CW}$ , is  $\triangle CSP \cong \triangle WDP$ ?



4. If  $\overline{JA} \perp \overline{MY}$  and  $\overline{JY} \cong \overline{AY}$ , is  $\triangle JYM \cong \triangle AYM$ ?



5. If  $\overline{ST} \perp \overline{SR}$ ,  $\overline{AT} \perp \overline{AR}$ , and  $\angle STR \cong \angle ATR$ , is  $\triangle STR \cong \triangle ATR$ ?

