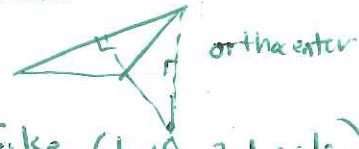
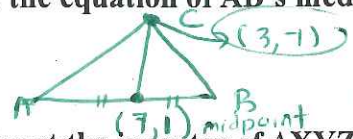


True or False?

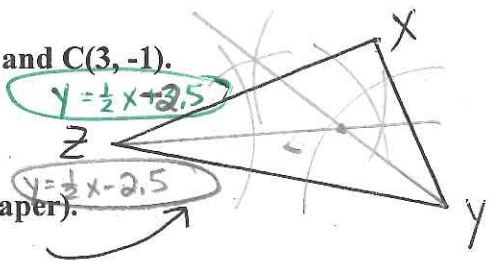
1. Medians always intersect at a triangle's circumcenter. **False, centroid**
2. The orthocenter may be outside of the triangle. **True**
3. The length of a midsegment will always be twice that of the 3rd side. **False (half 3rd side)**



4. Write the equation of AB's median in $\triangle ABC$ if $A(4,-3)$, $B(10,5)$ and $C(3,-1)$.

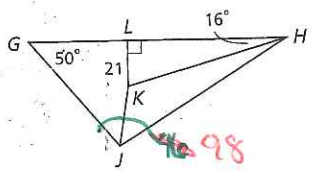


$\frac{1-1}{7-3} = \frac{2}{4} = \frac{1}{2}$
 $m = 7(\frac{1}{2}) + b$
 $1 = 3.5 + b$



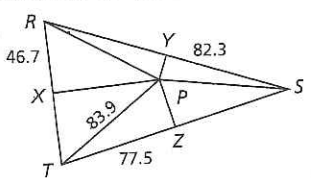
5. Construct the incenter of $\triangle XYZ$. (sketch the triangle on your paper).

6. \overline{JK} and \overline{HK} are angle bisectors of $\triangle GHJ$. Find $m\angle GJK$ and the distance from K to \overline{HJ} .



$m\angle GJK = 49^\circ$
 K to $\overline{HJ} = 21$ (incenter equidistant to sides)

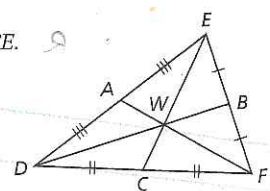
7. \overline{PX} , \overline{PY} , and \overline{PZ} are the perpendicular bisectors of $\triangle RST$. Find PS and XT .



$PS = 83.9$ (equidistant to...)
 $XT = 46.7$ (midpt @ 90°)

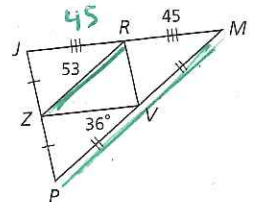
8. In $\triangle DEF$, $BD = 87$, and $WE = 38$. Find BW , CW , and CE .

$BW = 29$
 $CW = 19$
 $CE = 57$



$\frac{1}{3}(87) = 29$
 $38 \div 2 = 19$
 38

9. Find ZV , PM , and $m\angle RZV$ in $\triangle JMP$.



$ZV = 45$ ($\frac{1}{2} JM$)
 $PM = 106$ (twice $53 - 2R$)
 $\angle RZV = 36^\circ$ (alt. int to $\angle ZVP$)