



Name _____

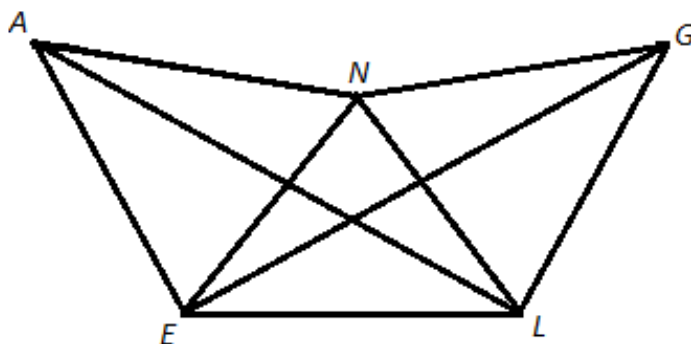
Lesson 20: Congruent Triangles (SAS) Cont'

LEARNING TARGETS

I CAN use my knowledge of rigid motions to prove two triangles are congruent.

Warm Up

Base Angles of Isosceles Triangles



For each of the following, if the given congruence exists:

- Name the isosceles triangle with the given sides
- Name the pair of congruent angles for the isosceles triangle based on the image above.

1. $\overline{AE} \cong \overline{EL}$

2. $\overline{LE} \cong \overline{LG}$

3. $\overline{AN} \cong \overline{LN}$

4. $\overline{EN} \cong \overline{NG}$

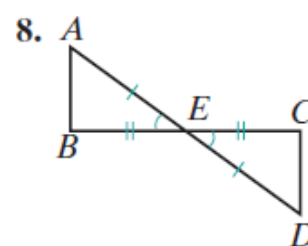
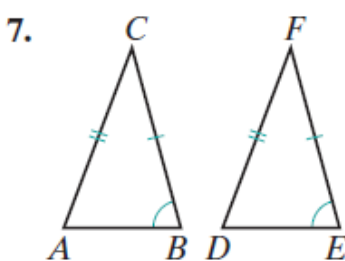
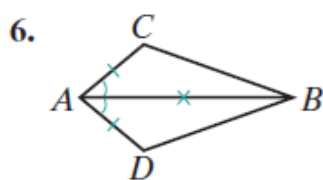
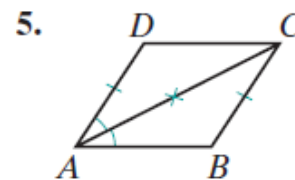
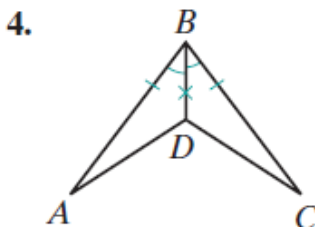
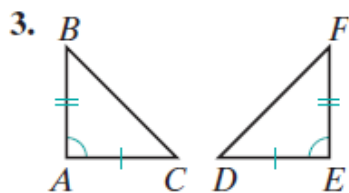
5. $\overline{NG} \cong \overline{GL}$

6. $\overline{AE} \cong \overline{EN}$

Mini Lesson

Example #1:

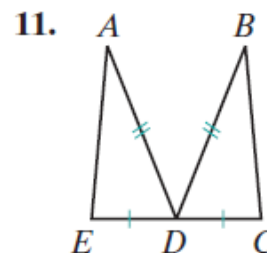
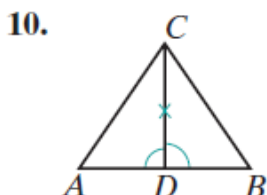
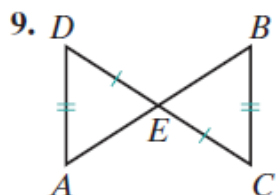
In each case, is the given information sufficient to prove congruent triangles using SAS?



Work Time:

Exercise 1:

In 9–11, two sides or a side and an angle are marked to indicate that they are congruent. Name the pair of corresponding sides or corresponding angles that would have to be proved congruent in order to prove the triangles congruent by SAS.

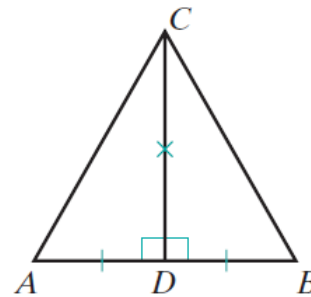


Exercise 2:

Given: $\triangle ABC$, \overline{CD} is the bisector of \overline{AB} , and $\overline{CD} \perp \overline{AB}$.

Prove: $\triangle ACD \cong \triangle BCD$

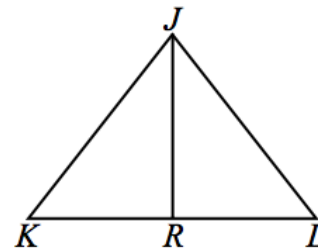
Prove the triangles congruent by SAS.



Exercise 3:

Given: $JK = JL$; \overline{JR} bisects \overline{KL}

Prove: $\triangle JRK \cong \triangle JRL$



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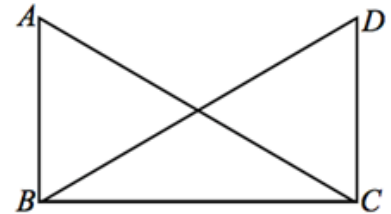
Classwork/Homework

Lesson 20: Congruent Triangles (SAS) Continued

Describe the additional piece of information needed for each pair of triangles to satisfy the SAS triangle congruence criteria.

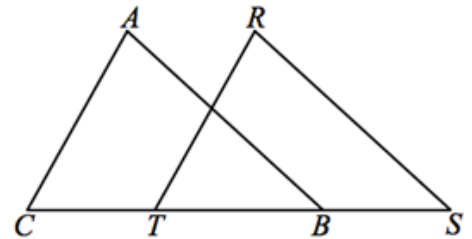
1. Given: $AB = DC$

Prove: $\triangle ABC \cong \triangle DCB$

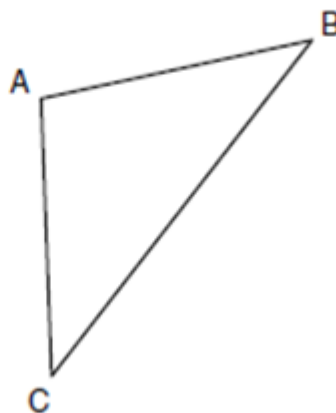


2. Given: $AB = RS$
 $\overline{AB} \parallel \overline{RS}$

Prove: $\triangle ABC \cong \triangle RST$



3. In the diagram of $\triangle ABC$ below, $\overline{AB} \cong \overline{AC}$. The measure of $\angle B$ is 40° .



What is the measure of $\angle A$?