Chapter 5
Congruent Triangles

5.1 Angles of Triangles

5.2 Congruent Polygons

5.3 Proving Triangle Congruence by SAS

5.4 Equilateral and Isosceles Triangles

5.5 Proving Triangle Congruence by SSS

5.6 Proving Triangle Congruence by ASA and AAS

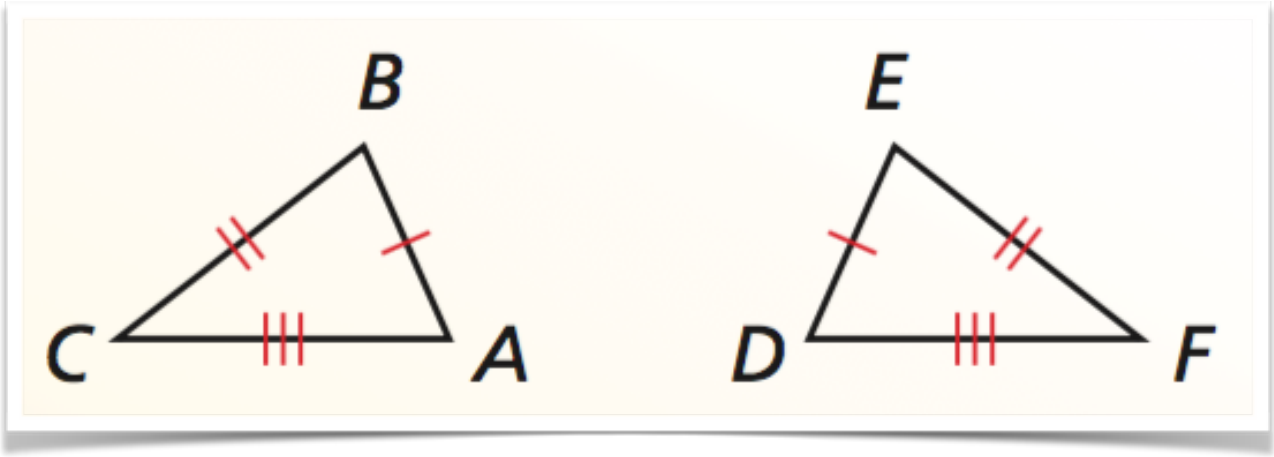
5.7 Using Congruent Triangles

5.8 Coordinate Proof (skip)

5.5 Proving Triangle Congruence by SSS

Theorem

Side-Side-Side (SSS) Congruence Theorem	If three sides of one triangle are congruent to three sides of a second triangle, then the two triangles are congruent.

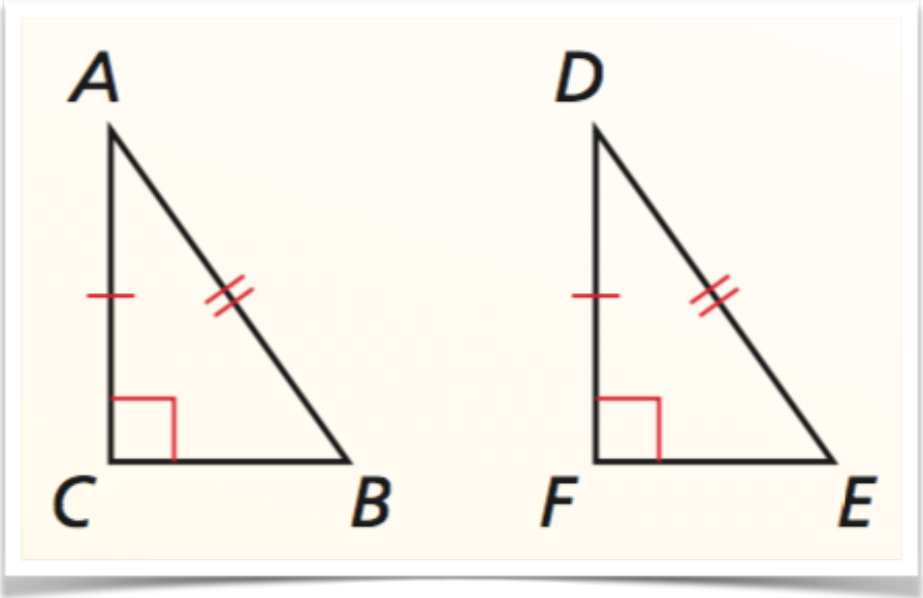


If $\overline{AB} \cong \overline{DE}$, $\overline{BC} \cong \overline{EF}$, and $\overline{AC} \cong \overline{DF}$, then $\triangle ABC \cong \triangle DEF$.

5.5 Proving Triangle Congruence by SSS

Theorem

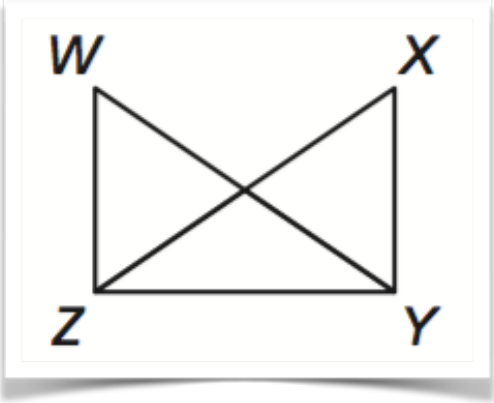
Hypotenuse-Leg (HL) Congruence Theorem	If the hypotenuse and a leg of a right triangle are congruent to the hypotenuse and a leg of a second right triangle, then the two triangles are congruent.



If $\overline{AB} \cong \overline{DE}$, $\overline{AC} \cong \overline{DF}$, and
$m\angle C = m\angle F = 90°$, then $\triangle ABC \cong \triangle DEF$.

5.5 Proving Triangle Congruence by SSS

Prove:



Given $\overline{WY} \cong \overline{XZ}$, $\overline{WZ} \perp \overline{ZY}$, $\overline{XY} \perp \overline{ZY}$

Prove $\triangle WYZ \cong \triangle XZY$

Statements	Reasons