Geometry

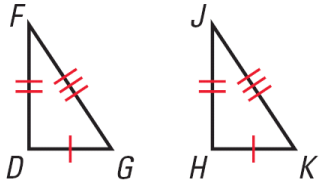
5.5 Proving Triangles Congruent by SSS

SSS (Side-Side-Side Congruence Postulate)

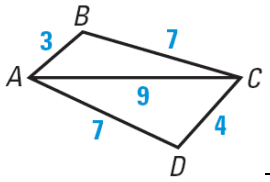
If _____ of one triangle are _____ to _____ of another triangle, then the _____ are _____.

True or False

ΔDFG ≅ ΔHJK

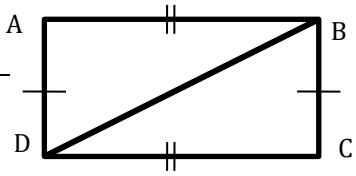


ΔACB ≅ ΔCAD



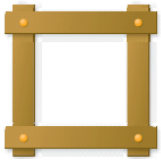
Given: $\overline{AB} \cong \overline{DC}; \overline{AD} \cong \overline{BC}$

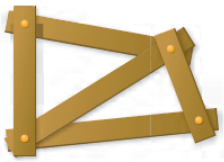
Prove: $\Delta ABD \cong \Delta CDB$

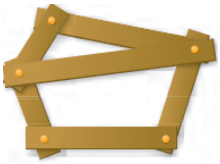


Statements	Reasons
1.	1.
2.	2.
3.	3.

Determine whether the figure is stable.





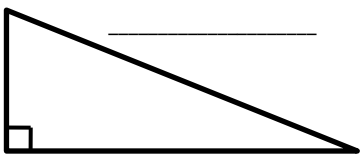


HL

Right triangles are special

If we know two sides are congruent we can use the Pythagorean Theorem (ch 7) to show that the third sides are congruent

_____

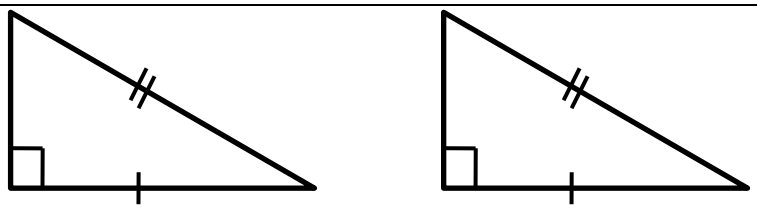


_____

_____

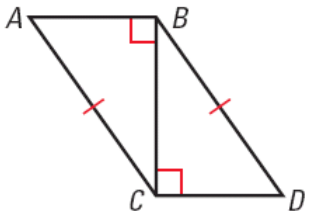
HL (Hypotenuse-Leg Congruence Theorem)

If the _____ and a _____ of a _____ triangle are congruent to the _____ and a _____ of another _____ triangle, then the two triangles are _____.



Given: $\angle ABC$ and $\angle BCD$ are rt $\angle$s; $\overline{AC} \cong \overline{BD}$

Prove: $\Delta ACB \cong \Delta DBC$



Statements	Reasons
1.	1.
2.	2.
3.	3.
4.	4.

Assignment: 256 #1, 2, 3, 4, 6, 7, 8, 10, 12, 14, 18, 20, 22, 26, 28, 31, 32, 34, 35, 36 = 20 total