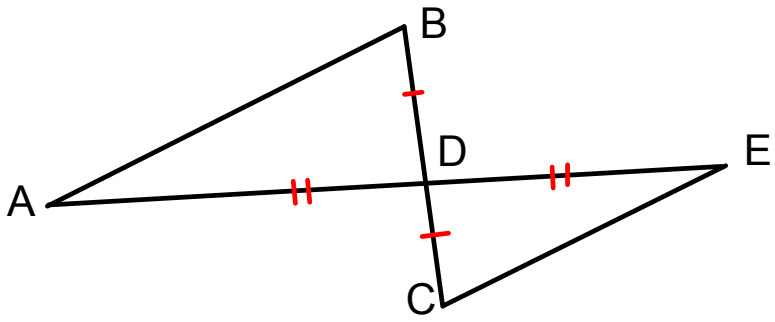
Exit Ticket:

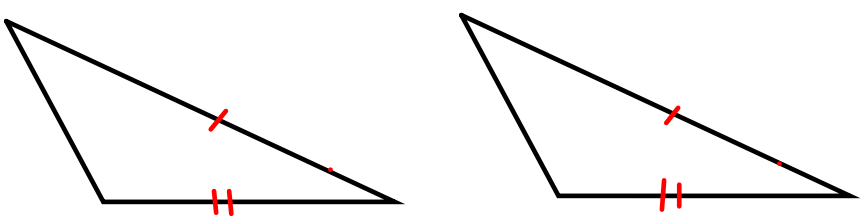
What do I need to know to use SSS?



Chapter 4.4: Prove Triangles Congruent by SAS and HL

Axiom 20: Side-Angle-Side

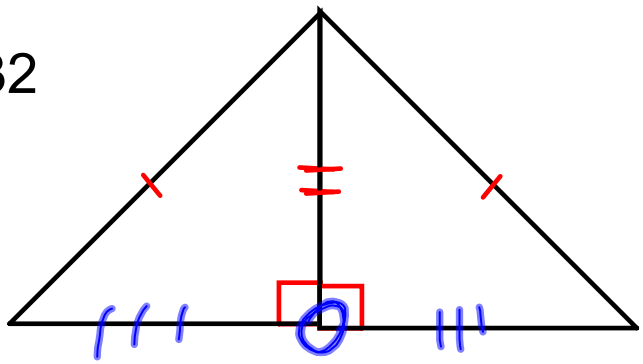
if 2 sides and the included angle of one triangle are congruent to 2 sides and the included angle of another triangle, then the triangles are congruent.



Hypotenuse-Leg 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.

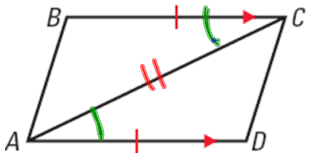
Proof pg.932



Write a Proof:

Prove:

$\Delta ABC \cong \Delta CDA$

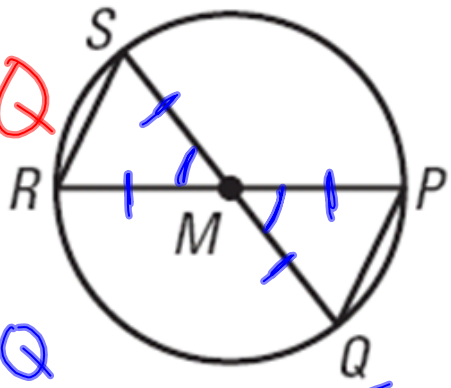


Statements	Reasons
1) $\overline{BC} \cong \overline{DA}$, $\overline{BC} \parallel \overline{DA}$	1) Given
2) $\overline{AC} \cong \overline{CA}$	2) Reflexive
3) $\angle BCA \cong \angle DAC$	3) alt. int.
4) $\Delta ABC \cong \Delta CDA$	4) SAS

Extra:

5) $\overline{BA} \cong \overline{DC}$	5) CPCTC

ex. What can you conclude about triangle MRS and triangle MPQ, if $\overline{SQ}$ and $\overline{RP}$ intersect at M



$\triangle MRS \cong \triangle MPQ$

SAS

$\angle SMR \cong \angle PMQ$

Vertical $\angle$'s

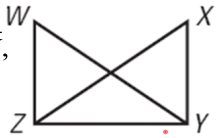
$\overline{SM} = \overline{MQ}$ def of radius

$\overline{RM} \cong \overline{MP}$

Write a Proof:

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

Prove: $\triangle WYZ \cong \triangle XZY$



Statements	Reasons
1) $\overline{WY} \cong \overline{XZ}$, $\overline{WZ} \perp \overline{ZY}$, $\overline{XY} \perp \overline{ZY}$	1) Given
2) $\overline{ZY} \cong \overline{YZ}$	2) Reflexive
3) $\angle WZY$ & $\angle XYZ$ are right $\angle$'s	3) def of $\perp$
4) $\triangle WZY$ & $\triangle XYZ$ are right $\triangle$'s	4) def of right $\triangle$.
5) $\triangle WYZ \cong \triangle XZY$	5) HL

Homework: Ch 4.4 pg.243
#'s 4-16e, 26,34,36