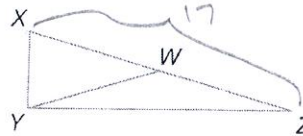


Median – A segment connecting the vertex of a triangle to the **midpoint** of the opposite side.

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).

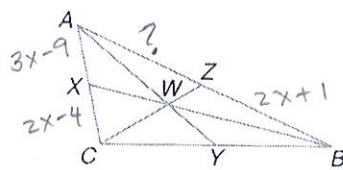
1. In $\triangle XYZ$, \overline{YW} is a median. What is XW if $XZ = 17$?

$$\frac{17}{2} = 8.5$$



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 ?

$$AZ = 11$$



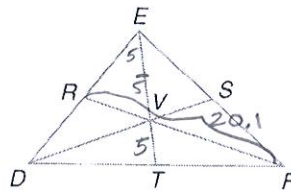
$$\begin{aligned} 3x - 9 &= 2x - 4 \\ x - 9 &= -4 \\ +9 & \quad +9 \\ \hline x &= 5 \end{aligned}$$

$$\begin{aligned} 2x + 1 &= 2(5) + 1 \\ &= 11 \end{aligned}$$

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

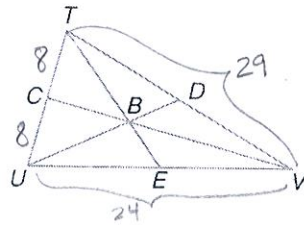
3. Find EV if $VT = 5$. $EV = 10$
 4. If $FR = 20.1$, what is the measure of \overline{VR} ?

$$\frac{20.1}{3} = 6.7$$



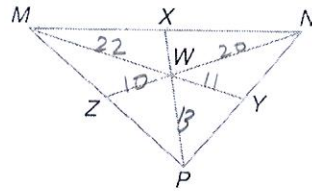
In $\triangle TUV$, \overline{TE} , \overline{UD} , and \overline{VC} are medians.

5. Find EV if $UV = 24$. 12
 6. If $TC = 8$, find TU . 16
 7. What is TD if $TV = 29$? 14, 5



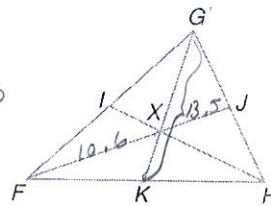
In $\triangle MNP$, \overline{MY} , \overline{PX} , and \overline{NZ} are medians.

8. Find the measure of \overline{WY} if $MW = 22$. 11
 9. What is NW if $ZW = 10$? 20
 10. If $PW = 13$, what is WX ? 6.5



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

11. What is XK if $GK = 13.5$? 4.5
 12. If $FX = 10.6$, what is the measure of \overline{XJ} ? 5.3
 13. Find HX if $HI = 9$. 6



$$\frac{13.5}{3} = 4.5$$

$$\frac{9}{3} = 3$$

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

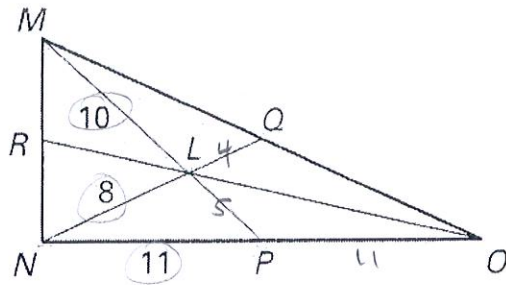
14. Find the length of \overline{PO} . 11

15. Find the length of \overline{MP} . 15

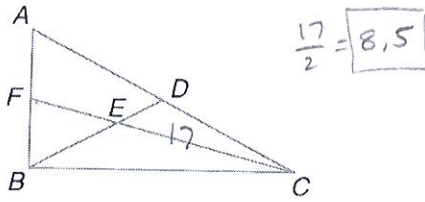
16. Find the length of \overline{LQ} . 4

17. Find the length of \overline{NQ} . 12

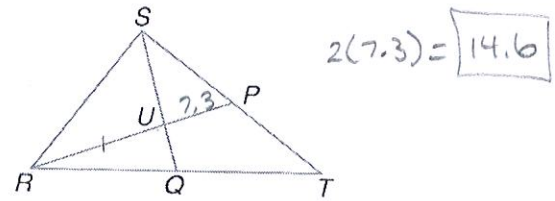
18. Find the perimeter of $\triangle NLP$. $8 + 11 + 5 = 24$



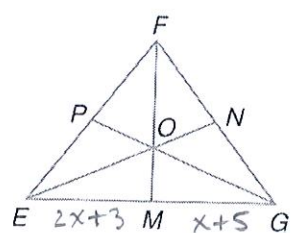
19. If \overline{BD} and \overline{CF} are medians of $\triangle ABC$ and $CE = 17$, what is EF ?



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 $VT = 2x + 9$?

