LEARNING TARGETS

- I can prove triangles congruent by the SSS Congruence Postulate
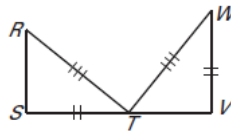
Side-Side-Side Congruence Postulate (SSS)	**Example:**
If three sides of one triangle are congruent to three sides of a second triangle, then the two triangles are congruent.	If Side $\overline{AB} \cong$ ____, Side $\overline{BC} \cong$ ____, and Side $\overline{CA} \cong$ ____, then $\triangle ABC \cong$ _____.

Example 1 – Use the SSS Congruence Postulate   Decide whether the congruence statement is true.

a) $\triangle JKL \cong \triangle MKL$
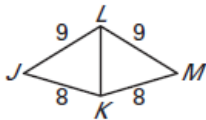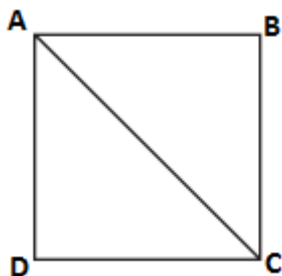
b) $\triangle RST \cong \triangle TVW$

Reasons to prove sides are congruent in triangle proofs:

- _____

- _____

- _____

Example 2 – Use the SSS Congruence Postulate to write a proof.

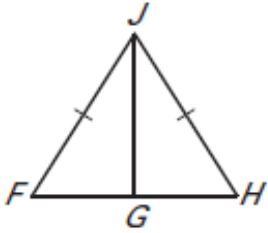**Given:** $\overline{AB} \cong \overline{CD}, \overline{DA} \cong \overline{CB}$

Prove: $\triangle ABC \cong \triangle CDA$

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

Given $\overline{FJ} \cong \overline{HJ}$,
    G is the midpoint of $\overline{FH}$.
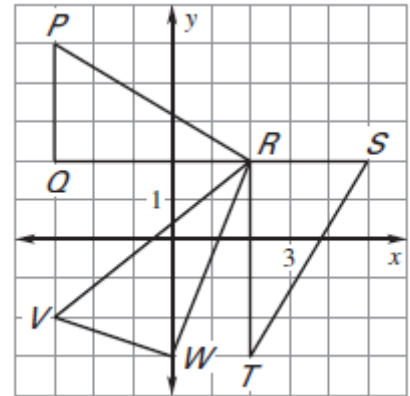
Prove $\triangle FGJ \cong \triangle HGJ$

Statements	Reasons
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.

Example 3 – Congruent Triangles in the Coordinate Plane

a) Determine whether ΔPQR is congruent to the other triangles shown at the right.

Use distance formula to find the lengths of the sides:

PQ = _____   VW = _____   RS = _____

QR = _____   WR = _____   RT = _____

PR = _____   VR = _____   ST = _____

CONCLUSIONS: