Name:_____ Date:_____
Geometry Band:_____

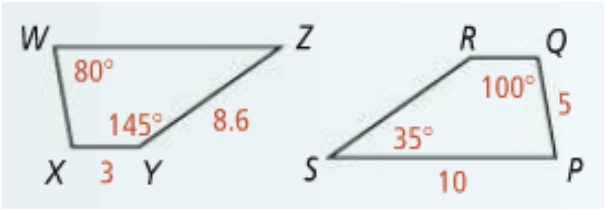
Unit 4: Congruent Triangles Study Guide

LT#1: Recognize congruent figures and their corresponding parts.

$RSTUV \cong KLMNO$. Complete the congruence statements.

1. $\overline{TS} \cong$ _____ **2.** $\angle N \cong$ _____ **3.** $\overline{LM} \cong$ _____ **4.** $VUTST \cong$ _____

$WXYZ \cong PQRS$. Find each measure or length.



9. $m\angle P$ **10.** QR **11.** WX **12.** $m\angle Z$ **13.** $m\angle X$ **14.** $m\angle R$

LT#2: Prove two triangles congruent using the SSS and SAS Postulates.
LT#3: Prove two triangles congruent using the ASA Postulate and the AAS Theorem.

15. In ΔHFD, what angle is included between $\overline{DH}$ and $\overline{DF}$?

16. In ΔOMR, what side is included between $\angle M$ and $\angle R$?

Which postulate or theorem, if any, could you use to prove the two triangles congruent? If there is not enough information to prove the triangles congruent, write *not enough information*.

17.

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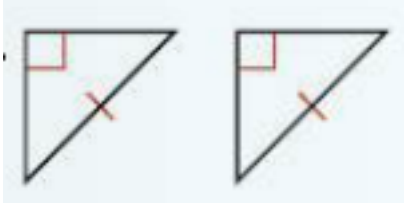

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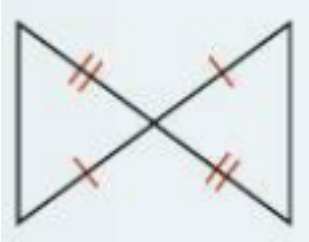
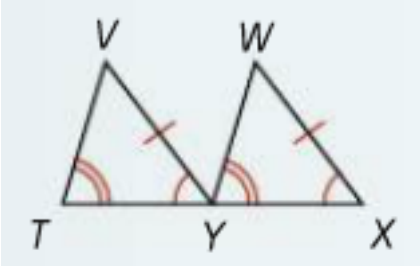


20.

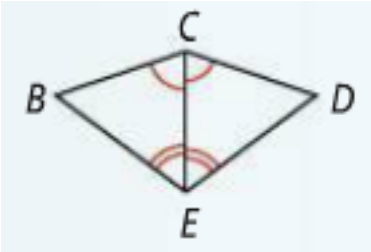
LT#4: Use triangle congruence and corresponding parts of congruent triangles to prove that parts of two triangles are congruent.

How can you use congruent triangles to prove the statement true?

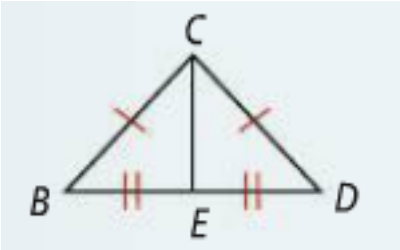
21. $\overline{TV} \cong \overline{YW}$



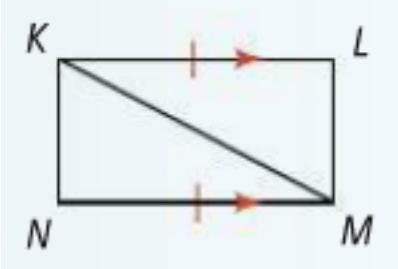
22. $\overline{BE} \cong \overline{DE}$



23. $\angle B \cong \angle D$



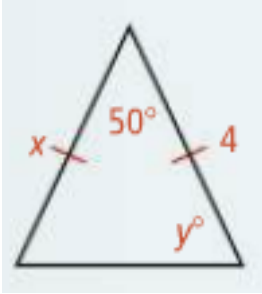
24. $\overline{KN} \cong \overline{ML}$



LT#5: Use and apply properties of isosceles and equilateral triangles.

Find the values of x and y.

25.



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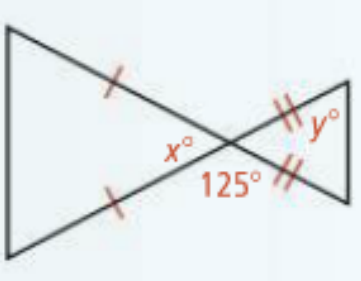

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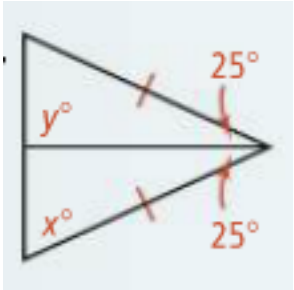

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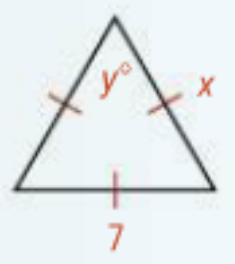
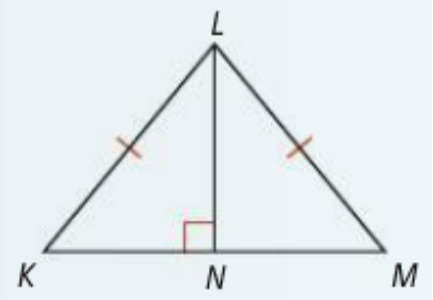


LT#6: Prove right triangles congruent using the Hypotenuse-Leg Theorem.

Write a proof for each of the following.

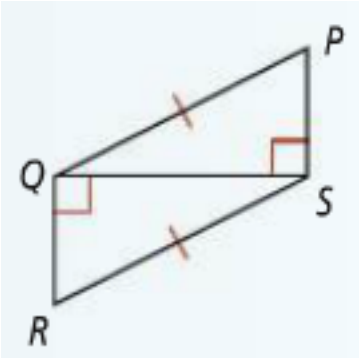
29. Given: $\overline{LN} \perp \overline{KM}, \overline{KL} \cong \overline{ML}$

Prove: $\Delta KLN \cong \Delta MLN$



30. Given: $\overline{PS} \perp \overline{SQ}, \overline{RQ} \perp \overline{QS}, \overline{PQ} \cong \overline{RS}$

Prove: $\Delta PSQ \cong \Delta RQS$



LT#7: Identify congruent overlapping triangles.
LT#8: Prove two triangles congruent using other congruent triangles.

Name a pair of overlapping congruent triangles in each diagram. State whether the triangles are congruent by SSS, SAS, ASA, AAS, or HL.

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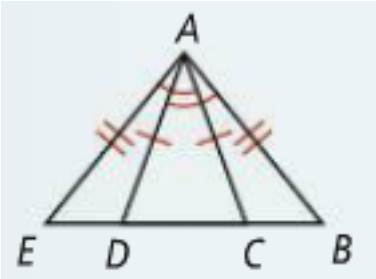

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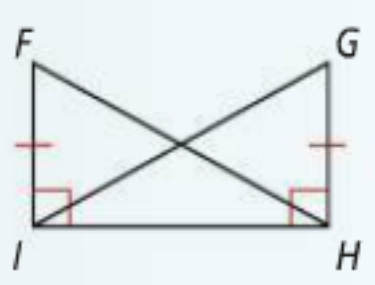

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