10) **Use the Exterior Angle Inequality Theorem to list all of the angles that satisfy the stated condition.**

3. measures are less than $m\angle 1$ $\angle 5, \angle 6$

4. measures are greater than $m\angle 1$ $\angle 7$

5. measures are less than $m\angle 7$ $\angle 1, \angle 3, \angle 5, \angle 6$

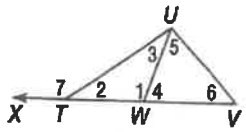
6. measures are greater than $m\angle 2$ $\angle 4$

7. measures are greater than $m\angle 5$ $\angle 1, \angle 7$

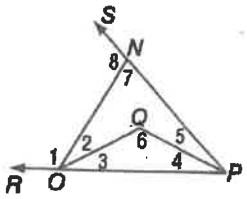
8. measures are less than $m\angle 4$ $\angle 2, \angle 3$

9. measures are less than $m\angle 1$ $\angle 7, \angle 5, \angle 4$

10. measures are greater than $m\angle 4$ $\angle 1, \angle 8$

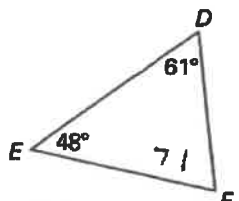


Exercises 3–8

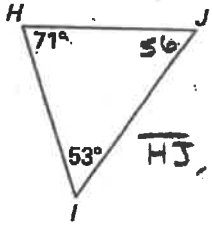


Exercises 9–10

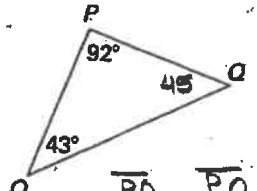
11) **List the sides in order from shortest to longest.**



$\overline{DF}, \overline{EF}, \overline{ED}$

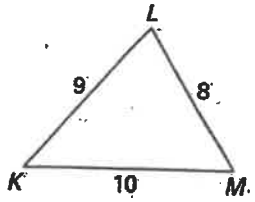


$\overline{HJ}, \overline{HI}, \overline{IJ}$

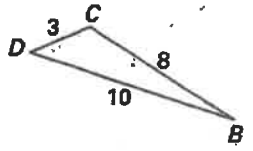


$\overline{PQ}, \overline{PO}, \overline{OQ}$

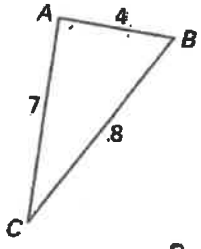
12) **List the angles in order from smallest to largest.**



$\angle K, \angle M, \angle L$



$\angle B, \angle D, \angle C$



$\angle C, \angle B, \angle A$

13) **Is it possible to form a triangle with the given side lengths? If not explain why not.**

9, 12, 18 yes

8, 9, 17 no

14, 14, 19 yes

23, 26, 50 no

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

6 ft and 19 ft $13 < x < 25$

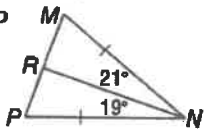
7 km and 29 km $22 < x < 36$

13 in. and 27 in. $14 < x < 40$

18 ft and 23 ft $5 < x < 41$

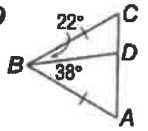
15) **Compare the given measures.**

1. *MR* and *RP*



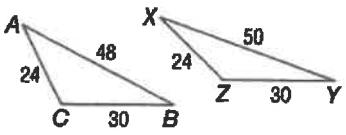
$MR > RP$

2. *AD* and *CD*



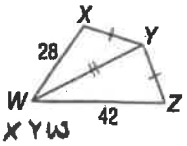
$AD > CD$

3. $m\angle C$ and $m\angle Z$



$m\angle Z > m\angle C$

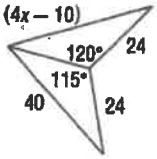
4. $m\angle XYW$ and $m\angle WYZ$



$m\angle WYZ > m\angle XYW$

16) **Write an inequality for the range of values of x.**

5. $(4x - 10)$

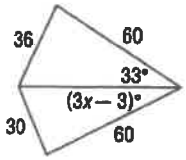


$40 < 4x - 10$

$\frac{50}{4} < x$

$12.5 < x$

6.



$33 > 3x - 3$

$36 > 3x$

$12 > x$