Name _____ Date _____

LESSON 5.6

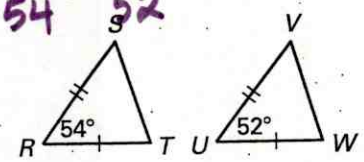
Practice

For use with pages 335–341

Complete with <, >, or = . *Explain.*

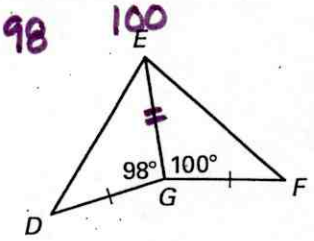
1. ST ? VW

54 > 52



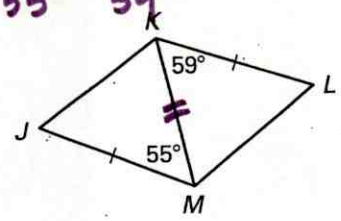
2. DE ? EF

98 < 100



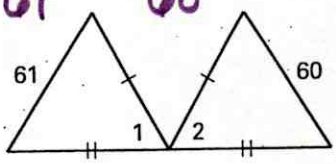
3. JK ? LM

55 < 59



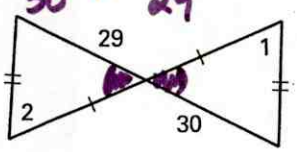
4. $m\angle 1$? $m\angle 2$

61 > 60



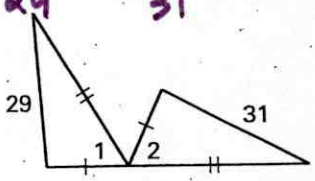
5. $m\angle 1$? $m\angle 2$

30 > 29



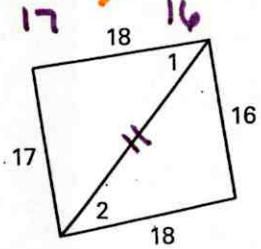
6. $m\angle 1$? $m\angle 2$

29 < 31

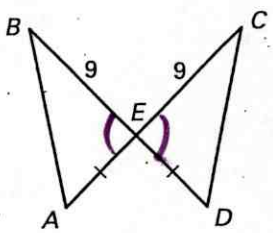


7. $m\angle 1$? $m\angle 2$

17 > 16



8. AB = ? CD

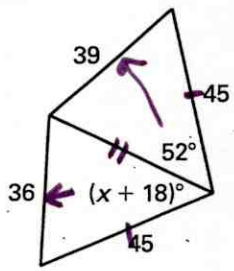


Name _____ Date _____

LESSON 5.6 **Practice** *continued*
For use with pages 335–341

Use the Hinge Theorem or its converse and properties of triangles to write and solve an inequality to describe a restriction on the value of x.

9.



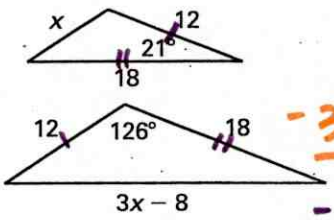
$36 < 39$

$x + 18 < 52$

$-18 \quad -18$

$x < 34$

10.



$21 < 126$

$x < 3x - 8$

$-3x \quad -3x$

$-2x < -8$

$\frac{-2x}{-2} < \frac{-8}{-2}$

$x > 4$

Write a temporary assumption you could make to prove the conclusion indirectly.

11. If two lines in a plane are parallel, then the two lines do not contain two sides of a triangle.

$x < 3x - 8$

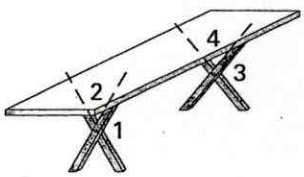
$8 + x < 3x$

$8 < 2x$

$4 < x$

12. If two parallel lines are cut by a transversal so that a pair of consecutive interior angles is congruent, then the transversal is perpendicular to the parallel lines.

13. **Table Making** All four legs of the table shown have identical measurements, but they are attached to the table top so that the measure of $\angle 3$ is smaller than the measure of $\angle 1$.



a. Use the Hinge Theorem to *explain* why the table top is not level.

b. Use the Converse of the Hinge Theorem to *explain* how to use a length measure to determine when $\angle 4 \cong \angle 2$ in reattaching the rear pair of legs to make the table level.