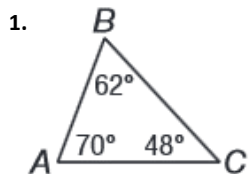
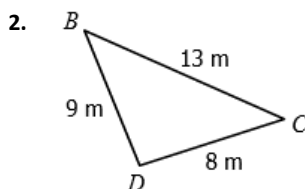


CHP 7 REVIEW

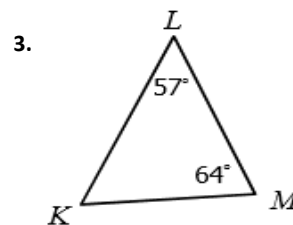
Give the sides or angles from least to greatest for each triangle.



$AB < AC < BC$



$\angle B < \angle C < \angle D$

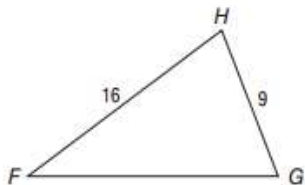


$KM < LM < KL$

Use the given figure to answer each question.

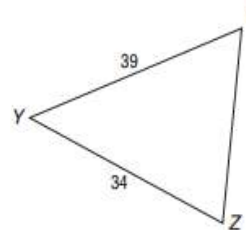
4. What are possible measures for $\angle F$?

$7 < \angle F < 25$



5. If $m\angle X < m\angle Y < m\angle Z$, what are possible measures for $\angle X$?

$35 < \angle X < 38$

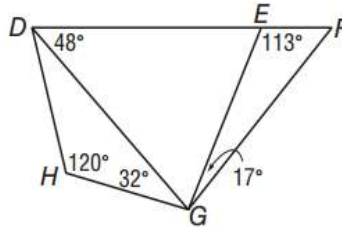
Use the figure at the right to determine the relationship between the lengths of the given sides (use $<$, $>$, or $=$)

6. $DH > GH$

7. $DE < DG$

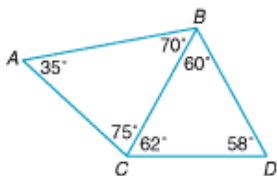
8. $EG < FG$

9. $DE > EG$



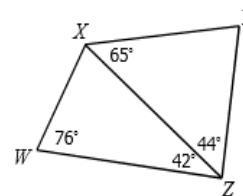
10. Which is the longest segment in $\triangle ABC$?

AB



11. Which is the longest segment in $\triangle XYZ$?

XZ



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

12. measures are less than $m\angle 1$

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

13. measures are greater than $m\angle 7$

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

14. measures are greater than $m\angle 2$

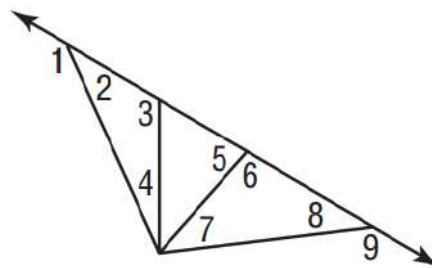
$\angle 6, \angle 9$

15. If the measure of $\angle 3$ is 100° , check the possible measures for $\angle 1$?

☐ 10° ☐ 100° ☒ 151°
☐ 80° ☒ 101° ☐ 180°

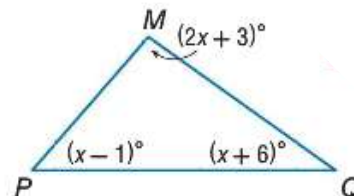
16. If the measure of $\angle 9$ is 135° , check the possible measures for $\angle 6$?

☐ 171° ☐ 135° ☒ 134°
☒ 98° ☒ 79° ☒ 50°



17. Mary, Paula, and Quinta are friends that live close to one another. Which two friends have the farthest distance between them?

$Paula \text{ and } Quinta$



Determine which sets of numbers could be the lengths of the sides of a triangle.

18. 6, 6, 12

no

19. 9, 5, 15

no

20. 2.6, 8.1, 10.2

yes

21. $\sqrt{2}$, $\sqrt{9}$, $\sqrt{18}$

yes

Find the range for the measure of the third side of a triangle given the measures of two sides.

22. 6 feet and 19 feet

$$13 \text{ ft} < x < 25 \text{ ft}$$

23. 18 and 23

$$5 < x < 41$$

24. 54 cm and 7 cm

$$47 \text{ cm} < x < 61 \text{ cm}$$

Match the name with the theorem.

25. Exterior angle inequality

C

26. Angle-Side Relationships

A

27. Triangle Inequality Theorem

D

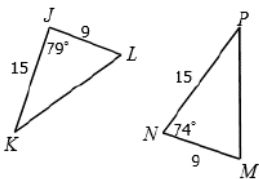
28. Hinge Theorem

B

- A. If one side of a triangle is longer than another, then the angle opposite the longer side has a greater measure than the angle opposite the shorter side.
- B. If two sides of a triangle are congruent to two sides of another and the included angle of the first is larger than the included angle of the second, then the third side of the first triangle is longer than the third side of the second.
- C. The measure of an exterior angle of a triangle is greater than the measure of either of its corresponding remote interior angles.
- D. The sum of the lengths of any two sides of a triangle must be greater than the length of the third side.

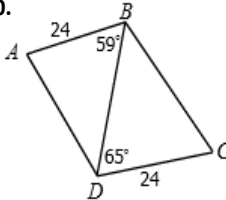
Compare the sides and angles by filling in the blanks with $<$, $>$ or $=$ symbol.

29.



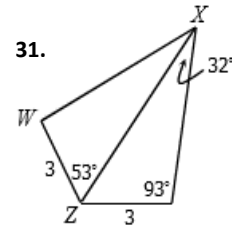
$$KL > PM$$

30.



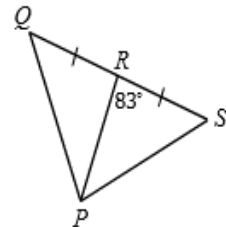
$$AD < BC$$

31.



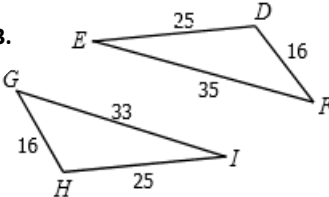
$$WX < XY$$

32.



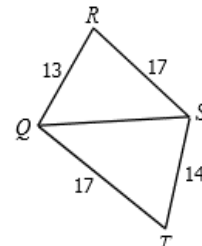
$$PQ > PS$$

33.



$$m\angle D > m\angle H$$

34.



$$m\angle RSQ < m\angle TQS$$

Answer the following based on the information given.

35. In $\triangle PQR$, $PQ = 11$ ft, and $QR = 7$ ft, and $PR = 15$ ft. List the angles in order from smallest to largest.

$$\angle P < \angle R < \angle Q$$

36. In $\triangle JKL$, $JK = 11$ cm, $KL = 4$ cm, and $JL = 7$ inches. List the angles in order from smallest to largest.

$$\angle J < \angle K < \angle L$$

Answer the following based on the information given.

37. If the sides of $\triangle QRS$, are $QR = 10x - 6$, $RS = 6x - 15$, and $QS = x + 24$, find a range of possible values for x .

$$3 < x < 5$$

38. List the sides of $\triangle FGH$, in order from least to greatest if $m\angle F = (15x - 7)^\circ$, $m\angle G = (6x - 15)^\circ$, and $m\angle H = (4x + 2)^\circ$.

$$FH < FG < GH$$