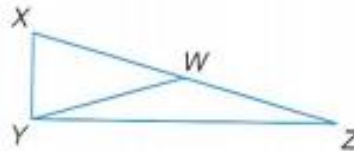


## Medians of Triangles Assignment (due Wednesday)

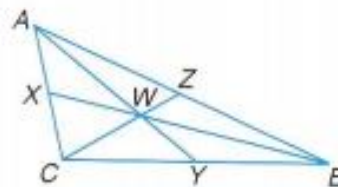
**Median** – A segment connecting the vertex of a triangle to the **midpoint** of the opposite side.

**Centroid** – Point where all medians of a triangle intersect. It is also the **“balancing point”** for the triangle. Each median is cut into two segments with a **ratio of 2:1** (the longer segment is between the vertex & the centroid).

1. In  $\triangle XYZ$ ,  $\overline{YW}$  is a median. What is  $XW$  if  $XZ = 17$ ?

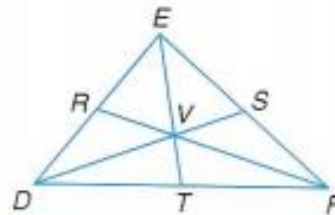


2. In  $\triangle ABC$ ,  $\overline{BX}$ ,  $\overline{CZ}$ , and  $\overline{AY}$  are medians. If  $AX = 3x - 9$ ,  $XC = 2x - 4$ , and  $ZB = 2x + 1$ , what is  $AZ$ ?



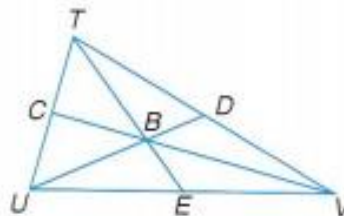
In  $\triangle DEF$ ,  $\overline{DS}$ ,  $\overline{FR}$ , and  $\overline{ET}$  are medians.

3. Find  $EV$  if  $VT = 5$ .  
 4. If  $FR = 20.1$ , what is the measure of  $\overline{VR}$ ?



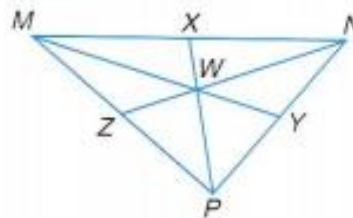
In  $\triangle TUV$ ,  $\overline{TE}$ ,  $\overline{UD}$ , and  $\overline{VC}$  are medians.

5. Find  $EV$  if  $UV = 24$ .  
 6. If  $TC = 8$ , find  $TU$ .  
 7. What is  $TD$  if  $TV = 29$ ?



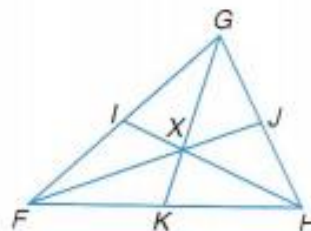
In  $\triangle MNP$ ,  $\overline{MY}$ ,  $\overline{PX}$ , and  $\overline{NZ}$  are medians.

8. Find the measure of  $\overline{WY}$  if  $MW = 22$ .  
 9. What is  $NW$  if  $ZW = 10$ ?  
 10. If  $PW = 13$ , what is  $WX$ ?



In  $\triangle FGH$ ,  $\overline{FJ}$ ,  $\overline{HI}$ , and  $\overline{GK}$  are medians.

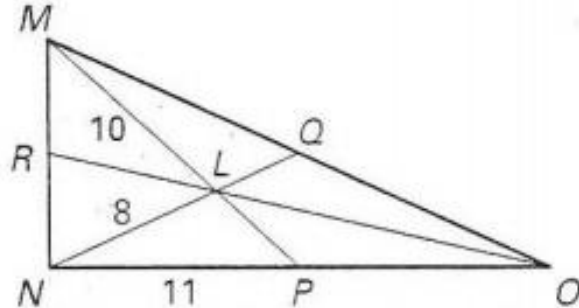
11. What is  $XK$  if  $GK = 13.5$ ?  
 12. If  $FX = 10.6$ , what is the measure of  $\overline{XJ}$ ?  
 13. Find  $HX$  if  $HI = 9$ .



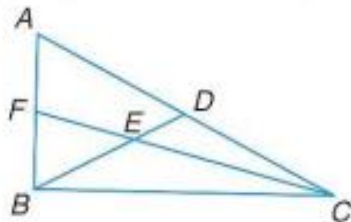
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**Use the figure shown and the given information.**  
 $L$  is the centroid of  $\triangle MNO$ ,  $NP = 11$ ,  $ML = 10$ , and  $NL = 8$ .

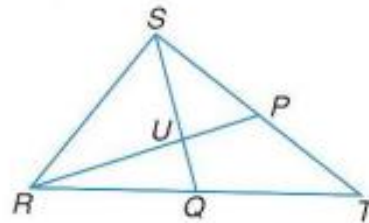
14. Find the length of  $\overline{PO}$ .
15. Find the length of  $\overline{MP}$ .
16. Find the length of  $\overline{LQ}$ .
17. Find the length of  $\overline{NQ}$ .
18. Find the perimeter of  $\triangle NLP$ .



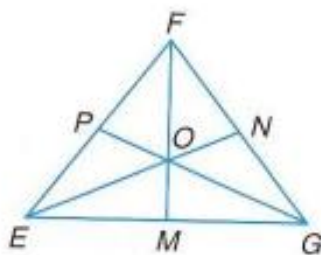
19. If  $\overline{BD}$  and  $\overline{CF}$  are medians of  $\triangle ABC$  and  $CE = 17$ , what is  $EF$ ?



20. In  $\triangle RST$ ,  $\overline{RP}$  and  $\overline{SQ}$  are medians. Find  $RU$  if  $UP = 7.3$ .



21. In  $\triangle EFG$ ,  $\overline{GP}$ ,  $\overline{FM}$ , and  $\overline{EN}$  are medians. If  $EM = 2x + 3$  and  $MG = x + 5$ , what is  $x$ ?



22.  $\overline{RU}$ ,  $\overline{SV}$ , and  $\overline{TW}$  are medians of  $\triangle RST$ . What is the measure of  $\overline{RW}$  if  $RV = 4x + 3$ ,  $WS = 5x - 1$ , and  $VT = 2x + 9$ ?

