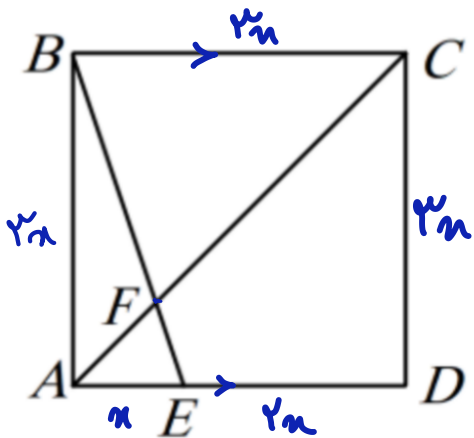


هستی / رضائی / از دهم دفتر ح



$ABCD \rightarrow BC = AD = AE + ED = n + r_n = r_n$
 مربع $\rightarrow AD \parallel BC \xrightarrow{\text{مربع}} \frac{AE}{AF} = \frac{AF}{AE} = 1$

$$B_E^Y = qn^Y + n^Y = 10n^Y \rightarrow B_E = n\sqrt{10}$$

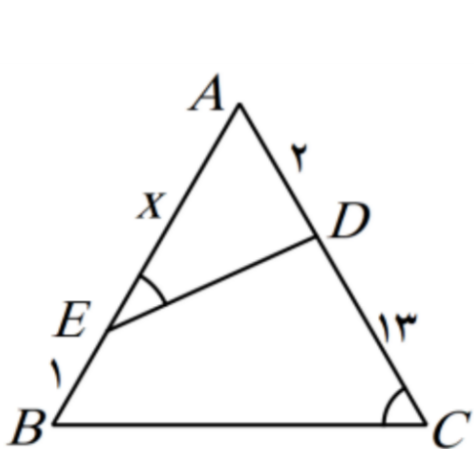
$$AC^r = 1n^r + 9n^r = 10n^r \rightarrow AC = 10\sqrt{x}$$

$$\rightarrow \frac{AF}{AF+BC} = \frac{AF}{AC} = \frac{EF}{EB}$$

$$\rightarrow \frac{Af}{r_n \sqrt{r}} = \frac{1}{f} \rightarrow Af = \frac{r_n \sqrt{r}}{f}$$

$$\rightarrow \frac{Ef}{n\sqrt{10}} = \frac{1}{f} \rightarrow Ef = \frac{n\sqrt{10}}{f}$$

$$\Rightarrow \frac{EF}{AF} = \frac{\frac{\pi \sqrt{10}}{\kappa}}{\frac{\kappa \sqrt{10}}{\kappa}} = \boxed{\frac{\sqrt{10}}{\kappa}}$$



$$(iii) \triangle ADE \sim \triangle ABC \rightarrow \frac{AD}{AB} = \frac{AE}{AC}$$

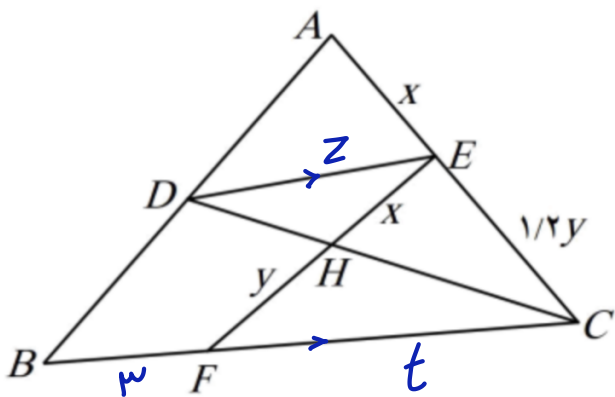
$$\rightarrow \mu_0 = \mu + \sigma$$

$$x^T + x - r_0 = 0$$

$$(n+4)(n-5) = 0$$

$$x = -4 \quad \bar{v} \bar{v} \dot{x}$$

$$x = \omega$$

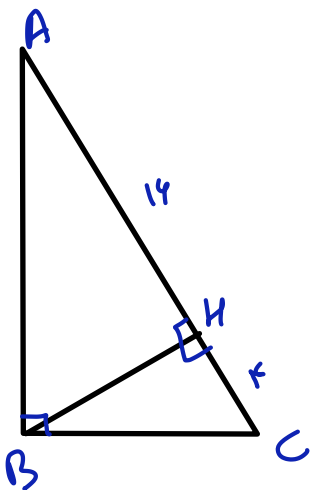


$$DE \parallel BC \xrightarrow{\text{ثابته}} \frac{AE}{AC} = \frac{DE}{BC} \rightarrow \frac{x}{x+1.2y} = \frac{z}{t+z} \rightarrow \frac{x}{x + \frac{1.2x}{r}x} = \frac{1}{r} = \frac{z}{t+z} \rightarrow \frac{1}{r} = \frac{\frac{1}{r}t}{t+z}$$

$$\boxed{\text{تالس}} \rightarrow \frac{DE}{BC} = \frac{EH}{HF} \rightarrow \frac{x}{y} = \frac{z}{t} \rightarrow \frac{x}{\frac{y}{r}x} = \frac{z}{t} \rightarrow \frac{r}{\omega} = \frac{z}{t}$$

$$\begin{aligned} \rightarrow \omega t &= t + \pi \rightarrow \pi t = \pi \\ &\rightarrow t = \frac{\pi}{\pi} \end{aligned}$$

$$\overline{BC = \{v, u\}}$$



$$AC - CH = AH$$

$$y_0 - k = 14$$

$$BC^Y = CH \times AC$$

$$BA^T = AH \times AC$$

$$\rightarrow \left(\frac{BC}{BA} \right)^T = \frac{CH}{AH}$$

$$\Rightarrow \frac{BC}{BA} = \frac{1}{Y}$$

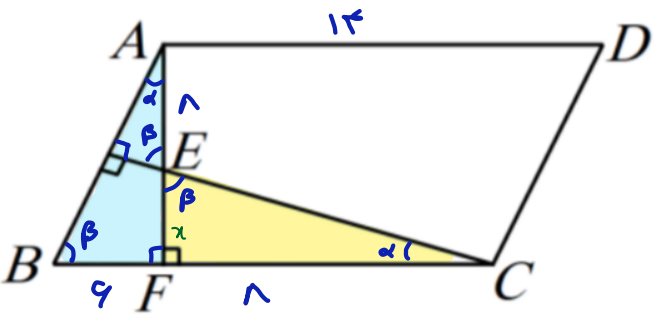
$$\frac{BA}{BC} = Y$$

①

④

④

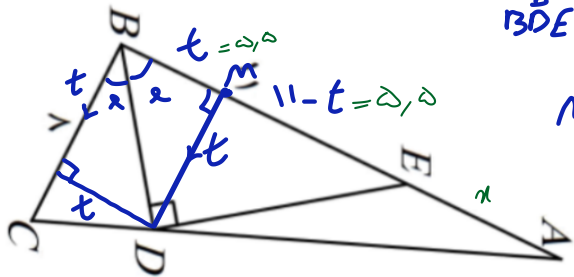
④



(iii) $\triangle AFB \sim \triangle CFE \rightarrow \frac{AF}{CF} = \frac{AB}{CE} = \frac{FB}{FE}$

$\rightarrow 1n + n^2 = 12$
 $n^2 + 1n - 12 = 0$
 $(n+4)(n-3) = 0$
 $n = -4$ or $n = 3$
 $AF = 1 + 3 = 4$

3

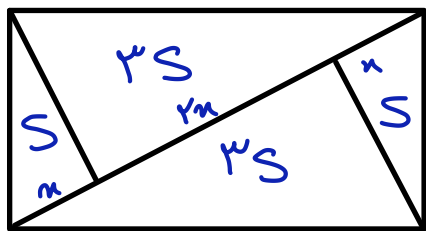


$\triangle ADE \rightarrow t = t(1-t) \rightarrow t = 1-t \rightarrow t = 0.5$

$MD \parallel BC \rightarrow \frac{AM}{AB} = \frac{MD}{BC} \rightarrow \frac{0.5}{1+n} = \frac{0.5}{1}$

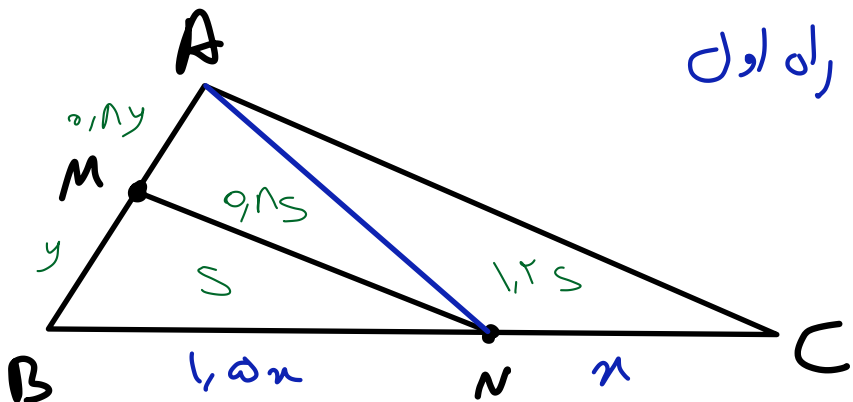
$1+n = 1 \rightarrow n = 0$
 $AE = 1 = 1$

4



$\frac{S_{\Delta}}{S_{\square}} = \frac{S}{12} = \frac{1}{4}$

5



داده: $S_{\triangle ABC} = 12$ $S_{\triangle AMN} = S$ $S_{\triangle ABC} = 12$

$\frac{S_{\triangle AMN}}{S_{\triangle ABC}} = \frac{4}{12} \rightarrow S_{\triangle AMN} = \frac{1}{3} S_{\triangle ABC}$

$S_{\triangle AMN} + S_{\triangle MNC} = S_{\triangle ANC}$

$S + mS + nS = 12 \rightarrow m+n=2$

$(m+1)S = \frac{1}{3} 12 \rightarrow \frac{1}{3} 12 - m = 1$

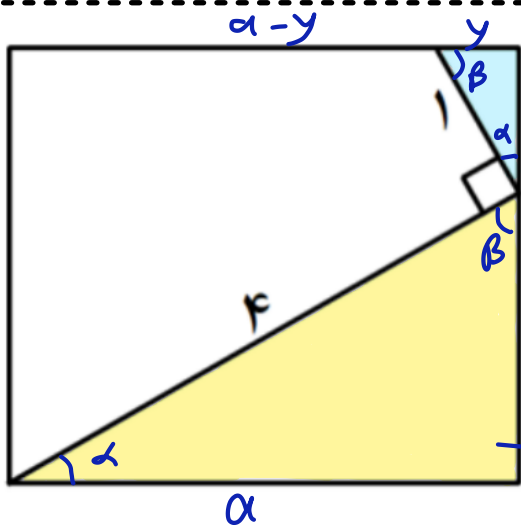
$\frac{1}{3} 12 = 4 \rightarrow n = \frac{4}{3}$

$m = \frac{4}{3}$

داده: $\frac{S_{\triangle ABC}}{S_{\triangle AMN}} = \frac{\frac{1}{2} \times AB \times AC \times \sin B}{\frac{1}{2} \times BM \times AN \times \sin B} = 3 \rightarrow \frac{AB}{BM} = \frac{4}{1}$

تعیین
 $\rightarrow \frac{AM}{BM} = \frac{4}{1} \rightarrow \frac{BM}{AM} = \frac{1}{4}$

6



$\frac{y}{a-n} = \frac{n}{a} = \frac{1}{3} \rightarrow a = 3n$
 $a-n = 2n \rightarrow 2n = 1 \rightarrow n = \frac{1}{2}$
 $a = \frac{3}{2}$

$S_{\Delta} = a^2 = \frac{9}{4}$

$1^2 = a^2 + (a-n)^2 \rightarrow 1 = \frac{9}{4} + \left(\frac{3}{2} - \frac{1}{2}\right)^2 = \frac{9}{4} + 1 = \frac{13}{4}$

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در مثلث AGC فقط F ، مرکز ثقل است.

$$\frac{BD}{FD} = 4$$

