

نام و نام خانوادگی: پانزدهم تشریحی تکلیف شماره 14 کلاس: 1402

$$m = \frac{dy}{dx} = \frac{k-m}{-r-\varepsilon} = -\frac{1}{r} \rightarrow k-m = \frac{r}{r} = 1$$

$$\text{طول ضلع: } \sqrt{r^2 + 9} = \sqrt{\varepsilon \alpha}$$

$$S = a^2 = \varepsilon \alpha$$

$$BC = AD \rightarrow (y-1)^2 + (x-r)^2 = (x-r)^2 + (y-1)^2$$

$$(x-r)^2 + (y-1)^2 = (-1-x+1)^2 + (y+r-1)^2$$

$$\rightarrow x^2 - 4x + 4 = x^2 - 1 - 2x + 1 + y^2 + 2y - 1 + 2y + r^2 - 2r + 1$$

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$$AB = \frac{r-1}{-1-r} = -\frac{r}{\varepsilon} \quad BC = \frac{-1}{AB} = \frac{\varepsilon}{r} = \frac{y-1}{x-r} \Rightarrow ry - r^2 = -4$$

$$ry = -r^2 + y = -1$$

$$\tan \alpha = \frac{y}{x} = \tan \alpha = \tan \alpha = \sqrt{r}$$

$$BC = \sqrt{r^2 + \frac{9}{\varepsilon}} = \frac{r}{\varepsilon} \quad AB = \sqrt{14 + 9} = 5$$

$$\frac{1}{\varepsilon} = r \left(\frac{9}{r} + \alpha \right) = \frac{10}{r}, r = 10$$

$$y = \frac{-rm}{m^2-1} x + \frac{r}{m^2-1}$$

$$\frac{-rm}{m^2-1} = \sqrt{r} \rightarrow -rm = \sqrt{r} m^2 - \sqrt{r} \rightarrow \sqrt{r} m^2 + rm - \sqrt{r} = 0 \quad (m + \frac{r}{\sqrt{r}})(m - \frac{1}{\sqrt{r}}) = 0$$

$$\rightarrow \left| \frac{1}{\sqrt{r}} + \frac{r}{\sqrt{r}} \right| = \frac{\varepsilon \sqrt{r}}{r}$$

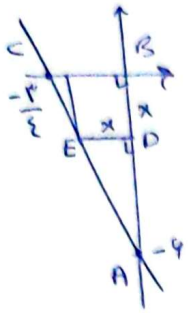
$$BC = \frac{11-r}{r-1} = \frac{1}{\varepsilon} = r \quad y-r = r(x-r) \rightarrow y = rx + r^2 = 0$$

$$AH = \frac{|9 - r + r^2|}{\sqrt{1+\varepsilon}} = \frac{1}{\sqrt{5}} = \frac{1 \cdot \sqrt{5}}{5} = \sqrt{5}$$

$$BC \rightarrow y = \frac{r}{\varepsilon} x - \frac{19}{r} \quad \frac{r}{\varepsilon} x - \frac{19}{r} = -rx + r \rightarrow rx - 19 = -\varepsilon x + 1\varepsilon$$

$$AB \rightarrow y = -rx + r \quad \rightarrow 11m = 13r \rightarrow m = r \rightarrow y = 1$$

$$H = \frac{| \varepsilon - 9 - 19 |}{\sqrt{14+9}} = \frac{28}{5} = \varepsilon, \varepsilon$$



$\triangle ADE \sim \triangle ABC$ (DE || BC, $\angle A$ مشترک)
 $AB = 4$ $BC = 8$
 $AD = 4 - n$

$$\frac{AB}{AD} = \frac{BC}{DE} = \frac{AC}{AE} \rightarrow \frac{4}{4-n} = \frac{8}{x} \rightarrow 4x = 8(4-n) = 32 - 8n$$

$$\rightarrow 4x + 8n = 32 \rightarrow x = \frac{32 - 8n}{4} = 8 - 2n$$

$$P_{\triangle ADE} = n\sqrt{2} = \frac{8}{\sqrt{2}} \sqrt{2}$$

$$y = ax + 1$$

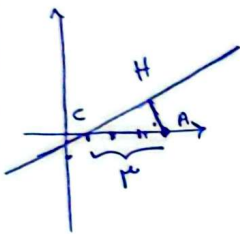
$$y = \frac{x}{a} + \frac{a-1}{a}$$

$$a = +1 \rightarrow y = x + 1 \rightarrow (1, 2) \checkmark$$

$$S = \frac{1}{2} \times \frac{8}{2} \times \sqrt{11} = \frac{8}{\sqrt{11}} \sqrt{11}$$

$$\left. \begin{aligned} AB &= \frac{1}{\sqrt{11}} \\ BD &= \frac{8}{\sqrt{11}} \end{aligned} \right\} S = \frac{8}{\sqrt{11}}$$

$$S_{\triangle ABC} = \frac{bc \sin A}{2} = \frac{1}{2} \rightarrow \sin A = \frac{1}{2} \rightarrow A = 30^\circ \text{ or } 150^\circ$$



$AH \rightarrow AC$ (ارتفاع) $\rightarrow AH \perp AC$

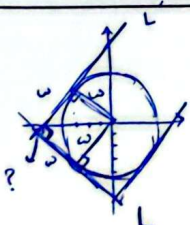
$$AH = \frac{|1-1|}{\sqrt{1+4}} = \frac{0}{\sqrt{5}} = 0$$

$$AC = 1 \rightarrow HC = \sqrt{1 - \frac{1}{4}} = \sqrt{\frac{3}{4}} = \frac{\sqrt{3}}{2}$$

$$S_{\max} = \frac{1}{2} \times AH \times CH = \frac{1}{2} \times \frac{0}{\sqrt{5}} \times \frac{\sqrt{3}}{2} = 0$$

$$\frac{b-a}{\frac{1}{2} + \frac{1}{2}} = \sqrt{2} \rightarrow b-a = \frac{\sqrt{2}}{2}$$

$$\text{منبع موج} = \sqrt{\frac{1}{4} + \frac{1}{4}} = \frac{1}{2} \rightarrow \sqrt{2} = a\sqrt{2} = \frac{\sqrt{2}}{2}$$



$$L' = \sqrt{1+1} = \sqrt{2}$$

از وصل کردن نقاط ه و دایره در ناحیه س و محل تلاقی نقطه
 یک چهارضلعی که دو ضلع ه و دایره موازی و ه و دایره موازی و دایره موازی و دایره موازی
 بوجود می آید به رسم است، نقطه تلاقی نقطه ه و دایره موازی است

$$L = \frac{1}{2}x - \frac{1}{2}$$

$$L': y = \frac{1}{2}x + k$$

$$OA = 1 \quad OL' = \frac{1}{2}k = 1 \rightarrow k = \frac{2}{1}$$

$$\frac{1}{2}x = \frac{1}{2} \rightarrow x = 1 \quad y = -1$$

$$- \sqrt{x-1} = \sqrt{1-1} = 0$$