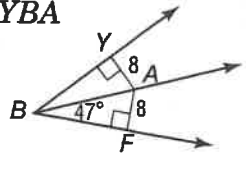


Chapter 5 Review HW

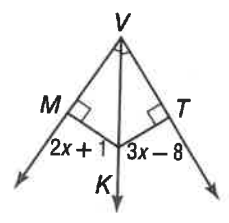
5.1

1) Find each measure:

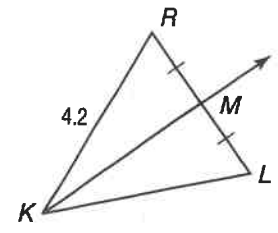
$m\angle YBA$



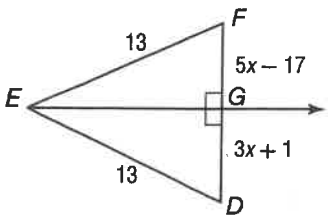
MK



KL



FG



2)

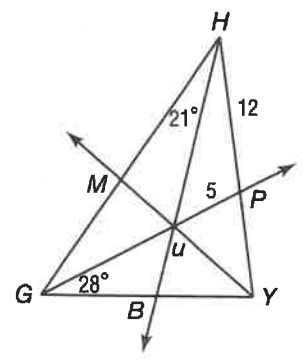
Point  $U$  is the incenter of  $\triangle GHY$ . Find each measure.

5.  $MU$

6.  $m\angle UGM$

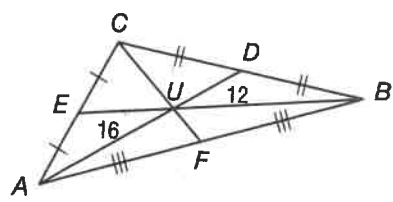
7.  $m\angle PHU$

8.  $HU$



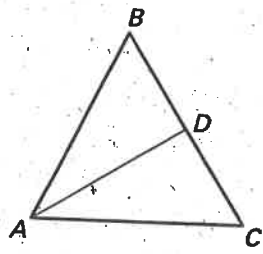
3) In  $\triangle ABC$ ,  $AU = 16$ ,  $BU = 12$ , and  $CF = 18$ . Find each measure.

- 1.  $UD$
- 2.  $EU$
- 3.  $CU$
- 4.  $AD$
- 5.  $UF$
- 6.  $BE$

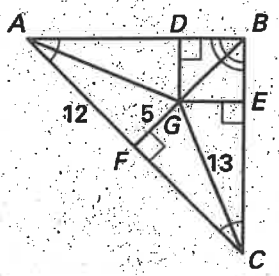


4) Use the diagram shown and the given information to decide in each case whether  $\overline{AD}$  is a perpendicular bisector, an angle bisector, or an altitude of  $\triangle ABC$ .

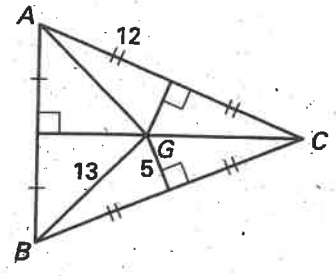
- 1.  $\overline{DB} \cong \overline{DC}$
- 2.  $\angle BAD \cong \angle CAD$
- 3.  $\overline{DB} \cong \overline{DC}$  and  $\overline{AD} \perp \overline{BC}$
- 4.  $\overline{AD} \perp \overline{BC}$
- 5.  $\triangle BAD \cong \triangle CAD$



5) The angle bisectors of  $\triangle ABC$  meet at point  $G$ . Find  $GD$ .



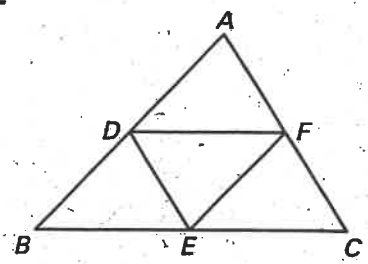
6) The perpendicular bisectors of  $\triangle ABC$  meet at point  $G$ . Find  $GA$ .



Midsegment

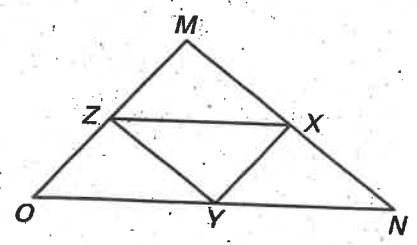
7) Use the diagram of  $\triangle ABC$  where  $D$ ,  $E$ , and  $F$  are the midpoints of the sides.

1.  $\overline{DE} \parallel$      ?
2.  $\overline{FE} \parallel$      ?
3. If  $AB = 14$ , then  $EF =$      ?
4. If  $BE = 8$ , then  $DF =$      ?
5. If  $DE = 6$ , then  $AC =$      ?



8) Use the diagram of  $\triangle MNO$  where  $X$ ,  $Y$ , and  $Z$  are the midpoints of the sides.

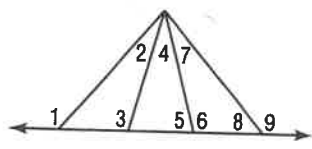
- If  $YZ = 3x + 1$ , and  $MN = 10x - 6$  then  $YZ =$      ?
- If  $YX = x - 1$ , and  $MO = 3x - 7$  then  $MO =$      ?



5.3

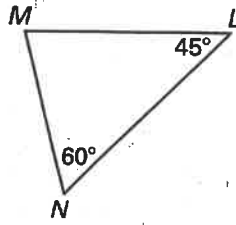
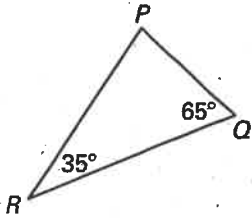
9) Use the Exterior Angle Inequality Theorem to list all of the angles that satisfy the stated condition.

- measures less than  $m\angle 1$
- measures less than  $m\angle 9$
- measures greater than  $m\angle 5$
- measures greater than  $m\angle 8$



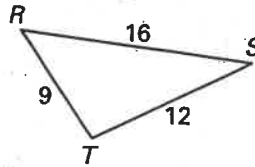
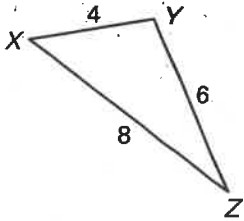
10)

Name the shortest and longest sides of the triangle.



11)

Name the smallest and largest angles of the triangle.



5.5

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

1. 2 ft, 3 ft, 4 ft

2. 5 m, 7 m, 9 m

13)

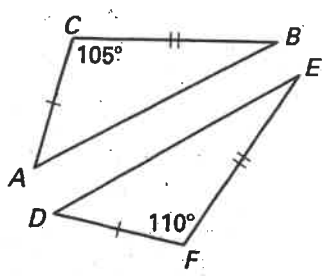
Find the range for the measure of the third side of a triangle given the measures of two sides.

9. 5 ft, 9 ft

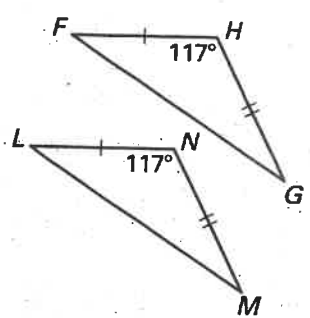
10. 7 in., 14 in.

14) Complete with  $<$ ,  $>$ , or  $=$ .

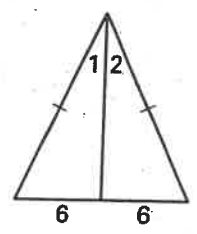
$AB$  ?  $DE$



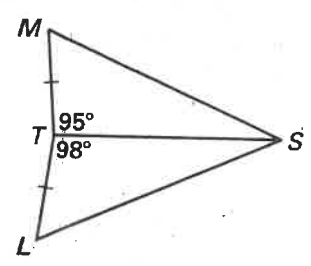
$FG$  ?  $LM$



$m\angle 1$  ?  $m\angle 2$



$MS$  ?  $LS$



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

