

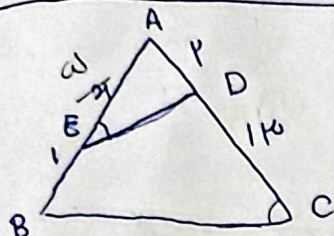
$$BFC \sim AFE$$

$$AC = \sqrt{4+9} = \sqrt{13} = 4y \rightarrow y = \frac{\sqrt{13}}{4}$$

$$BE = \sqrt{4+1} = \sqrt{5} = 4x \rightarrow x = \frac{\sqrt{5}}{4}$$

$$\frac{x}{y} = \frac{\frac{\sqrt{5}}{4}}{\frac{\sqrt{13}}{4}} = \frac{\sqrt{5}}{\sqrt{13}}$$

1.



$$\hat{AED} = \hat{ACB}$$

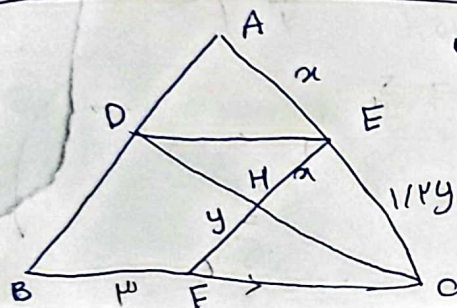
$$x = y$$

2.

$$\frac{BD}{BC} = \frac{y}{x+y} = \frac{x}{1+y} \rightarrow 1 = x^2 + x - x^2 + x - y = \dots$$

$$(x+y)(x-y) = \dots$$

$$3 \text{ غ } 2 \text{ غ } 1 \text{ غ } 1$$



$$BF = y \quad y = 2x \quad DE \parallel BC$$

$$BC = ?$$

$$\frac{y}{x} = \frac{2}{1} - \frac{1}{x} = y \quad x = 2$$

$$\frac{1}{y} = \frac{y}{y+2} = \frac{y}{y+2} \quad \text{II}$$

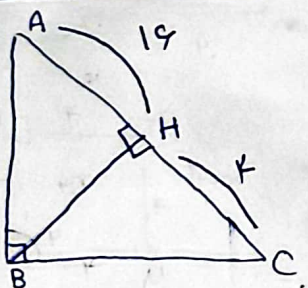
$$9 = y + 2$$

$$t = \frac{y}{x} \quad \text{III}$$

$$BC = y + 2 + 1 = 3 = \text{IV}$$

$$9/1/2$$

3.



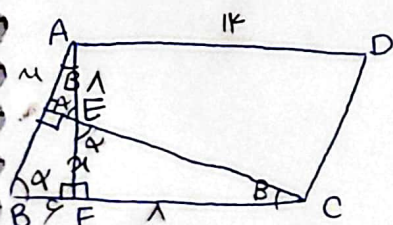
$$AB = ? \quad BC = ?$$

$$AB^2 = 1 \times 2 = 2 \rightarrow AB = \sqrt{2}$$

$$AC^2 = CH \times BH \rightarrow 1 \times 2 = 2 \rightarrow AC = \sqrt{2} = \sqrt{2} \times \sqrt{2} = 2$$

$$\frac{AC}{AB} = \frac{\sqrt{2}}{\sqrt{2}} = 1$$

4.



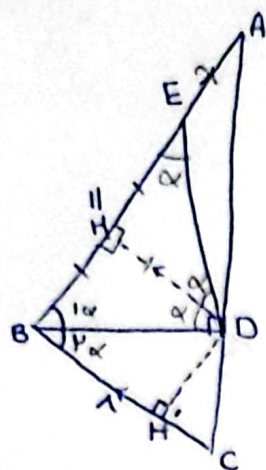
$$AE = 1 \quad BF = 4 \quad AD = 1 \quad AF = ?$$

$$\frac{EC}{AF} = \frac{EF}{BF} \rightarrow 1 = x^2 + 1 \rightarrow x^2 + 1 - 1 = \dots \rightarrow (x+1)(x-1) = \dots$$

$$AF = 1 + 1 = 2$$

$$2 = 1 + 1 \quad 2 = 1 + 1$$

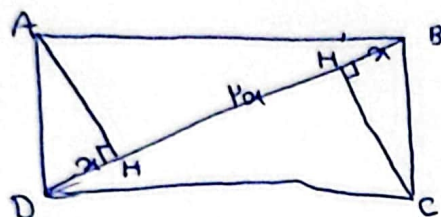
5.



$$\hat{B}_1 = \hat{B}_2$$

$$EH = BH \rightarrow \frac{11}{1} = \frac{\omega}{\omega} = EH$$

$$\frac{DH}{BC} = \frac{AH}{AB} \rightarrow \frac{\omega/\omega}{1} = \frac{x + \omega/\omega}{x+11} \rightarrow 1x + 11 = \omega/\omega x + 9/\omega - 1x - 9/9$$

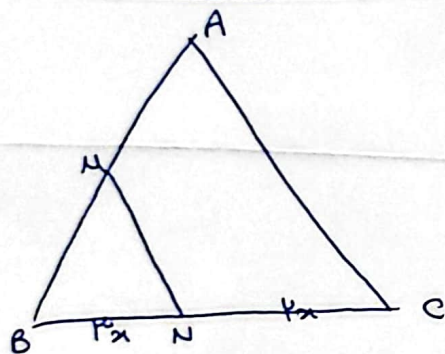


$$h^2 = x \times 14x \rightarrow h = \sqrt{14} x$$

$$S_{\square} = S_{ABD} \times 2 = 2 \times \frac{1 \times 14}{2} = \sqrt{14} x \times 14x \rightarrow 14\sqrt{14} x^2$$

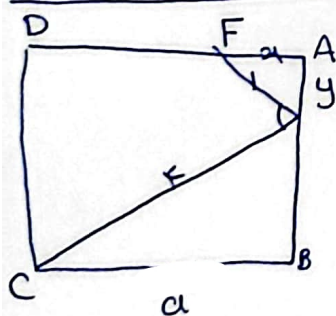
$$S = \frac{\sqrt{14} x^2}{1}$$

$$\frac{14\sqrt{14} x^2}{\sqrt{14} x^2} = 14$$



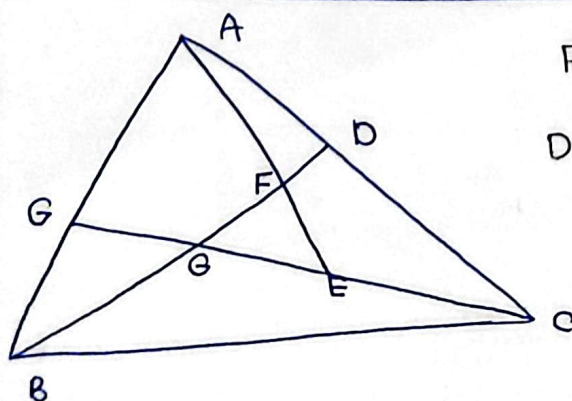
$$\frac{S_{BMN}}{S_{ABC}} = \frac{BM \times BN}{BA \times BC} = \frac{BM}{AB} \times \frac{BN}{AC} = \frac{1}{16}$$

$$\frac{BM}{AB} = \frac{1}{4} \rightarrow \frac{BM}{AB} = \frac{1}{4}$$



$$\frac{x}{a-y} = \frac{y}{a} = \frac{1}{4} \rightarrow y = \frac{a}{4} \rightarrow x = \frac{14a}{19} \rightarrow \triangle BCE = a^2 + \left(\frac{14}{19}\right)^2 = 14^2$$

$$a^2 = \frac{(19)^2}{14} = 14^2$$



$$FD = \frac{1}{16} GD \rightarrow \text{ACB نقل } F$$

$$D = \frac{1}{16} BD \rightarrow \text{ABC نقل } \theta$$

$$\frac{BD}{FD} = 9$$