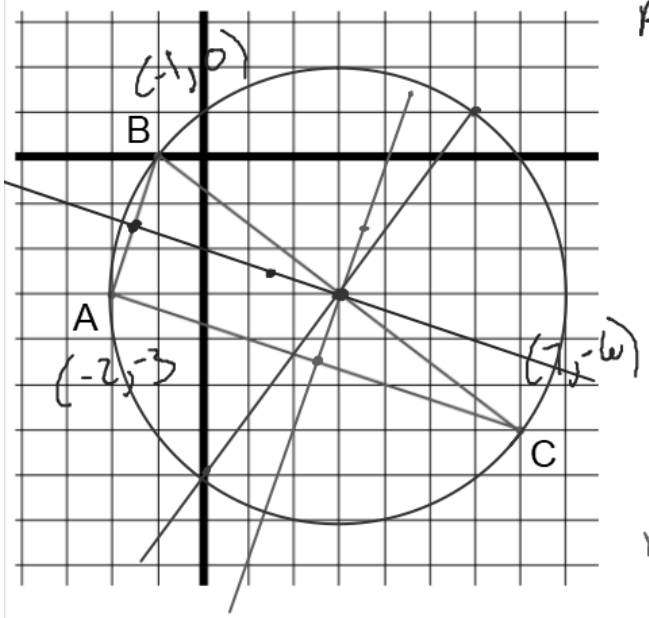
Draw the three perpendicular bisectors for the triangle below and place a point a the circumcenter. Give the point for the circumcenter.



Perpendicular Bisector $\left(\frac{x_1+x_2}{2}, \frac{y_1+y_2}{2}\right)$

midpoint Slope

midpt AB $\left(\frac{-2+(-1)}{2}, \frac{-3+0}{2}\right)$

$\left(-\frac{3}{2}, -\frac{3}{2}\right)$

Slope $AB = \frac{3}{1}$ Slope $\perp = -\frac{1}{3}$

midpt AC $\left(\frac{-2+7}{2}, \frac{-3+(-6)}{2}\right)$

$\left(\frac{5}{2}, -\frac{9}{2}\right)$

$(2.5, -4.5)$

Slope $\overline{AC} = \frac{-3}{9} = -\frac{1}{3}$ Slope $\perp = 3$

midpt $\overline{BC}$ $\left(\frac{-1+7}{2}, \frac{0+(-6)}{2}\right)$

$\left(\frac{6}{2}, -\frac{6}{2}\right)$

$(3, -3)$

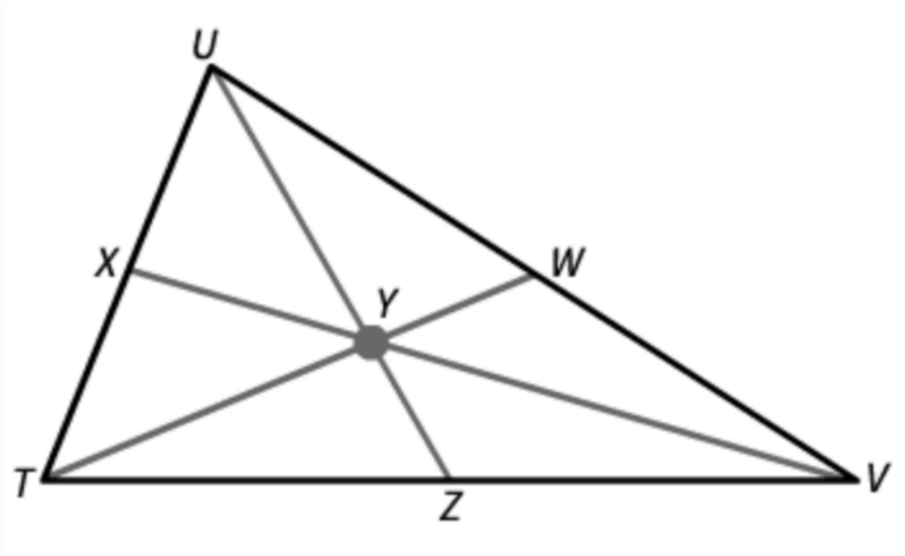
Slope $BC = -\frac{6}{8} = -\frac{3}{4}$

Slope $\perp = \frac{4}{3}$

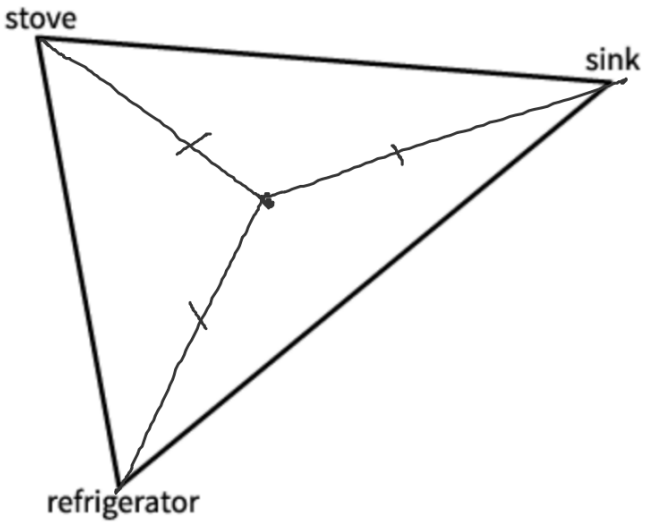
Circumcenter

$(3, -3)$

In ΔTUV, Y is the centroid. If $TW = 30$, what is TY?



In the diagram, which center describes the point equidistant to the stove, the refrigerator, and the sink?



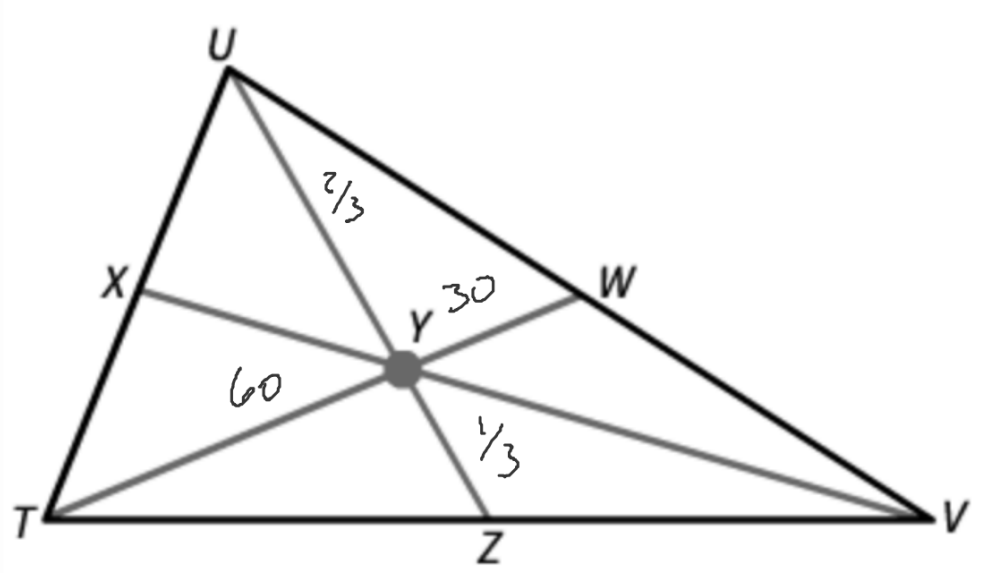
Circumcenter

Incenter

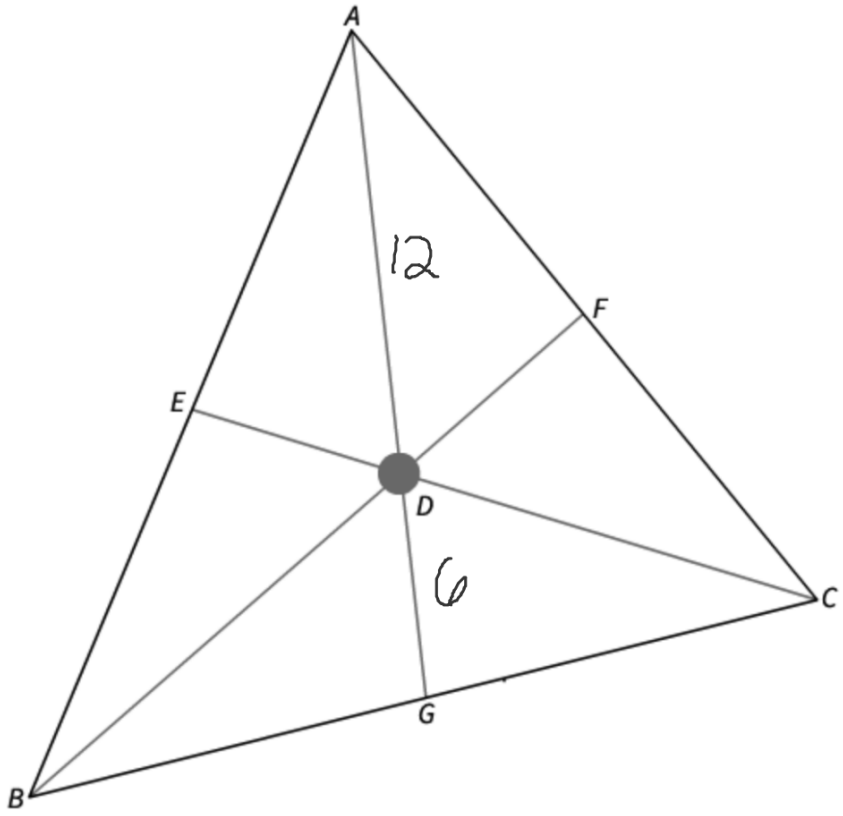
Centroid

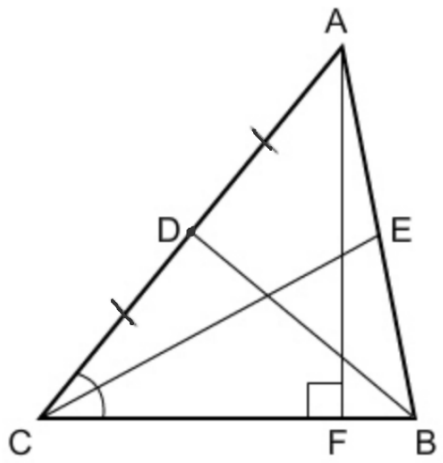
Orthocenter

In ΔTUV, Y is the centroid. If $YW = 30$, what is TY?



D is the centroid of ΔABC and $DG = 6$ ft. Find AD.





Name a median for △ABC. $\overline{BD}$

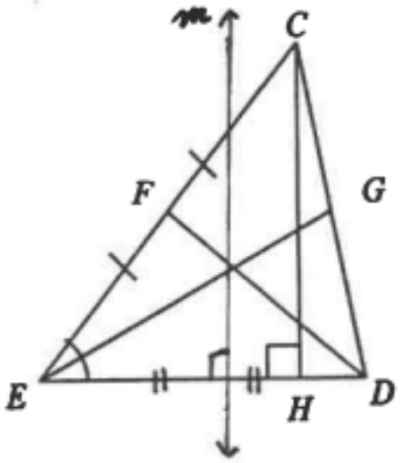
In triangle CDE identify the following:

A Median $\overline{DF}$

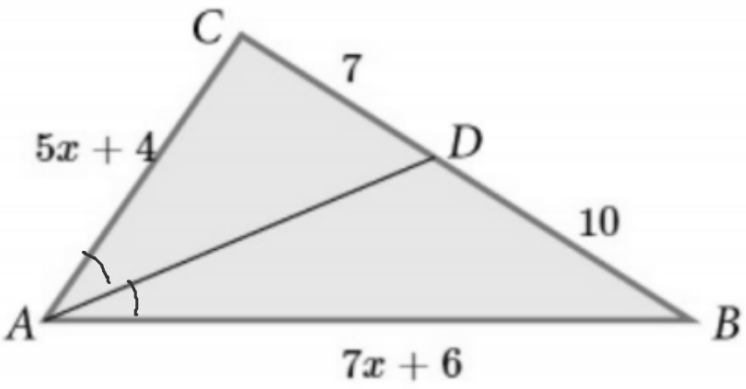
An Altitude $\overline{CH}$

A Perpendicular Bisector m

An Angle Bisector $\overline{EG}$



$\overline{AD}$ bisects $\angle CAB$. Use the info in the figure to find x and then $\overline{AB}$ and $\overline{AC}$.



$\frac{CD}{DB} = \frac{AC}{AB}$

$\frac{7}{10} = \frac{5x+4}{7x+6}$

$7(7x+6) = 10(5x+4)$

$49x + 42 = 50x + 40$

$42 = x + 40$

$2 = x$

$X = 2$

$AC = 5x+4$

$= 5(2)+4$

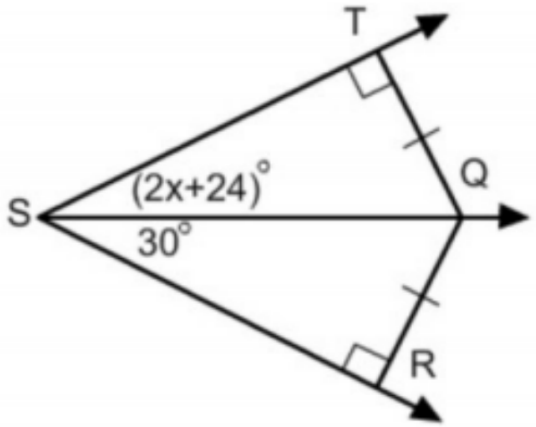
$= 14$

$AB = 7x+6$

$7(2)+6$

$14+6$

20



$\overline{TQ} \cong \overline{QR}$. Find the value of x.

$2x+24=30$

$2x=6$

$x=3$