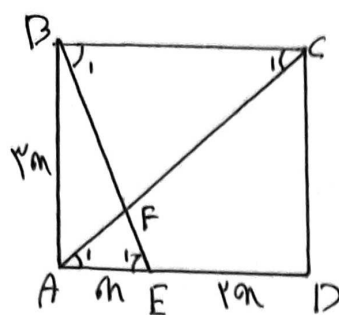




$ED = 2AE \Rightarrow AE = m \Rightarrow BC = AD = 3m$ $AF + CF = 2m\sqrt{2}$
 $AC = 3m\sqrt{2} \Rightarrow \frac{AE}{BC} = \frac{BF}{CF} = \frac{AF}{CF} = \frac{1}{2} \Rightarrow 2m\sqrt{2} = AF$
 $C_1 = A_1$
 $B_1 = E_1$
 $\Rightarrow \triangle BCF \sim \triangle EAF$
 $BE = \sqrt{(2m)^2 + m^2} = \sqrt{5}m$
 $\frac{EF}{AF} = \frac{\sqrt{10}m}{2m\sqrt{2}} = \frac{\sqrt{5}}{2} \Rightarrow \frac{\sqrt{10}m}{2} = BE$

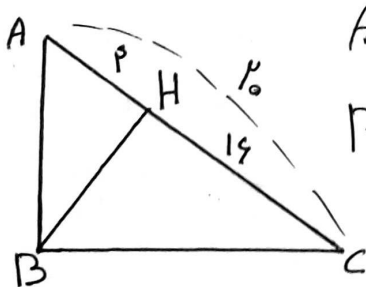
$\triangle AED \sim \triangle ACB$
 $\hat{A} = \hat{A}$
 $\Rightarrow \triangle ADE \sim \triangle ABC \Rightarrow \frac{AD}{AB} = \frac{AE}{AC} \Rightarrow \frac{3}{m+1} = \frac{m}{10}$

$\Rightarrow m^2 + m = 3 \Rightarrow m^2 + m - 3 = 0 \quad (m-1)(m+3) = 0$

$\boxed{m=1} \Rightarrow X$

$y = \frac{10}{3}m \Rightarrow DE \parallel BC \Rightarrow \frac{AE}{AC} = \frac{DE}{BC} \Rightarrow \frac{m}{3m} = \frac{DE}{3m} \Rightarrow DE = m$
 $EC = \frac{10}{3}m \times \frac{2}{3} = \frac{20}{9}m \Rightarrow AC = 3m$
 $DE = m \Rightarrow \frac{1}{3}DE = \frac{1}{3}m \Rightarrow DE = \frac{1}{3}m$

$\triangle E_1 = F_1$
 $D_1 = C_1$
 $\Rightarrow \triangle DHE \sim \triangle CHF \Rightarrow \frac{FH}{EH} = \frac{FC}{DE} = \frac{\frac{10}{3}m}{m} = \frac{10}{3} \Rightarrow FC = \frac{10}{3}DE$



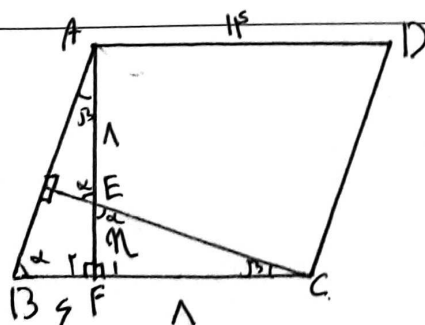
$AB^2 = AH \times AC \Rightarrow 9 \times 20 = (AH)^2$

$BC^2 = CH \times AC \Rightarrow 19 \times 20 = (CH)^2$

$AB = \sqrt{18}$

$BC = \sqrt{38}$

$\frac{AB}{BC} = \frac{\sqrt{18}}{\sqrt{38}} = \frac{3\sqrt{2}}{\sqrt{38}}$



$AB = \sqrt{(1+2)^2 + 3} = \sqrt{10}$

$EC = \sqrt{1^2 + 9} = \sqrt{10}$

$F_1 = F_2 = 9$

$\alpha = \alpha$

$B = E_1$

$C = A$

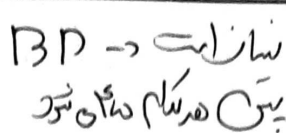
$B = B$

$\Rightarrow \triangle ABF \sim \triangle CFE$

$\Rightarrow \frac{AB}{EC} = \frac{AF}{FC} = \frac{BF}{FE}$

$\Rightarrow \frac{\sqrt{(1+2)^2 + 3}}{\sqrt{1^2 + 9}} = \frac{1+2}{1} = 3 \Rightarrow m^2 + 11m - 11 = 0 \Rightarrow (m-1)(m+12) = 0$

$m = 1 \Rightarrow 1+12 = 13$



二

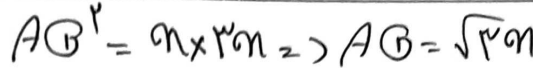
$$EH = BH = \frac{11}{2}$$

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Exib $\Rightarrow \frac{PA}{AB} = \frac{PB}{BC} \Rightarrow \frac{\frac{11}{4} + n}{11 + n} = \frac{\frac{11}{4}}{1} \Rightarrow 11n = 14,125$

$$\Rightarrow n = (5, 5)$$



$$AD = \sqrt{m^2 + (\sqrt{m})^2} = 2m \quad AB = \sqrt{(\sqrt{m})^2 + (m)^2} = 2\sqrt{m}$$

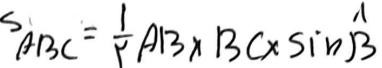
$$\Sigma_{\text{plate}} = P_{\text{on}} \times P \sqrt{\mu} n = P \sqrt{\mu} n^2$$

$$\Rightarrow \textcircled{F} E = \frac{\sqrt{r}}{r} n \rightarrow s = \frac{v}{\frac{\sqrt{r}}{r} n}$$

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$$\hat{A}_1 = \hat{E}_1$$

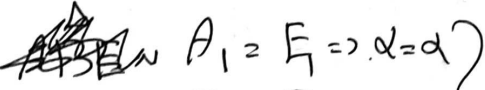
$$\left. \begin{array}{l} A_1 = E_1 \\ B_1 = B \\ \alpha = \alpha \end{array} \right\} \Rightarrow \triangle DEB \sim \triangle BFA \Rightarrow \frac{DE}{AB} = \frac{AB}{AE} = \frac{DB}{BE}$$



$$S_{BNM} = \frac{1}{r} B_M \times B_N \times \sin \hat{B}$$

$$\Rightarrow \frac{1}{x} B_N \times B_M = \frac{1}{x} B_C \times A_B$$

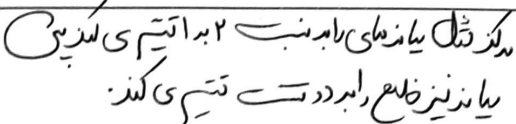
$$\psi_{\text{X}} \text{ } \cancel{\psi_{\text{X}}} \text{ } \beta_{\text{M}} = \cancel{\omega_{\text{X}}} (A_{\text{M}} + \cancel{M} \beta) \Rightarrow \frac{\beta_{\text{M}}}{A_{\text{M}} + \cancel{M} \beta} = \frac{\omega}{9} \Rightarrow \frac{\beta_{\text{M}}}{A_{\text{M}} - \beta_{\text{A}} + \beta_{\text{M}}} = \frac{\omega}{9}$$



$$E_Y = G_1 = \beta$$

$$B_2 E_{av} = 9.$$

$$\frac{AB}{CE} = \frac{AF}{BE} \Rightarrow \frac{n}{y} = \frac{1}{1} \Rightarrow Fy = n \Rightarrow y = \frac{1}{F} = \frac{1}{\frac{F}{\omega}} = \frac{\omega}{F} = \frac{1}{\omega} \times \frac{1}{\omega} = \frac{1}{\omega^2}$$



$$\frac{FD}{EH} = \frac{y}{\frac{r}{r}y} = \frac{r}{r}$$

$$\frac{EH}{DG} = \frac{n}{r \sin} = \frac{1}{r}$$

$$B \Rightarrow \frac{FD}{\cancel{EH}} \cdot \frac{\cancel{EH}}{DG} = \frac{FD}{DG} = \frac{P}{r} \cdot \frac{1}{P} = \frac{1}{r} \quad GD = \frac{1}{r} BD$$

$$\frac{FD}{\frac{1}{FD}} = \frac{1}{\frac{1}{FD}} \Rightarrow \frac{BD}{FD} = 9$$