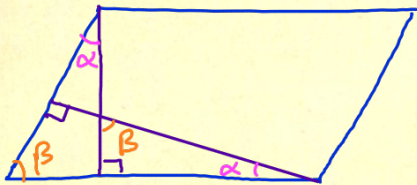
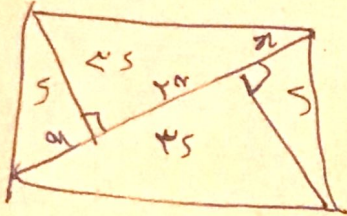


$$\triangle CEF \sim \triangle ABF$$

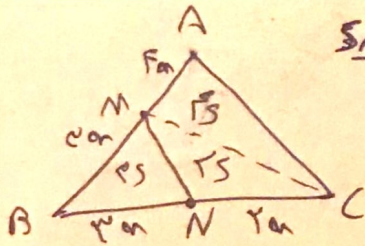


$$\alpha \text{ و } \beta \rightarrow \frac{x}{4} = \frac{1}{x+1} \quad \beta \text{ و } \alpha$$

$$\rightarrow \boxed{x=4} \quad AF = x+1 = \boxed{12}$$



$$\frac{15}{5} = \triangle \checkmark$$

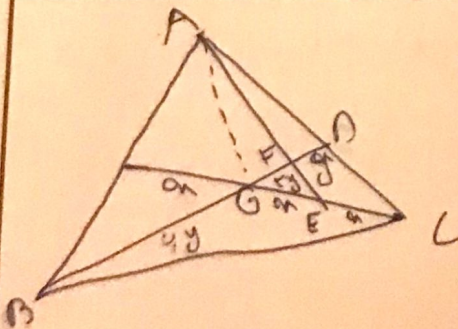


$$\frac{S_{\triangle ABC}}{25} = 2 \quad S_{\triangle BGC} = 95$$

$$\frac{DM}{AM} = \frac{2}{5}$$

$$\frac{F \times R}{Y} \rightarrow \frac{1 \times 1}{Y} \rightarrow \frac{\sqrt{1 \times 1} \sqrt{1 \times 1}}{Y} \rightarrow \frac{1 \times 1}{Y} =$$

$$1 \times 1 \rightarrow 1 \times 1 \rightarrow 1 \times 1 \rightarrow 1 \times 1 = 1$$



$$GD \rightarrow \text{Al } \alpha$$

$$AF \rightarrow \text{Al } \alpha$$

$$F \rightarrow \text{Al } \alpha$$

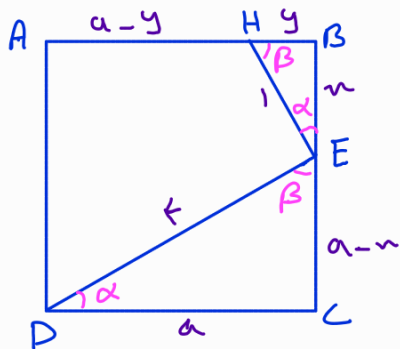
$$BD = 15$$

$$FD = 5$$

$$\frac{S_{ABC}}{S_{BMN}} = \frac{\frac{1}{r} AB \times BC \times \sin B}{\frac{1}{r} BM \times BN \times \sin B} = r \rightarrow \frac{AB}{BM} = \frac{r}{a}$$

$$\frac{AB - BM}{BM} = \frac{r - a}{a} = \frac{r}{a}$$

$$\frac{BM}{AM} = \boxed{\frac{a}{r}}$$



$$\triangle EBH \sim \triangle DCE \rightarrow \frac{y}{a-n} = \frac{n}{a} = \frac{1}{r} \begin{cases} a = rn \\ a-n = ry \\ n = \frac{r}{r}y \end{cases}$$

$$\triangle DCE \xrightarrow{\text{Pythagoras}} (r)^2 = (a-n)^2 + (a)^2 \begin{cases} n = \frac{r}{a} \\ a = \frac{1}{a} \end{cases}$$

$$S_{\square} = a^2 = \boxed{\frac{r^2 y}{r a}}$$