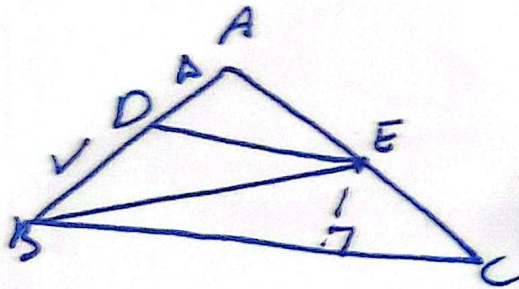


دوسری جانب

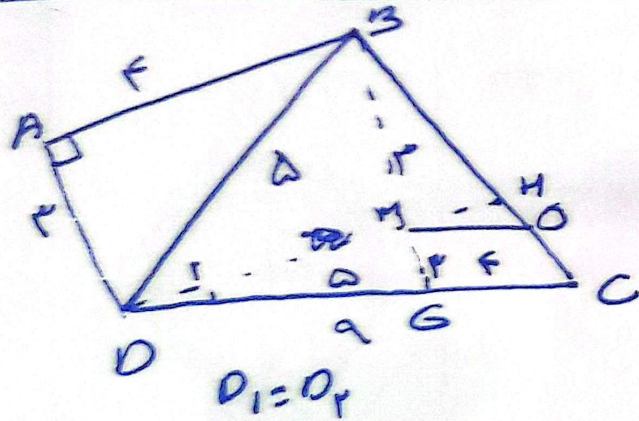
۲۲ باز ہم دقتی



$$BC \parallel DE \xrightarrow[\text{قوس}]{\text{مقابلہ}} \frac{DE}{BC} = \frac{5}{5+7} = \frac{5}{12}$$

$$\frac{S_{BEC}}{S_{DEB}} = \frac{BC}{DE} = \frac{12}{5} = \frac{24}{10} = \boxed{2.4}$$

①



$$\triangle DMO \sim \triangle BGC$$

$$\frac{BM}{BC} = \frac{1}{2} = \frac{1}{2} = \frac{BO}{BC}$$

$$\frac{MO}{GC} = \frac{1}{2} \quad \frac{MO}{F} = \frac{1}{2} \quad MO = \frac{1}{2} F$$

$$BM \parallel DC \quad \text{قضيه ثابته} \quad \triangle BME \sim \triangle DEC \quad (E)$$

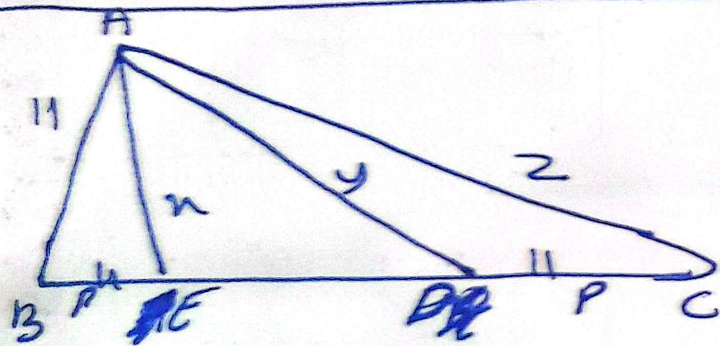
$$\frac{ME}{CE} = \frac{BM}{DC} = \frac{4}{8} = \frac{1}{2} \quad (I) \rightarrow BC^2 = CM^2 = BE^2 + BM^2 \rightarrow 4^2 + 4^2 = 8^2$$

$$CM = 4\sqrt{2} \quad (II) \quad (I), (II) \rightarrow ME = \sqrt{8} \quad CE = 2\sqrt{8}$$

$$\triangle AME \sim \triangle BCM$$

$$\rightarrow \frac{AM}{BC} = \frac{ME}{MC} \Rightarrow \frac{4}{8} = \frac{ME}{4\sqrt{2}} \rightarrow ME = \frac{4}{2}\sqrt{2}$$

$$S_{MEC} = \frac{1}{2} ME \times MC = \frac{1}{2} (2\sqrt{2} \times 4\sqrt{2}) = \frac{10}{2} = 5\sqrt{2}$$

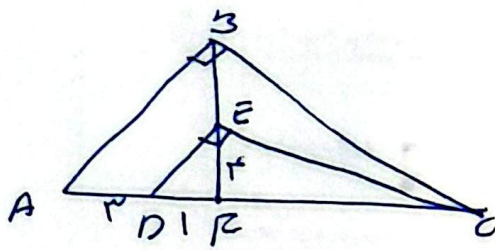


$$\frac{n}{1+p} = \frac{y}{n} = \frac{1}{n} \rightarrow n^2 = 1 \cdot (1+p)$$

②

$$11 + p^2 = 1 \cdot 1 + 1 \cdot p \rightarrow p^2 - 1 \cdot p + 11 = 0$$

$$(p-v)(p-v) \rightarrow p = v$$



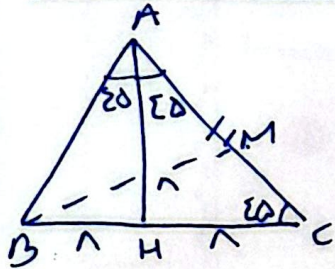
$$\vec{DE} = \vec{DF} \times \vec{FC} \Rightarrow \vec{DE} = 1 \times \vec{FC}$$

$$FC = 14$$

$$\vec{AB} \Rightarrow \vec{BF} = \vec{AF} \times \vec{FC} \Rightarrow \vec{BF} = \vec{AF} \times 14 = 4\vec{E}$$

$$BF = 1$$

$$\vec{BE} \Rightarrow \vec{BE} = \vec{BF} + \vec{FE} \Rightarrow \vec{BE} = 1 + 14 \Rightarrow \vec{BE} = 15$$



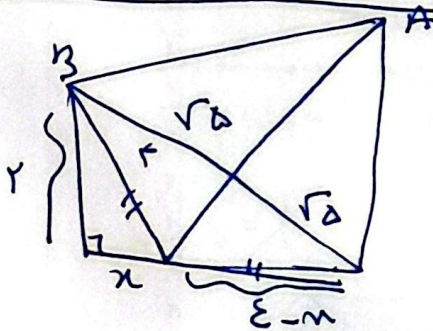
$$AB = AC = \sqrt{AH^2 + HC^2} = \sqrt{4^2 + 4^2} = \sqrt{16 + 16} = \sqrt{32} = 4\sqrt{2}$$

$$CM = AM = \frac{AC}{2} = \frac{4\sqrt{2}}{2} = 2\sqrt{2}$$

$$AM = HC \Rightarrow \vec{AM} = \vec{HC} \Rightarrow \vec{AM} = \vec{HC} \Rightarrow \begin{cases} \angle A = \angle C = 45^\circ \\ \angle B = 90^\circ \end{cases} \Rightarrow A = 90^\circ$$

$$BM = \sqrt{AB^2 + AM^2}$$

$$\sqrt{16 + 16} = \sqrt{32} = 4\sqrt{2}$$



$$(E-M) = \vec{DE} = \vec{DF} \times \vec{FC} \Rightarrow \vec{DE} = 1 \times \vec{FC} \Rightarrow \vec{DE} = 14$$

$$CM = 12 \Rightarrow M = \frac{12}{2} = 6$$

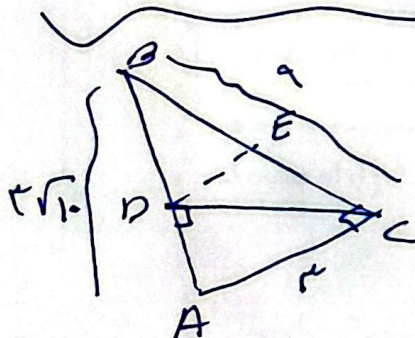
$$BM = CM = 6 - \frac{12}{2} = 3 \Rightarrow \vec{BC} = \sqrt{3^2 + 3^2} = 3\sqrt{2}$$

$$EM = \sqrt{\left(\frac{12}{2}\right)^2 + (3\sqrt{2})^2} = \sqrt{36 + 18} = \sqrt{54} = 3\sqrt{6}$$

$$\vec{EC} = \vec{EM} \times \vec{AE} \Rightarrow 4\sqrt{2} = \frac{\sqrt{2}}{2} \times \vec{AE}$$

$$\vec{AE} = 4\sqrt{2} \times 2 = 8\sqrt{2}$$

$$S_{ABE} = \frac{AB \times AE}{2} = \frac{4\sqrt{2} \times 8\sqrt{2}}{2} = 16$$



$$\vec{BC} = \vec{BD} \times \vec{AB} \Rightarrow 1 = \vec{BD} \times \sqrt{2}$$

$$\vec{BD} = \frac{1}{\sqrt{2}}$$

$$\vec{BD} = \vec{BE} \times \vec{BC}$$

$$\frac{1}{\sqrt{2}} = \vec{BE} \times 1$$

$$\vec{BE} = \frac{1}{\sqrt{2}} = \frac{1}{1.41} \approx 0.71$$

$$AB^r = AH \times AC$$

$$14^r = AH \times 12$$

$$AH = \frac{14^r}{12} = \frac{104}{12} = 11\frac{1}{3}$$

AH $\sim$ E

$$AE = EH \times \frac{AH}{r} = 41^r$$

(1.)

$\triangle ADE \sim \triangle ABC$

$$\begin{aligned} \hat{A} &= \hat{A} \\ \angle &= \angle \end{aligned} \quad \left. \vphantom{\begin{aligned} \hat{A} &= \hat{A} \\ \angle &= \angle \end{aligned}} \right\}$$

$$\rightarrow \frac{AE}{AC} = \frac{DE}{BC}$$

$$\frac{41^r}{12} = \frac{DE}{12}$$

$$\rightarrow DE = \frac{41^r \times 12}{12} = 41^r$$

Ans