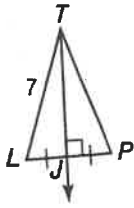


Geometry CP  
Chapter 5 Review

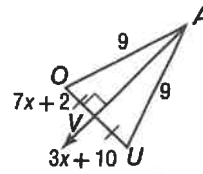
1) Find each measure.

TP



$TP = 7$

VU



$$7x + 2 = 3x + 10$$

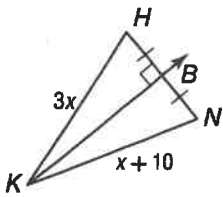
$$4x = 8$$

$$x = 2$$

$$VU = 3(2) + 10$$

$16$

KN

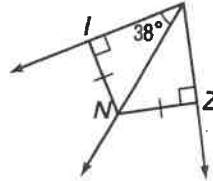


$$3x = x + 10$$

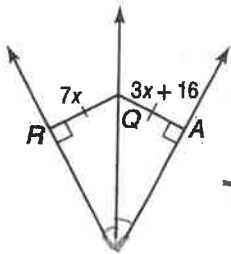
$$x = 5$$

$KN = 15$

$\angle NJZ = 38^\circ$



QA



$$7x = 3x + 16$$

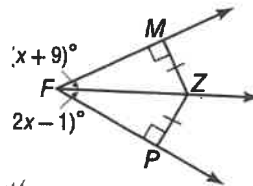
$$4x = 16$$

$$x = 4$$

$QA = 3(4) + 16$

$= 28$

$\angle MFZ$

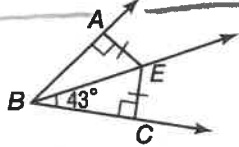


$$x + 9 = 2x - 1$$

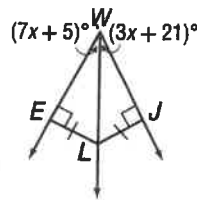
$$10 = x$$

$\angle MFZ = 19^\circ$

$m\angle ABE = 43^\circ$



$m\angle EWL$



$$7x + 5 = 3x + 21$$

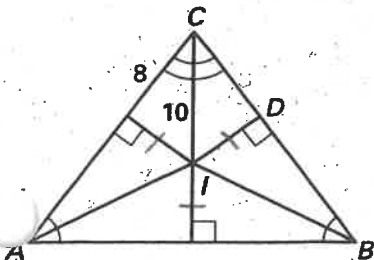
$$4x = 16$$

$$x = 4$$

$$m\angle EWL = 7(4) + 5$$

$= 33^\circ$

2) Find ID.



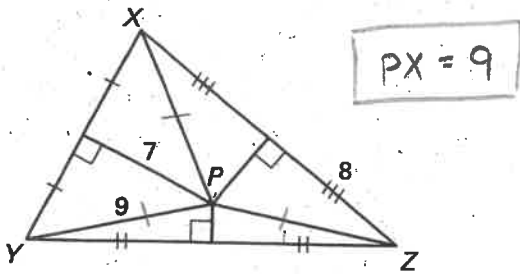
$$8^2 + x^2 = 10^2$$

$$x^2 = 36$$

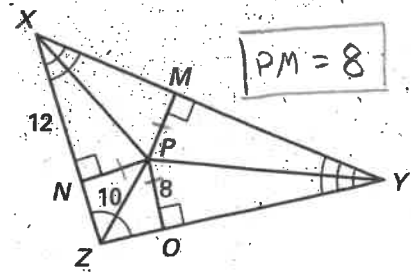
$$x = 6$$

$ID = 6$

- 3) The perpendicular bisectors of  $\triangle XYZ$  meet at point  $P$ . Find  $PX$ .



- 4) The angle bisectors of  $\triangle XYZ$  meet at point  $P$ . Find  $PM$ .



- 5) In  $\triangle PQR$ ,  $NQ = 6$ ,  $RK = 3$ , and  $PK = 4$ . Find each measure.

$$KM = 2$$

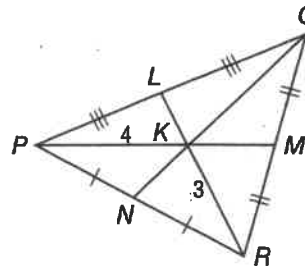
$$KQ = 4$$

$$LK = \frac{3}{2}$$

$$LR = \frac{9}{2}$$

$$NK = 2$$

$$PM = 6$$



\* Medians

- 6) In  $\triangle STR$ ,  $H$  is the centroid,  $EH = 6$ ,  $DH = 4$ , and  $SM = 24$ . Find each measure.

$$SH = 16$$

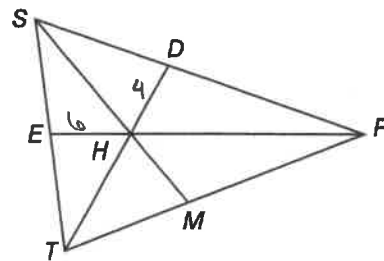
$$HM = 8$$

$$TH = 8$$

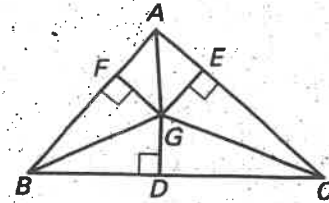
$$HR = 12$$

$$TD = 12$$

$$ER = 18$$



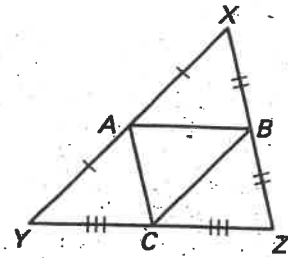
7) Use the diagram shown.  $G$  is the incenter of  $\triangle ABC$ .



6.  $\angle GCA \cong ? \angle GCD$       7.  $\angle ABG \cong ? \angle GBD$   
 8.  $\angle GEC \cong ? 90^\circ$       9.  $\overline{GD} \cong ?$  and  $\frac{?}{\overline{FG}}$  and  $\frac{?}{\overline{GE}}$   
 10. What method could be used to prove  $\triangle GFA \cong \triangle GEA$ ?

HL

8) Use the diagram of  $\triangle XYZ$  where  $A$ ,  $B$ , and  $C$  are the midpoints of the sides.



1.  $\overline{AB} \parallel ? \overline{YZ}$   
 2.  $\overline{XY} \parallel ? \overline{BC}$   
 3. If  $AC = 3$ , then  $XZ = ? \cdot 6$   
 4. If  $YZ = 7$ , then  $AB = ? \cdot 7/2$   
 5. If  $AC = 3m$ , then  $XZ = ? \cdot 6m$   
 6. If  $XY = m + 1$  and  $BC = m - 3$ , then  $XY = ?$   
 7. If  $AC = m - 2$  and  $XZ = m + 4$ , then  $AC = ? \cdot 6$   
 8. If  $BC = \frac{3}{4} AC$  and  $XZ = 8$ , then  $BC = ? \cdot 3$

$$2(m-3) = m+1$$

$$2m-6 = m+1$$

$$m = 7$$

$$2(m-2) = m+4$$

$$2m-4 = m+4$$

$$m = 8$$

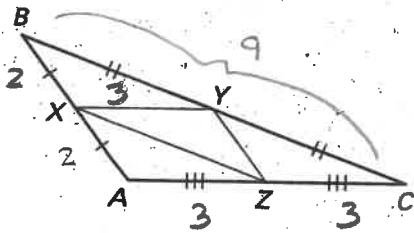
$$AC = 4$$

$$BC = \frac{3}{4}(4)$$

$$= 3$$

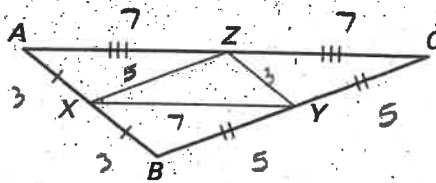
9) Find the perimeter of  $\triangle ABC$ .

17. Given:  $AX = 2, XY = 3, BC = 9$



$$9 + 4 + 6 = \boxed{19}$$

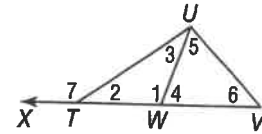
18. Given:  $XZ = 5, ZY = 3, XY = 7$



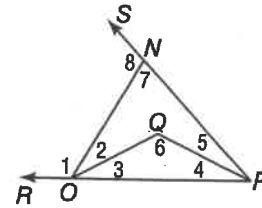
$$14 + 6 + 10 = \boxed{30}$$

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  $m\angle 4$   $\angle 1, \angle 8$

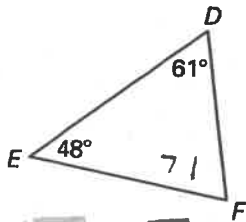


Exercises 3-8

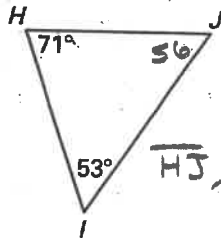


Exercises 9-10

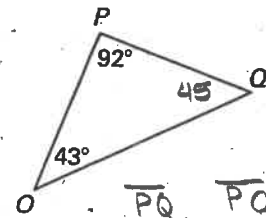
11) List the sides in order from shortest to longest.



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

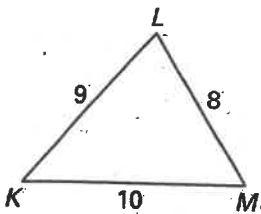


$\overline{HJ}, \overline{HI}, \overline{IJ}$

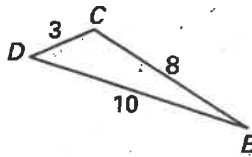


$\overline{PQ}, \overline{PO}, \overline{OQ}$

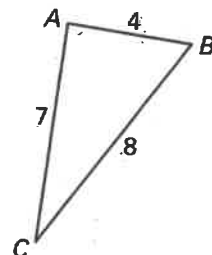
12) List the angles in order from smallest to largest.



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



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



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

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  $22 < x < 36$

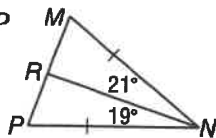
13 in. and 27 in.  $14 < x < 40$

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

15) Compare the given measures.

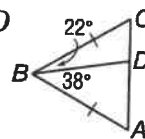
1.  $MR$  and  $RP$

$MR > RP$



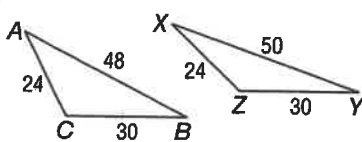
2.  $AD$  and  $CD$

$AD > CD$



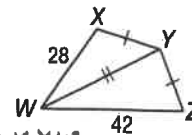
3.  $m\angle C$  and  $m\angle Z$

$m\angle Z > m\angle C$



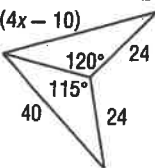
4.  $m\angle XYW$  and  $m\angle WYZ$

$m\angle WYZ > m\angle XYW$



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

5.  $(4x - 10)$

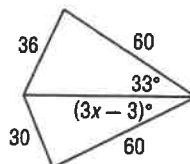


$$40 < 4x - 10$$

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

$$12.5 < x$$

6.



$$33 > 3x - 3$$

$$36 > 3x$$

$$12 > x$$

