HW #70

LESSON 5.6

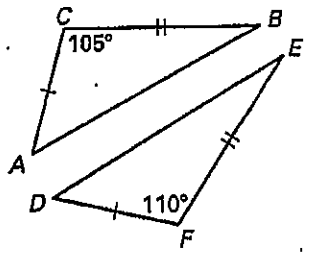
NAME _____ DATE _____

Practice A

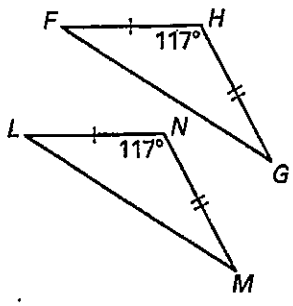
For use with pages 302–308

Complete with <, >, or =.

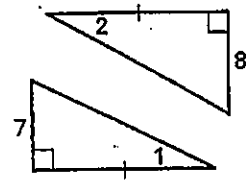
1. AB ? DE



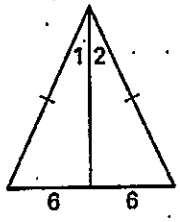
2. FG ? LM



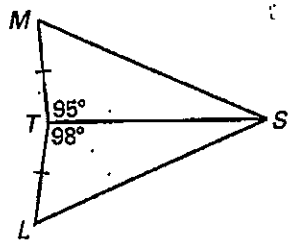
3. $m\angle 1$? $m\angle 2$



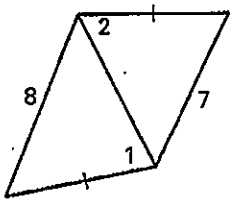
4. $m\angle 1$? $m\angle 2$



5. MS ? LS



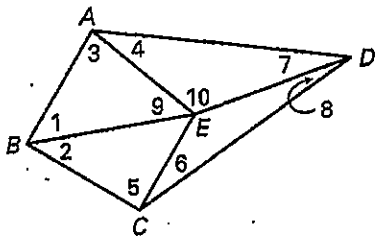
6. $m\angle 1$? $m\angle 2$



Match the conclusion on the right with the given information. Explain your reasoning.

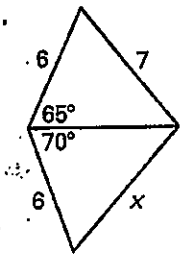
7. $AB = BC, \angle 1 > m\angle 2$
8. $AE > EC, AD = CD$
9. $m\angle 9 < m\angle 10, BE = ED$
10. $AB = BC, AD = CD$

A. $m\angle 7 > m\angle 8$
B. $AD > AB$
C. $m\angle 3 + m\angle 4 = m\angle 5 + m\angle 6$
D. $AE > EC$

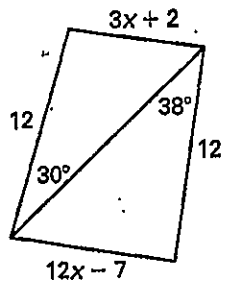


Use an inequality to describe a restriction on the value of x as determined by the Hinge Theorem or its converse.

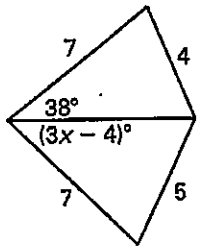
11.



12.



13.



Write the first statement for an indirect proof of the situation.

14. In $\triangle MNO$, if $\overline{MP}$ is perpendicular to $\overline{NO}$, then $\overline{MP}$ is an altitude.

LESSON **5.6**

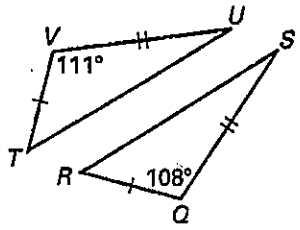
NAME _____ DATE _____

Practice B

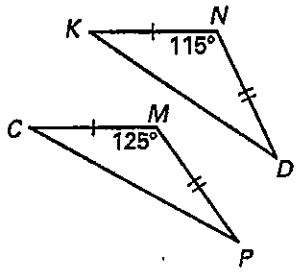
For use with pages 302–308

Complete with <, >, or =.

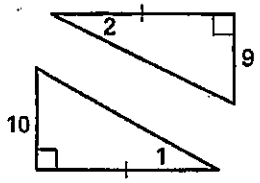
1. TU ? RS



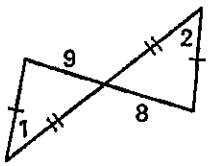
2. KD ? CP



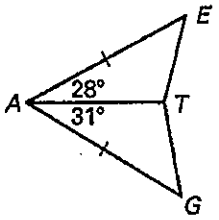
3. $m\angle 1$? $m\angle 2$



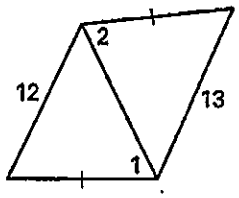
4. $m\angle 1$? $m\angle 2$



5. ET ? GT



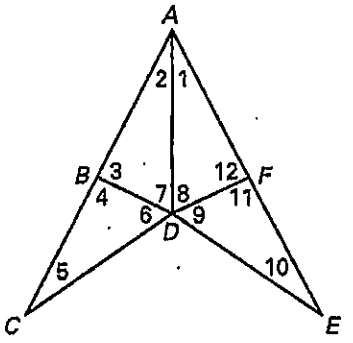
6. $m\angle 1$? $m\angle 2$



Match the conclusion on the right with the given information.

7. $AF = AB, m\angle 1 > m\angle 2$
8. $AF > FE, m\angle 11 > m\angle 12$
9. $m\angle 7 < m\angle 8, FD = BD$
10. $AF = AB, FD = DB$
11. $FD = DB$, $m\angle 9 + m\angle 8 > m\angle 7 + m\angle 6$
12. $AD = DC, m\angle 6 < m\angle 7$

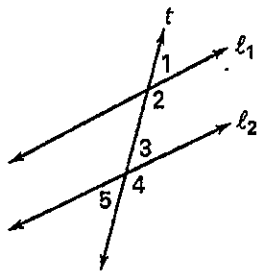
A. $ED > AD$
B. $AF > AB$
C. $m\angle 12 = m\angle 3$
D. $AB > BC$
E. $FD > BD$
F. $AE > AC$



Complete the indirect proof.

13. **Given:** $\angle 1 \ncong \angle 5$

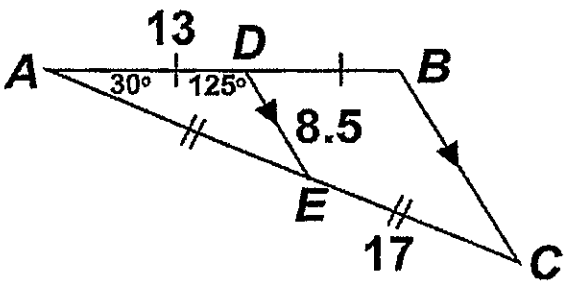
Prove: $\angle 2$ and $\angle 3$ are not supplementary.



Review.

Find the following.

1.

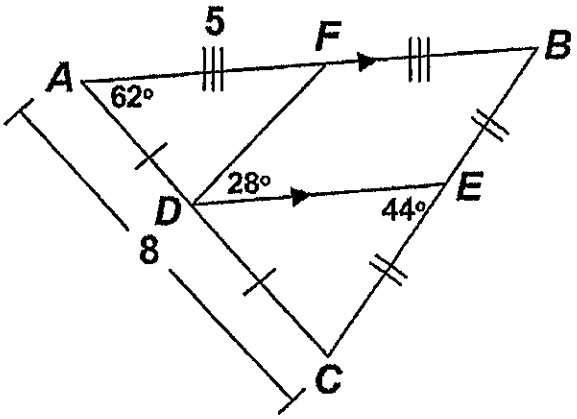


$DB =$ _____ $BC =$ _____ $AE =$ _____

$m\angle DEA =$ _____ $m\angle EDB =$ _____ $m\angle DBC =$ _____

$m\angle ECB =$ _____ Perimeter of $\Delta ABC =$ _____

2.



$FB =$ _____ $AB =$ _____ $CD =$ _____

$AD =$ _____ $DE =$ _____ $DF =$ _____

$BC =$ _____ $EC =$ _____ $BE =$ _____

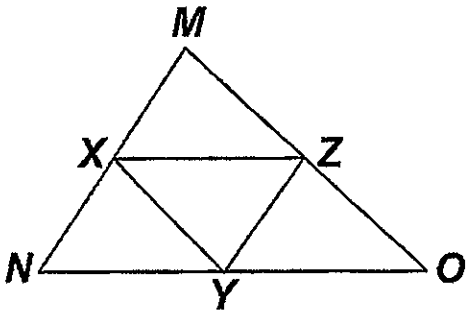
$m\angle DEB =$ _____ $m\angle EDC =$ _____ $m\angle DCE =$ _____

$m\angle ADF =$ _____ $m\angle AFD =$ _____ $m\angle DFB =$ _____

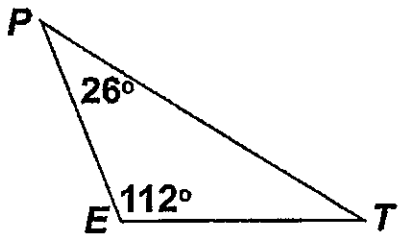
$m\angle EBF =$ _____ Perimeter of $DFBE =$ _____

---

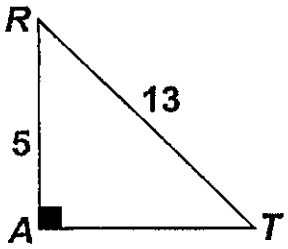
3. Given x, y, and z are the midpoints of the each side. *If* $YZ = 3x + 7$ *and* $MN = 7x + 6$, *find* YZ.



4. Name the sides from largest to smallest.



5. Name the angles from largest to smallest.



6. Can the side lengths form a triangle?

2.3, 5.4, 3.14

7. Can the side lengths form a triangle?

6^3, $\sqrt{39204}$, 20^2

8. Given ΔABC, $AC = 16$ and CB has a value that is doubled of AC. Describe the possible lengths of the AB.

9. If $BD = DC$, find the coordinates of point D.

10. If point F has the coordinates of (-1, 1) and point G has the coordinates of (2, -4), would $\overline{FG} \parallel \overline{BC}$. Explain.