NAME Key DATE _____ PERIOD ____

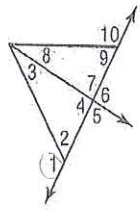
5-2 Practice

Inequalities and Triangles

Determine which angle has the greatest measure.

1. $\angle 1$, $\angle 3$, $\angle 4$

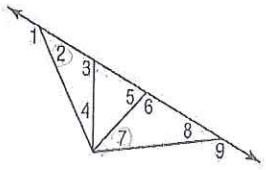
2. $\angle 4$, $\angle 8$, $\angle 9$



3. $\angle 2$, $\angle 3$, $\angle 7$

4. $\angle 7$, $\angle 8$, $\angle 10$

Use the Exterior Angle Inequality Theorem to list all angles that satisfy the stated condition.



5. all angles whose measures are less than $m\angle 1$

$\angle 3, \angle 4, \angle 5, \angle 7, \angle 8$

6. all angles whose measures are less than $m\angle 3$

$\angle 5, \angle 7, \angle 8$

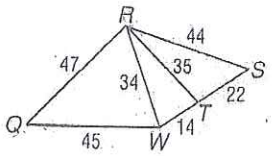
7. all angles whose measures are greater than $m\angle 7$

$\angle 9, \angle 5, \angle 3, \angle 1$

8. all angles whose measures are greater than $m\angle 2$

$\angle 6, \angle 9$

Determine the relationship between the measures of the given angles.



9. $m\angle QRW$, $m\angle RWQ$

$45 < 47$

10. $m\angle RTW$, $m\angle TWR$

$34 < 35$

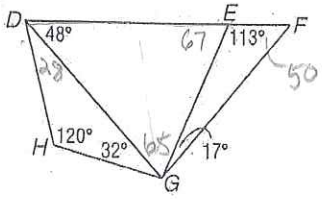
11. $m\angle RST$, $m\angle TRS$

$35 > 22$

12. $m\angle WQR$, $m\angle QRW$

$34 < 45$

Determine the relationship between the lengths of the given sides.



13. $\overline{DH}$, $\overline{GH}$

$32 > 28$

14. $\overline{DE}$, $\overline{DG}$

$65 < 67$

15. $\overline{EG}$, $\overline{FG}$

$50 < 113$

16. $\overline{DE}$, $\overline{EG}$

$65 > 48$

17. **SPORTS** The figure shows the position of three trees on one part of a Frisbee™ course. At which tree position is the angle between the trees the greatest?

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