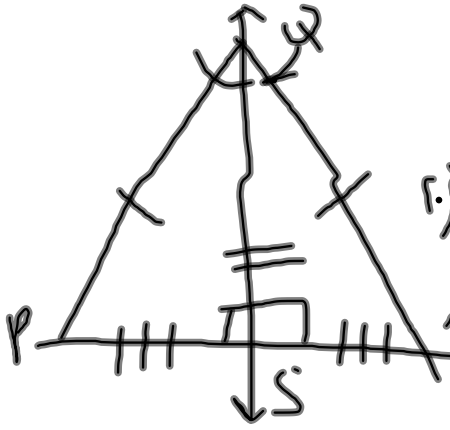
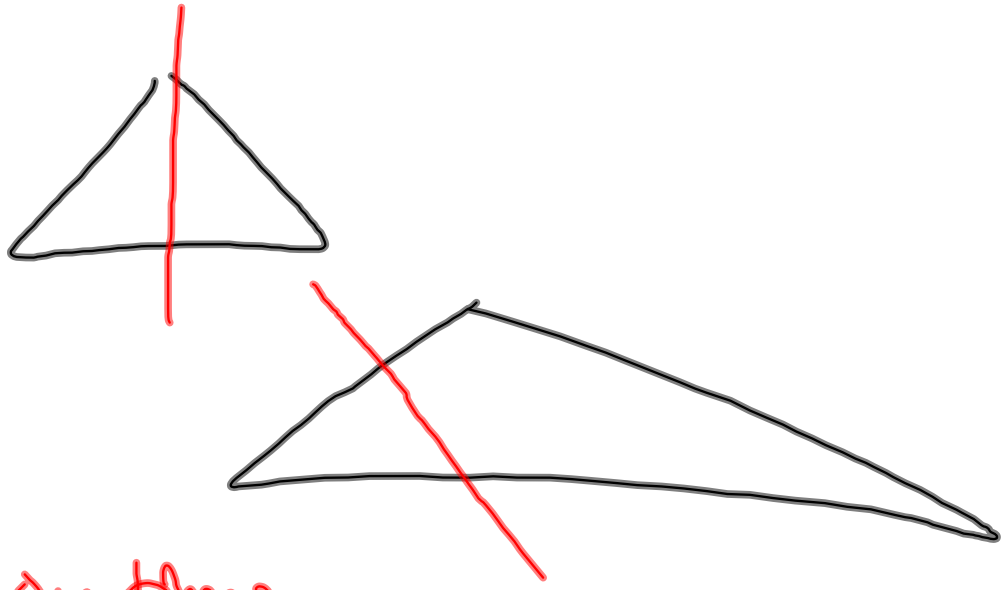


Statements	Reason
1.) $\overrightarrow{QS}$ bisects $\angle PQR$	1.) given
2.) $\angle PQS \cong \angle RQS$	2.) def. of $\angle$ bisector
3.) $\overline{PQ} \cong \overline{RQ}$	3.) given
4.) $\overline{QS} \cong \overline{QS}$	4.) reflex prop. of $\cong$
5.) $\triangle PQS \cong \triangle RQS$	5.) SAS
6.) $\overline{PS} \cong \overline{RS}$	6.) CPCTC
7.) $\angle QSR$ & $\angle QSP$ are rt. $\angle$	7.) $\angle$ bisector thm
8.) $\overrightarrow{QS}$ is $\perp$ bisector of $\overline{PR}$	8.) con. $\perp$ bisector thm

30.

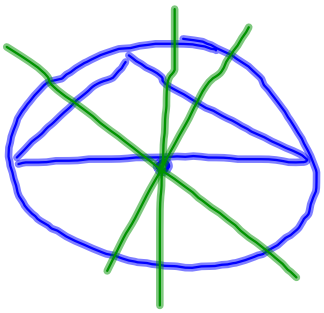


Sometimes

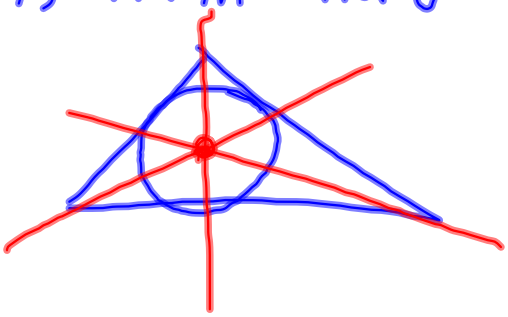
0-4 ✓
5-8 ✓
9 ↑ -

5.3 Medians + Altitudes of $\triangle$s.

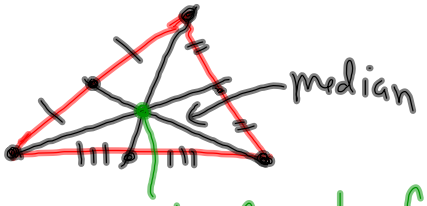
circumscribed circle: a circle whose center is the circumcenter of the $\triangle$.



inscribed circle: a circle whose center is the incenter of a $\triangle$.

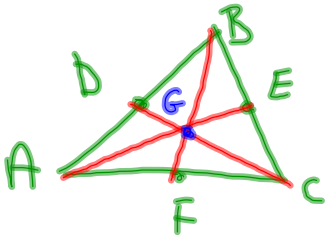


Median: segment whose endpts. are a vertex and the midpt. of the opposite side.



centroid: pt. of concurrency of the medians.
"center of gravity"

Centroid thm: the centroid of a $\triangle$ is located $\frac{2}{3}$ of distance from the vertex to the midpoint of the opposite side.

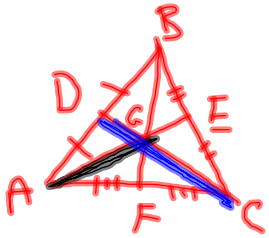


$\frac{2}{3}AE = AG$

$\frac{2}{3}CD = CG$

$\frac{2}{3}BF = BG$

Ex:



$AE = 9$, $CG = 2.4$

Find $AG = \frac{2}{3}AE$

$= \frac{2}{3} \cdot 9$

$= 6$

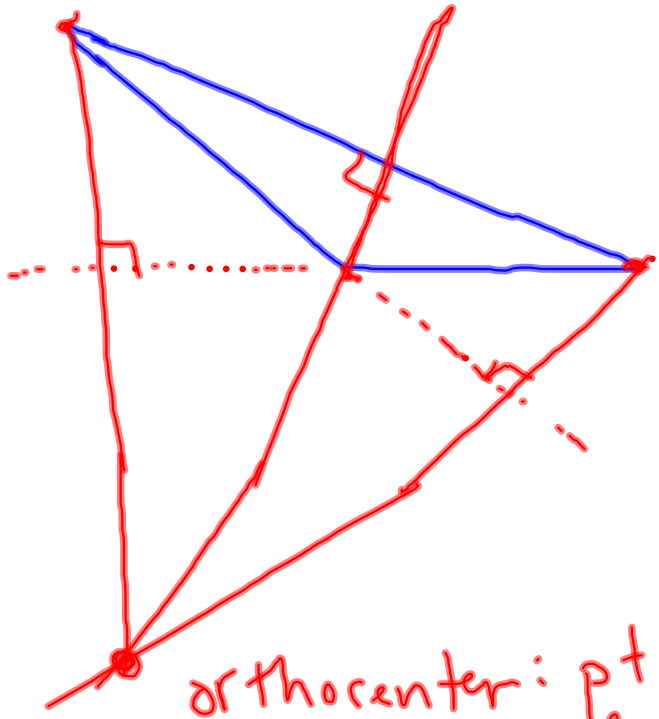
Find CD

$CG = \frac{2}{3}CD$

$\frac{3}{2} \cdot 2.4 = \frac{2}{3}CD \cdot \frac{3}{2}$

$CD = 3.6$

Altitude: 1 segment from the vertex to the line containing the opposite side.



orthocenter: pt. of concurrency of the altitudes.

Hw:

p. 317 2-36 even

skip 16 & 28

odds E.C.