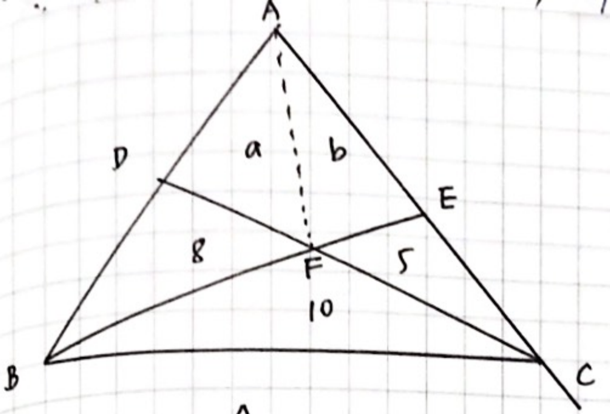
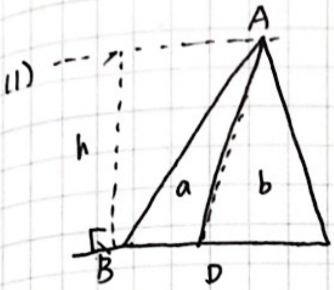




Let area of $\triangle ABD$ as 'a', area of $\triangle ADC$ as 'b'

area of $\triangle ABD$ is $\frac{1}{2} \times h \times \overline{BD} = a$

If you organize the equation, $\overline{BD} = \frac{a \times 2}{h}$

area of $\triangle ADC$ is $\frac{1}{2} \times h \times \overline{DC} = b$

If you organize the equation, $\overline{DC} = \frac{b \times 2}{h}$

so $\overline{BD} : \overline{DC} = \frac{a \times 2}{h} : \frac{b \times 2}{h} = a : b$

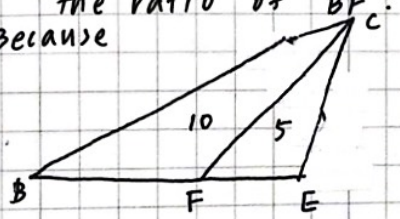
Lets let that area of triangle ADF is a and area of AFE is b

Look at the line $\overline{BE}$

By the progress explained before,

the ratio of $\overline{BF} : \overline{FE} = 10 : 5$

(Because



$\overline{BF} : \overline{FE} = 10 : 5$

shown in (1))

Because $\overline{BF} : \overline{FE}$ is also the base of $\triangle ABF$ and $\triangle AFE$

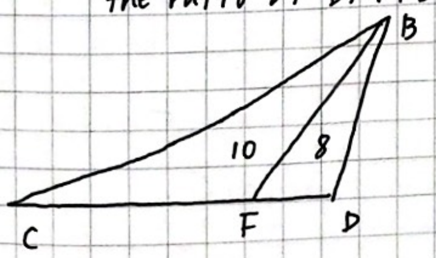
$\overline{BF} : \overline{FE} = \triangle ABF : \triangle AFE = \cancel{5}\ 10 : 5 = 8 + a + : b$

$40 + 5a = 10b \rightarrow 2b = a + 8 \quad b = \frac{1}{2}a + 4 \quad \cdots\cdots (2)$

Look at the line $\overline{DC}$

by the progress explained before)

the ratio of $\overline{DF} : \overline{FC} = 8 : 10$



$\overline{CF} : \overline{FD} = 10 : 8$

shown in (1)

Because $\overline{CF} : \overline{FD}$ is also the base of $\triangle CFA$ and $\triangle ADF$.

$\overline{CF} : \overline{FD} = \triangle CFA : \triangle FDA = 10 : 8 = 5 + b : a$

$40 + 8b = 10a \quad \cdots\cdots (3)$

put equation (2) into equation (3)

$40 + 8 \times (\frac{1}{2}a + 4) = 10a \quad 4a + \cancel{3}72 = 10a \quad 6a = 72 \quad a = 12$

$a = 12 \quad b = \frac{1}{2} \times a + 4 = 10$

$\boxed{\therefore \text{Area} = 12 + 10 = 22}$