

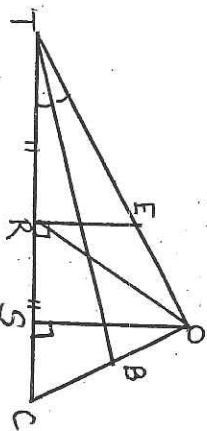
Take Home Quiz due! Friday

Identify one of each type of special segment in diagram at right by naming segment and writing type of special segment beside it.

$\overline{ER}$  = perpendicular bisector  
 $\overline{RO}$  = median  
 $\overline{OS}$  = altitude

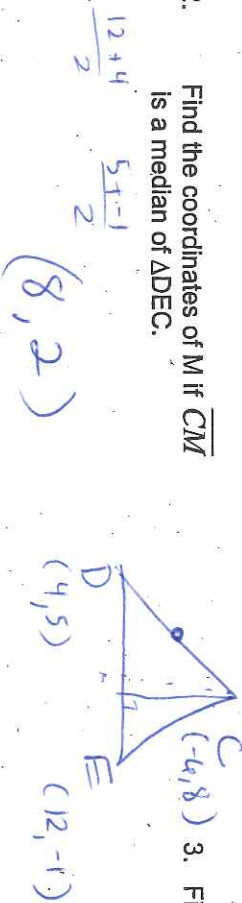
$\overline{BT}$  = angle bisector

? midsegment? none



#2-4, Draw a sketch of  $\triangle DEC$  with vertices  $D(4,5)$ ,  $E(12,-1)$  and  $C(-6,8)$  to answer the questions.

2. Find the coordinates of M if  $\overline{CM}$  is a median of  $\triangle DEC$ .



3. Find the slope of  $\overline{DE}$ 's altitude

$$\frac{-1-5}{12-4} = \frac{-6}{8} = -\frac{3}{4}$$

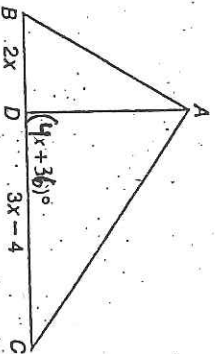
$$\left(\frac{4}{3}\right)$$

$$y - 6.5 = \frac{10}{3}(x + 1)$$

4. Find the equation of  $\overline{DC}$ 's perpendicular bisector.

midpoint:  $(-1, 6.5)$   
 slope:  $\frac{8-5}{-6-4} = \frac{3}{-10} = -\frac{3}{10}$

5. Use the diagram at right to find BC if  $\overline{DA}$  is an altitude of  $\triangle ABC$



$$BD + DC = BC$$

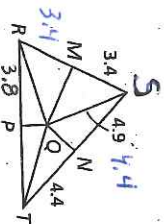
$$2(13.5) + 3(13.5) - 4 = BC$$

$$27 + 40.5 - 4 = BC$$

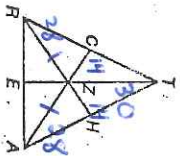
$$63.5$$

7.  $\overline{MQ}$ ,  $\overline{NQ}$ , and  $\overline{PQ}$  are perpendicular bisectors. Find:

RS = 6.8  
 RQ = 4.9  
 Perimeter  $\triangle RST = 23.2$



6. Z is the centroid in diagram below

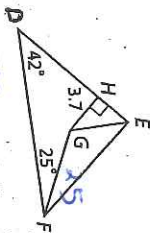


CZ = 14  
 TZ = 30  
 RZ = AZ

Find: RH = 42  
 TE = 45

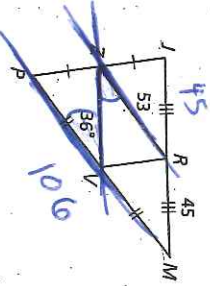
8.  $\overline{EG}$  and  $\overline{FG}$  are angles bisectors of  $\triangle DEF$ . Find:

$m\angle GEF = 44^\circ$   
 distance from G to  $\overline{FD} = 3.7$

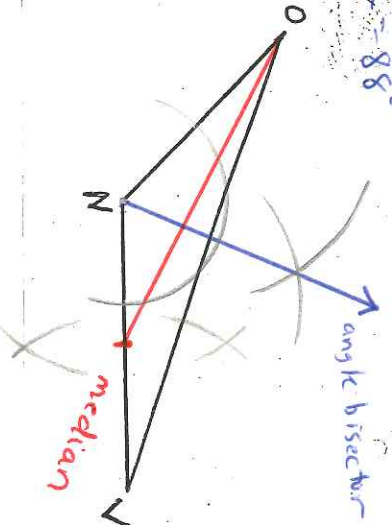


9. Find each:

ZV = 45  
 PM = 106  
 $m\angle RZV = 36^\circ$

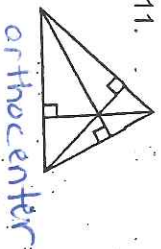


10. Construct the angle bisector for  $\angle ONV$  and the median for  $\overline{NV}$



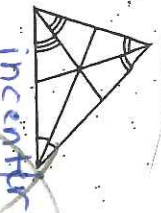
#11-14, Give the name for each point of concurrency.

11.

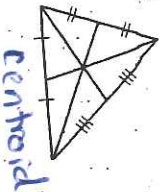


15. Construct the orthocenter

12.



13.



14.

