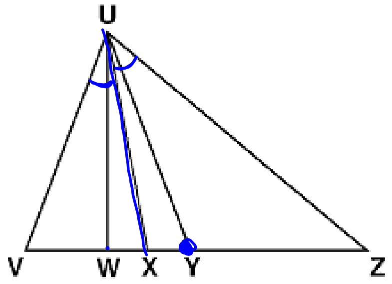
DO NOW

$\perp$ lines　　$2 \cong \angle$'s　　to midpoint

In $\triangle UVZ$ below, $\overline{UW}$ is an altitude, $\overline{UX}$ is an angle bisector, and $\overline{UY}$ is a median.



1) Name one pair of perpendicular line segments

$\overline{UW} \perp \overline{VZ}$

2) Name one pair of congruent segments → Y is midpoint of $\overline{VZ}$

$\overline{VY} \cong \overline{YZ}$

3) Name two congruent angles that each have a vertex at *U*

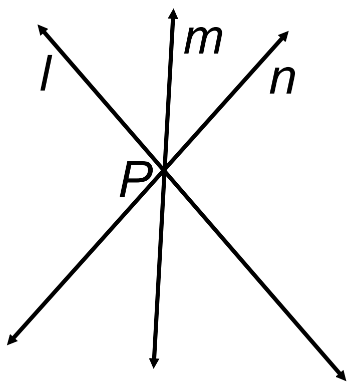
$\angle XUV \cong \angle XUZ$

Oct 1-10:23 AM

Concurrence

Three or more lines are *concurrent* if and only if their intersection is exactly one point

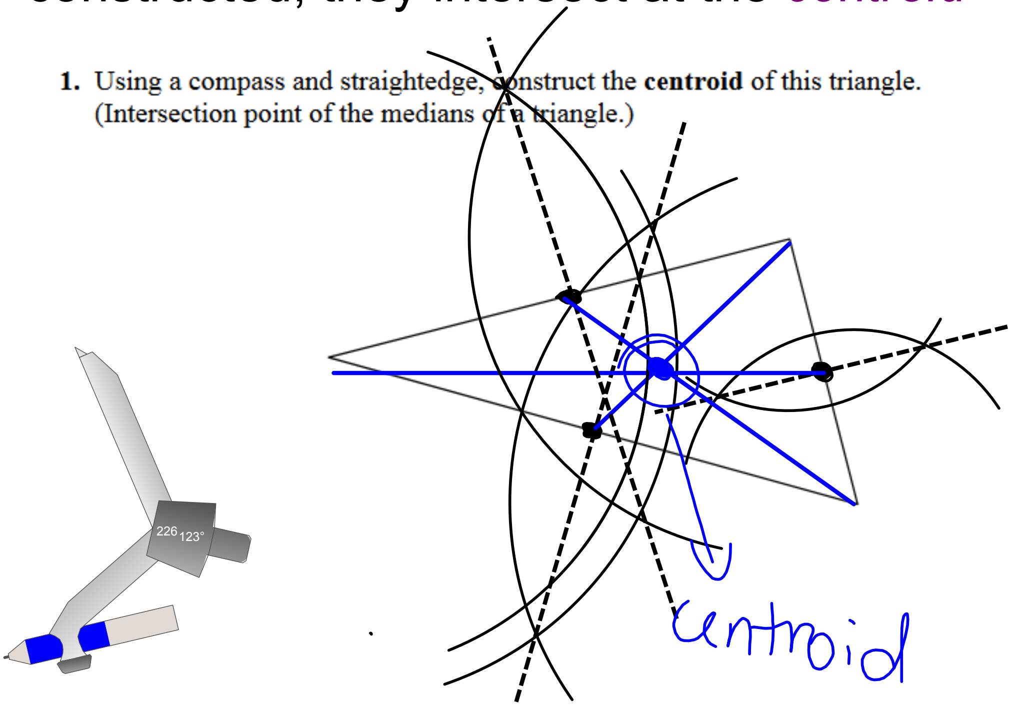
The lines *l*, *m*, and *n* are concurrent at point *P*



May 2-10:19 AM

If three medians of a triangle are constructed, they intersect at the *centroid*

1. Using a compass and straightedge, construct the **centroid** of this triangle. (Intersection point of the medians of a triangle.)

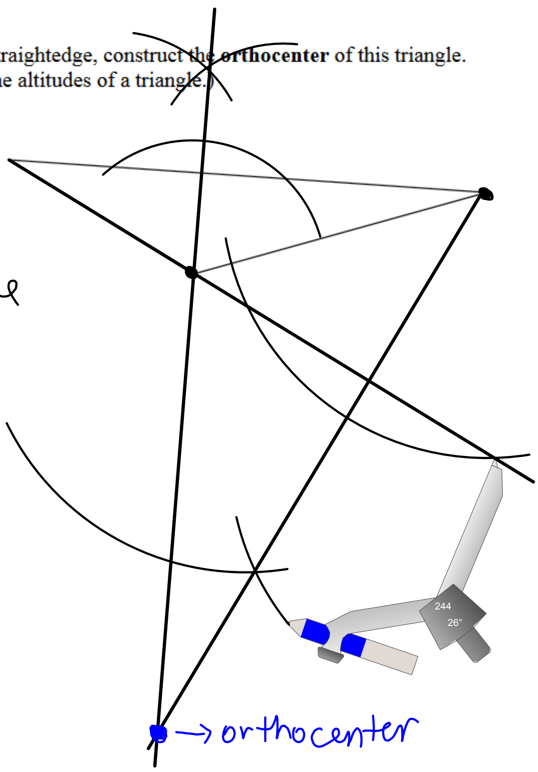


Dec 19-9:29 AM

If three altitudes of a triangle are constructed, they intersect at the *orthocenter*

2. Using a compass and straightedge, construct the **orthocenter** of this triangle. (Intersection point of the altitudes of a triangle.)

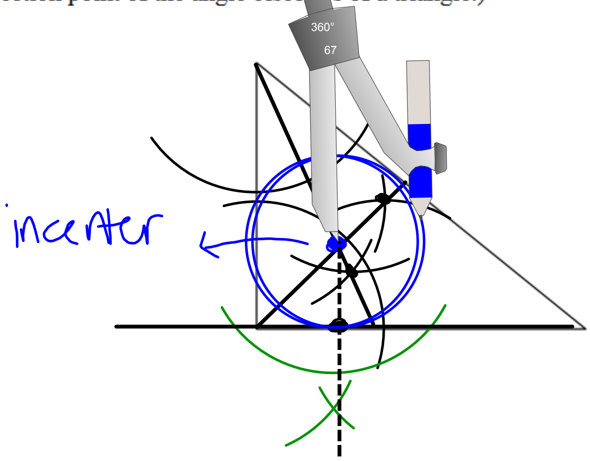
($\perp$ to a line from point off the line)



Dec 19-9:31 AM

If three angle bisectors of a triangle are constructed, they intersect at the *incenter*

3. Using a compass and straightedge, construct the **incenter** of this triangle. (Intersection point of the angle bisectors of a triangle.)



The incenter is the center of the inscribed circle within the triangle

Dec 19-9:31 AM