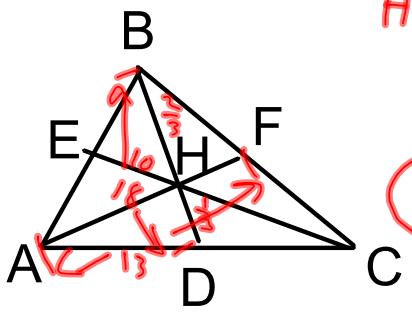
1.) If Point H is the centroid of triangle ABC, BD=18, HE=10, and AF=13, find HD.

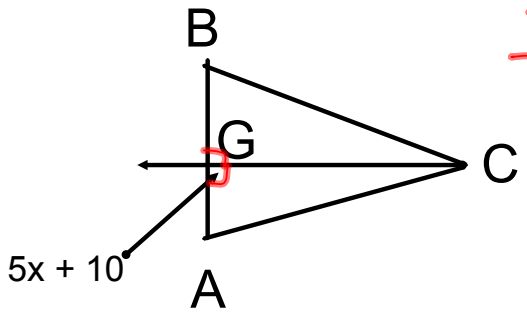


$HD = \frac{1}{3}$ of 18

$= \frac{1}{3} \cdot 18$

$HD = 6$

2.) If $\overline{CG}$ is the altitude for triangle ABC, find x.



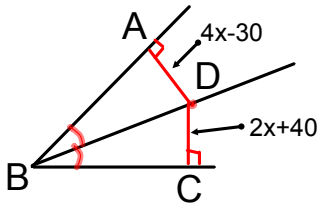
$90 = 5x + 10$

$-10 \quad -10$

$\frac{80}{5} = \frac{5x}{5}$

$16 = x$

3.) If $\overline{BD}$ bisects angle ABC, find x.



$4x - 30 = 2x + 40$

$+30 \quad +30$

$4x = 2x + 70$

$-2x \quad -2x$

$2x = 70$

$\frac{2x}{2} = \frac{70}{2}$

$x = 35$