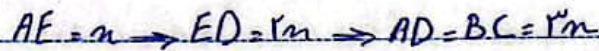


Y.

آرشیو ایلام در دسترس آید / تالیف شاپور ۲۱

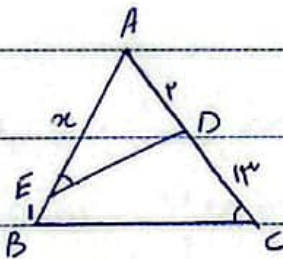


$$\left. \begin{array}{l} \hat{F}_1 = \hat{F}_r \\ \hat{A}_1 = \hat{C}_1 \end{array} \right\} \Rightarrow \triangle AFE \sim \triangle FBC \quad \frac{FM}{n} = r = \frac{\text{radius}}{\text{chord}}$$

$$BF = \sqrt{(rm)^r + (m)^r} = \sqrt{10} \cdot m \rightarrow EF = \frac{1}{\epsilon} EB = \frac{\sqrt{10}}{\epsilon} m$$

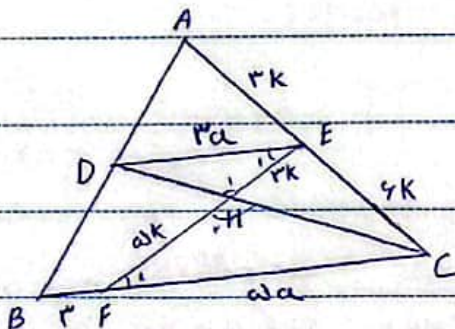
$$AC = \sqrt{(rm)^2 + (rm)^2} = r\sqrt{2}m \rightarrow AF = \frac{1}{\epsilon} AC = \frac{r\sqrt{2}}{\epsilon} m$$

$$\frac{EF}{AF} = \frac{\frac{\sqrt{1}}{f} n}{\frac{3\sqrt{f}}{f} n} = \frac{\sqrt{\omega}}{3}$$



$$\left. \begin{array}{l} \hat{A} = \hat{A} \\ \hat{E} = \hat{C} \end{array} \right\} \Rightarrow \triangle ADE \sim \triangle ABC \rightarrow \frac{r}{n+1} = \frac{n}{15}$$

$$\rightarrow v = u^r + u = u(u+1) \rightarrow u = \omega$$



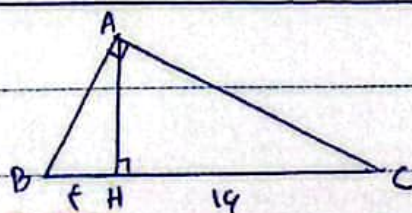
$$\ddot{y} = \omega n \rightarrow x = \ddot{x}K, y = \omega K$$

$$\left. \begin{array}{l} \hat{H}_1 = \hat{H}_r \\ \hat{E}_1 = \hat{F}_1 \end{array} \right\} \Rightarrow \Delta H \sim \Delta C \rightarrow \frac{\Delta K}{\Delta K} = \frac{1}{\omega} = \text{نسبت سائب}$$

$$\frac{r_a}{r+a} = \frac{rK}{9K} = \frac{1}{9}$$

$$q_a = r + a \rightarrow f_a = r \rightarrow a = \frac{r}{\varepsilon}$$

$$B C = \bar{r} + \omega \left(\frac{\bar{r}}{\epsilon} \right) = \bar{r} + \frac{1\omega}{\epsilon} = \frac{rV}{\epsilon} = 9, \text{ Vds}$$



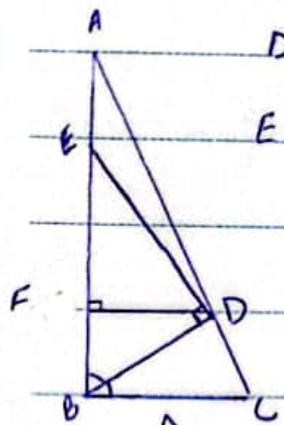
$$AC^2 = HC \times BC = 14 \times 20$$

$$AB^T = BH \times BC = E \times T.$$

$$\rightarrow \frac{AC}{AB} = r \rightarrow \frac{AC}{AB} = r \quad (5)$$

$$\left. \begin{array}{l} \hat{E}_1 = \hat{E}_r \\ \hat{P} = 90^\circ \end{array} \right\} \rightarrow \triangle BAF \sim \triangle ECF \rightarrow \frac{BF}{EF} = \frac{AF}{CF} \rightarrow \frac{q}{n} = \frac{1+n}{1} \quad (EF=n) \quad - \omega$$

$$\rightarrow n(n+1) = 1 \rightarrow n = 1 \rightarrow AF = 1+n = 1+1 = 2$$

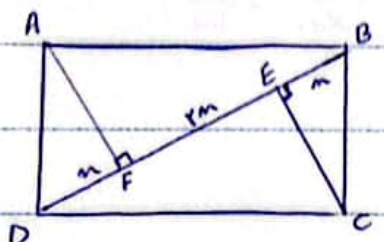


$$DF \parallel BC \rightarrow \hat{B} = \hat{F} = 90^\circ \rightarrow \frac{q}{r} = \frac{EF}{FD} = \frac{D_1}{D_2} = \frac{B_1}{B_2} \quad - \gamma$$

$$ED = n = DB \rightarrow \hat{E} = \hat{B}_1 = 90^\circ \rightarrow \left. \begin{array}{l} EF = FD \\ BF = FD \end{array} \right\} \rightarrow EF = BF = \frac{11}{r}$$

$$DF \parallel BC \rightarrow \frac{n+0/0}{AF} = \frac{0/0}{FB} \rightarrow 1n + EF = \omega/\omega n + \gamma/\gamma$$

$$\rightarrow n = \frac{14/0}{\gamma/0} = 4/4 \rightarrow AF = 4/4$$



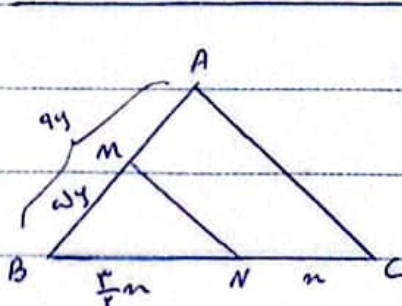
$$AF = CE = h$$

$$\triangle ADF \sim \triangle BCE = \frac{h \times n}{r} \quad \triangle ABF \sim \triangle ECD = \frac{h \times r}{r}$$

$$S_{ABCD} = r \left(\frac{h \times n}{r} \right) + r \left(\frac{h \times r}{r} \right) = 2h \omega$$

$$S_{ADF} = \frac{h \times n}{r}$$

$$\frac{S_{ABCD}}{S_{ADF}} = \frac{2h \omega}{\frac{h \times n}{r}} = \Lambda$$

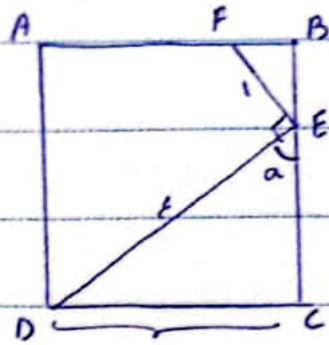


$$BC = \frac{r}{r} n + n = \frac{\omega}{r} n$$

$$\frac{S_{ABC}}{S_{MBN}} = \frac{\sin B \times AB \times BC}{\sin B \times BM \times BN} = \frac{\omega}{r} \quad - \Lambda$$

$$\rightarrow \frac{AB}{BM} = \frac{r}{\omega} \times \frac{r}{\omega} = \frac{1}{\omega} \rightarrow AB = 4\gamma, BM = \omega\gamma$$

$$AB - BM = 4\gamma - AM \quad \frac{BM}{AM} = \frac{\omega\gamma}{4\gamma} = \frac{\omega}{4}$$



$$\hat{B} = \hat{C} = 90^\circ$$

$$\left. \begin{array}{l} \hat{a} + \hat{B} = 90^\circ \\ \hat{B} + \hat{E}_1 = 90^\circ \end{array} \right\} \Rightarrow \hat{E}_1 = \hat{a}$$

$$\left. \begin{array}{l} \hat{E}_1 + \hat{D}_1 = 90^\circ \\ \hat{a} + \hat{B} = 90^\circ \end{array} \right\} \Rightarrow \hat{D}_1 = \hat{B}$$

$$\Rightarrow \triangle FBE \sim \triangle ECD$$

$$\rightarrow \frac{EF}{1} = \frac{DE}{BE} = \frac{EC}{FB} \quad \sqrt{14-a^2} = EC \quad EB = a - \sqrt{14-a^2} \quad (5)$$

$$a = FB = \sqrt{14-a^2} \rightarrow 2a = \sqrt{14-a^2}$$

$$9a^2 = 14 \times 14 - 14a^2 \rightarrow 20a^2 = 14^2 \rightarrow a^2 = \frac{104}{10} = 1.04$$

$$\text{میان } BD \rightarrow AD = DC \quad (1) \Rightarrow GD \rightarrow \text{میان}$$

$$\text{میان } AH \rightarrow \text{میان } G \text{ از } \text{میان } G \rightarrow GE = EC \quad \text{نقطه } F \rightarrow AE \text{ میان} \quad (5)$$

$$(1), (2) \rightarrow \triangle AGC \left\{ \begin{array}{l} GD \text{ میان} \\ AE \text{ میان} \end{array} \right. \Rightarrow F \text{ نقطه تقاطع} \rightarrow \begin{array}{l} FD = m \\ GF = 2m \end{array} \quad AC \rightarrow BG = 4m$$

$$\frac{BD}{FD} = \frac{4m + 2m + m}{m} = 7$$