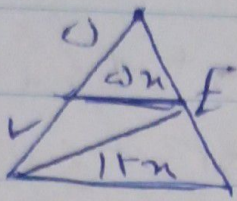


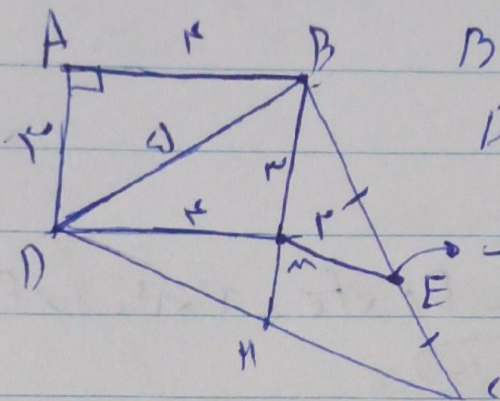
①



$$h_1 = h_2$$

$$\left. \begin{array}{l} S_{BEC} = 12m \times h_1 \\ S_{BDE} = 2x \times h_2 \end{array} \right\} \Rightarrow \frac{12m \times h}{2x \times h} = \frac{12}{x}$$

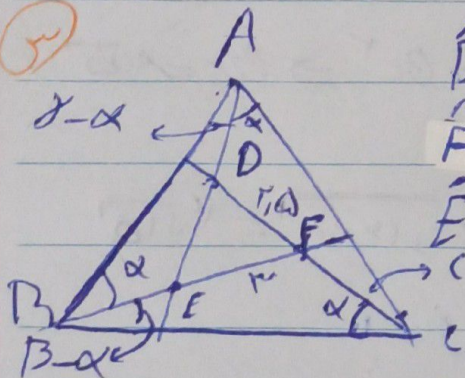
②



$$\begin{aligned} \triangle BDM &= \triangle EMH \Rightarrow \text{مستطابق الساقین} \\ DM &= EM \quad MC = 2 \Rightarrow \text{میراثاں ثالث} \end{aligned}$$

$$\Rightarrow ME \parallel HC \Rightarrow ME = 2$$

③



$$\hat{D} = \alpha + (C - \alpha) = C$$

$$\hat{F} = \alpha + (\beta - \alpha) = \beta$$

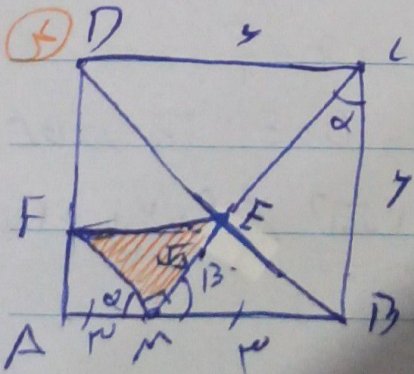
$$\hat{E} = \alpha + (\gamma - \alpha) = \gamma$$

$$\Rightarrow \triangle ABC \sim \triangle DFE$$

$$\Rightarrow \frac{BC}{DF} = \frac{AB}{EF} \Rightarrow \frac{1}{2} = \frac{AB}{2}$$

$$\Rightarrow AB = 1$$

④



$$MC = 2\sqrt{5} \quad \frac{EC}{ME} = \frac{2}{1}$$

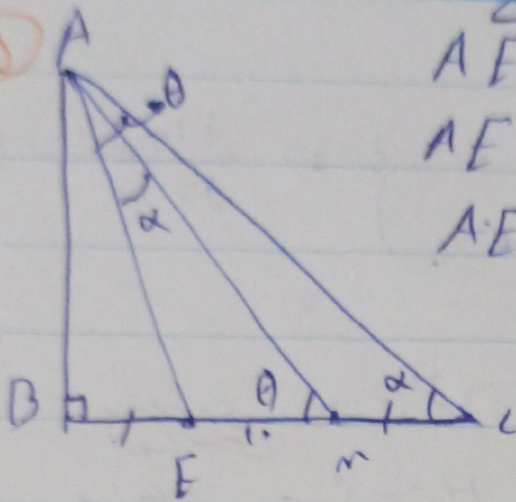
$$\Rightarrow 2\sqrt{5} \times \frac{1}{2} = BE = \sqrt{5}$$

$$EM = 1.4\sqrt{5}$$

$$S_{FME} = \frac{1}{2} \times 1.4\sqrt{5} \times \sqrt{5} = \frac{1}{2} \times 1.4 \times 5$$

$$\frac{1.4}{2}$$

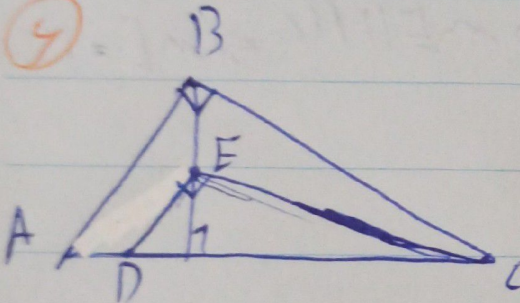
②



$$\triangle AEC \sim \triangle AFD$$

$$\left. \begin{aligned} AE^2 &= 100 + 10n \\ AE^2 &= n^2 + 100 \end{aligned} \right\} \begin{aligned} n^2 - 10n + 100 &= 0 \\ n &= 5 \end{aligned}$$

④



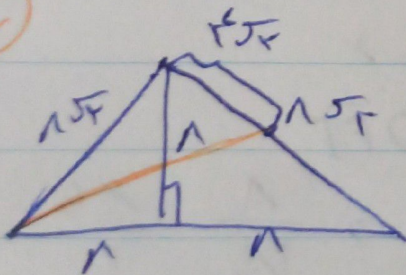
$$EF^2 = DF \times FC = 15 \times 15 = 15 \times FC$$

$$\Rightarrow FC = 15$$

$$BF^2 = 15 \times 15 \Rightarrow BF = 15 \times 15 = 15$$

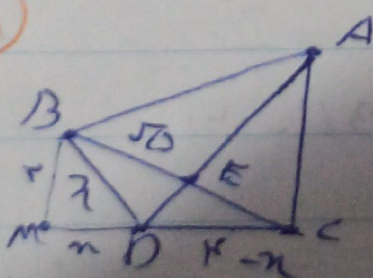
$$FB^2 + FC^2 = BC^2 \Rightarrow BC = 15\sqrt{2}$$

⑤



$$\Rightarrow \underline{BC} = \sqrt{75 \times 75 + 15 \times 15} = 15\sqrt{10}$$

①



$$n^2 + 15 = (15 - n)^2 \Rightarrow n = \frac{5}{4}$$

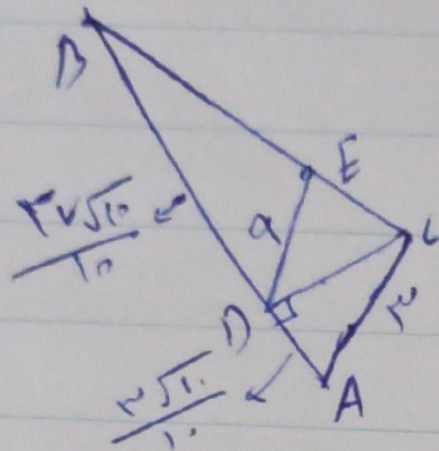
$$BC^2 = 15^2 + 15^2 \Rightarrow BC = 15\sqrt{2} \Rightarrow BE = \sqrt{2}$$

$$DE = \frac{\sqrt{2}}{4} \Rightarrow AE = 15\sqrt{2} / \left(\frac{1}{4} \times \frac{\sqrt{2}}{4} \times 15\sqrt{2} \right) = \frac{1}{4}$$

Date _____

Subject _____

9)

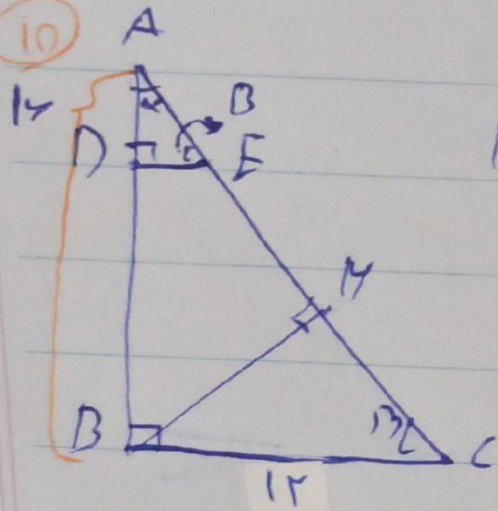


$$AB = 10\sqrt{5}$$

$$9 = AD \times \frac{1}{10} \Rightarrow AD = \frac{9}{\frac{1}{10}} = \frac{9 \times 10}{1}$$

$$\frac{BE}{BC} = \frac{\frac{9 \times 10}{1}}{\frac{10\sqrt{5}}{1}} = \frac{9}{10} \Rightarrow \frac{9}{10}$$

10)



$$AC = 20 \quad AB^2 = AC \times AH$$

$$12 \times 17 = 20 \times AH \Rightarrow AH = \frac{12 \times 17}{20}$$

$$\triangle AED \sim \triangle ABC \Rightarrow AE = \frac{12 \times 15}{20}$$

$$DE = BC \times \frac{AE}{AC} \Rightarrow \frac{17}{20} = \frac{12}{20} \times 15$$