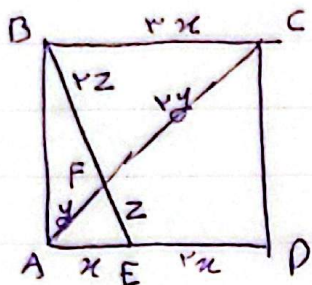


$$FAE = ED \Rightarrow AD = 3AE \Rightarrow BC = 3AE$$



$$\triangle AFE \cong \triangle BFC \Rightarrow$$

$$BE = \sqrt{(3x)^2 + x^2} = \sqrt{10x^2} = x\sqrt{10} = \frac{x}{\sqrt{10}} \sqrt{10}$$

$$AC^2 = (3x)^2 + (3x)^2 \Rightarrow AC = 3x\sqrt{2} \Rightarrow x\sqrt{2}$$

$$\frac{\sqrt{10}}{\sqrt{2}}$$

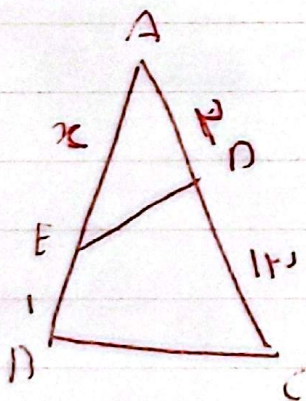
$$\hat{AED} = \hat{ACB}$$

$$\Rightarrow ACB \sim AED$$

$$\frac{AE}{EC} = \frac{AD}{AB} \Rightarrow \frac{x}{10} = \frac{2}{3} \Rightarrow 3x + x = 10 \Rightarrow$$

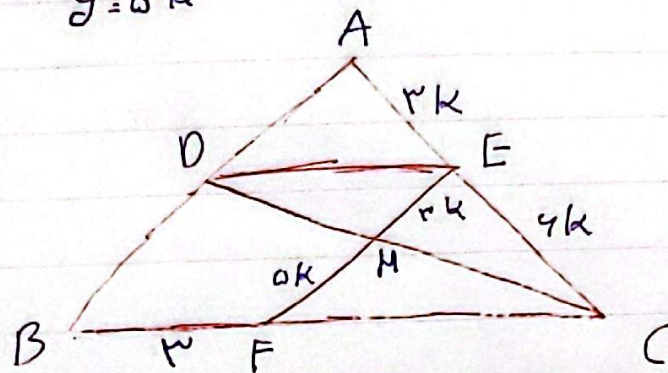
$$x = 2$$

$$x = 2 = \frac{10}{5}$$



$$x = 3k$$

$$y = 4k$$



$$\frac{3k}{9k} = \frac{DE}{BC}$$

$$\triangle DHE \sim \triangle HFC \Rightarrow \frac{3k}{4k} = \frac{DE}{FC}$$

$$9k \cdot DE = 3k \cdot BC$$

$$3DE = BC$$

$$10DE = 4FC + 10$$

(1)

$$4DE = 3FC$$

$$10DE = 9FC \quad (2)$$

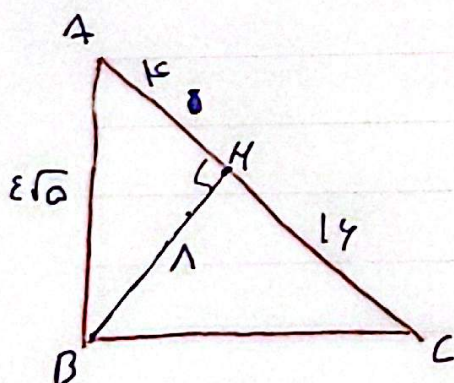
(1), (2)

$$4FC + 10 = 9FC$$

$$5FC = 10$$

$$FC = \frac{10}{5}$$

$$BC = \frac{10}{5} + \frac{10}{5} = \frac{20}{5} = 4 \quad (3)$$



$$3 - 4 = 1$$

$$\widehat{AH} \times \widehat{HC} = \widehat{BH}^2$$

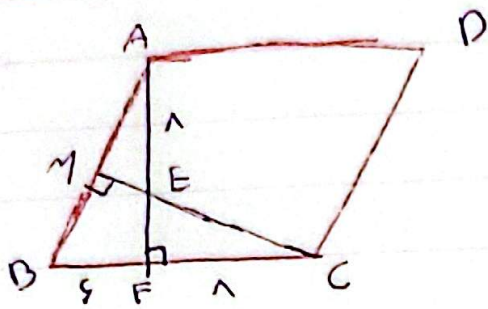
$$3 \times 9 = 4 \Rightarrow \widehat{BH} = 1$$

$$AB^2 = 9 + 16 \Rightarrow AB = \sqrt{25} = 5$$

$$BC^2 = 4 + 16 \Rightarrow BC = \sqrt{20} = 2\sqrt{5}$$

$$\frac{BC}{AB} = \frac{2\sqrt{5}}{5} = \frac{2}{\sqrt{5}} \quad (4)$$

$$\frac{AB}{BC} = \frac{5}{2\sqrt{5}} = \frac{\sqrt{5}}{2} \quad (5)$$



$$AD = BC = 12$$

$$FC = 12 - 9 = 3$$

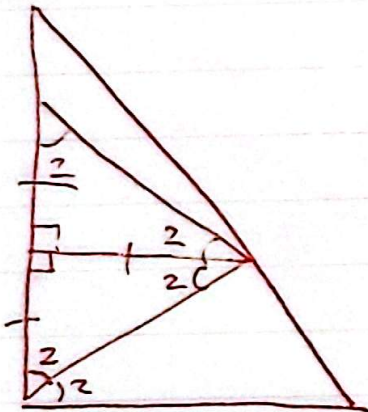
$$\triangle AME \cong \triangle FEC \Rightarrow$$

$$\frac{BF}{EF} = \frac{AF}{CF} \Rightarrow \frac{9}{x} = \frac{1+x}{3} \Rightarrow x(1+x) = 9 \cdot 3$$

$$x: 9 \Rightarrow AF = 1 + x = 12$$

$$AF = 12$$

✓ = 9



$$2+2=9$$

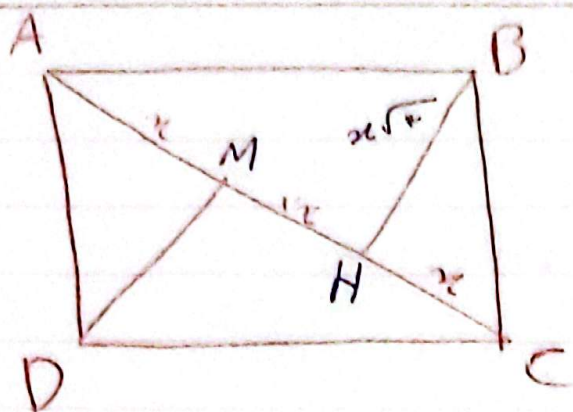
$$2 = 9 \Rightarrow B = 9$$

$$\frac{AG}{AB} = \frac{GD}{BC} \Rightarrow \frac{x+0,0}{1+x} = \frac{0,0}{1}$$

$$1x + 9 = 9,0 + 0,0x$$

$$19,0 = 9,0x$$

$$x = 9,9$$



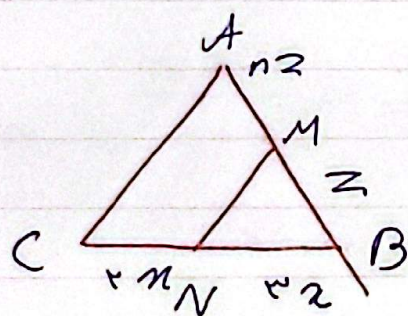
$$BH^2 = AH \times HC = x \times x = x^2 \Rightarrow BH = x\sqrt{2}$$

$$\delta_{ABC}^{\Delta} = \frac{x\sqrt{2} \times x}{2} = \frac{x^2\sqrt{2}}{2}$$

$$\delta_{ABCD}^{\square} = 2 \times \delta_{ABC}^{\Delta} \Rightarrow x^2\sqrt{2}$$

$$\delta_{HBC}^{\Delta} = \frac{x \times x\sqrt{2}}{2} = \frac{\sqrt{2}}{2} x^2$$

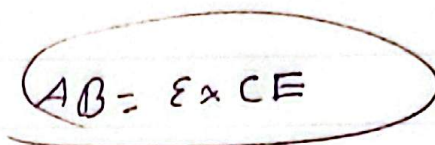
$$\frac{\delta_{ABCD}^{\square}}{\delta_{HBC}^{\Delta}} = \frac{x^2\sqrt{2}}{\frac{\sqrt{2}}{2} x^2} = 2$$



$$\delta_{ABC} = 2 \delta_{BMN}^{\Delta}$$

$$n = \frac{\frac{1}{2} \sin \theta \times 2(n+x) \times nx}{\frac{1}{2} \sin \theta \times nx \times z} \Rightarrow \frac{n}{z} = n+x$$

$$\frac{BM}{AM} = \frac{1}{\frac{z}{n}} = \frac{n}{z} \quad n = \frac{z}{\omega} \Rightarrow$$



$$x^2 + y^2 - xy = 1 \quad V$$

10, 12

$$\frac{14}{5} \times \frac{14}{5} = \frac{196}{25} = 7.84$$

$$6D = r F D + F D + (r F D)$$

$$CE = EG = GH$$

↓ ↓
4Pd 10Fe

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