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بناس عرف زار ياردهم دفتره ۱۲

$$m = \frac{dy}{dx} = \frac{14}{-1} = -14 \quad \text{بناس عرف زار ياردهم دفتره ۱۲}$$

$$y-1 = \frac{1}{-14} (x-1) \rightarrow y-1 = -\frac{x}{14} + \frac{1}{14}$$

$$y = -\frac{x}{14} + \frac{15}{14}$$

$$\overline{BC} = \sqrt{9+14} = 5$$

$$AB \text{ و } BC \rightarrow y-1 = -\frac{x}{14} (x+1) \rightarrow y-1 = -\frac{x}{14} x - \frac{x}{14} \rightarrow 14y + x - 1 = 0$$

$$\text{طول ارتفاع: } \frac{|14+1-1|}{\sqrt{9+14}} = \frac{14}{5} = 2.8$$

$$\overline{BC} - \text{ارتفاع} = 5 - 2.8 = 2.2$$

$$\begin{cases} 14y - 9x = 1 \\ 14y - x = 14 \end{cases} \xrightarrow{\text{مطابق}} \frac{14}{14} = \frac{-9}{-1} \rightarrow 9 = 1$$

$$\text{مقدار: } \frac{|14-1|}{\sqrt{9+14}} = \frac{13}{5} = 2.6 \rightarrow \text{ارتفاع} = \frac{9\sqrt{2}}{2} = \frac{9}{1.41}$$

$$S = \pi r^2 = \left(\frac{9}{1.41}\right)^2 \pi = \frac{81}{1.98} \times \pi = 128 \pi$$

$$AB \text{ و } BC: y-1 = \frac{1}{-14} (x-1) \rightarrow y-1 = -\frac{x}{14} + \frac{1}{14} \rightarrow y + x - 1 = 0$$

$$\overline{CH} = \frac{|1-1-1|}{\sqrt{2}} = \frac{1}{\sqrt{2}} = \frac{1}{1.41}$$

$$\overline{CM} = \sqrt{1+14} = \sqrt{15} \rightarrow m = \frac{1}{1.41}$$

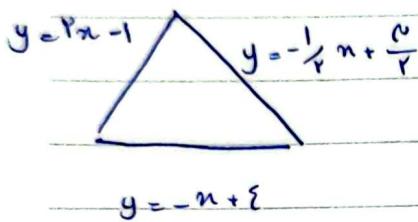
$$CM^2 - CH^2 = MH^2 \rightarrow 15 - \frac{1}{2} = \frac{14-1}{2} = \frac{13}{2} \rightarrow \overline{MH} = \frac{\sqrt{13}}{2}$$

$$(r_m - r)x + (\delta - m)y - v = 0 \rightarrow a = \frac{r - r_m}{\delta - m} \quad m \neq \delta \quad (2)$$

$$(m+1)x + (\xi - r_m)y + 1 = 0 \rightarrow a' = \frac{m+1}{r_m - \xi} \quad m \neq r$$

$$a = \frac{-1}{a'} \rightarrow \frac{r_m - r}{\delta - m} = \frac{r_m - \xi}{m+1} \rightarrow r_m^2 + m - r = -r_m^2 + 1\xi m - \xi$$

$$\rightarrow 2m^2 - 1r_m + 1\xi = 0 \rightarrow \Delta < 0 \rightarrow m = \{ \}$$



$$A \rightsquigarrow -\frac{1}{r}x + \frac{r}{r} = rx - 1$$

$$A \mid 1 \quad -x + r = \xi x - r \rightarrow \delta x = 0 \rightarrow x = 1 \quad y = 1$$

$$B \rightarrow -\frac{1}{r}x + \frac{r}{r} = -x + \xi \rightarrow x = \delta \quad y = -1$$

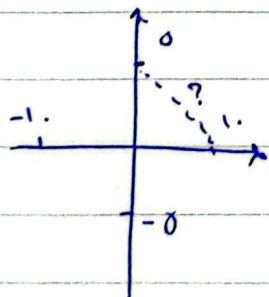
$$C \rightarrow rx - 1 = \xi - x \rightarrow x = \frac{\delta}{r} \quad y = \frac{v}{r}$$

$$M \mid \begin{array}{c} \frac{r}{9} \\ \xi \\ \frac{r}{9} \end{array} \rightsquigarrow \overline{AM} = \sqrt{\left(\frac{\xi}{9}\right)^2 + \left(\frac{1}{r}\right)^2} = \sqrt{\frac{\xi^2 + 1}{9}} = \frac{\sqrt{\xi^2 + 1}}{3} = \frac{\omega \sqrt{r}}{r}$$

$$\overline{Alt} = \frac{|1 + 1 - \xi|}{\sqrt{r}} = \sqrt{r}$$

$$\frac{\overline{AM}}{\overline{Alt}} = \frac{\omega}{r}$$

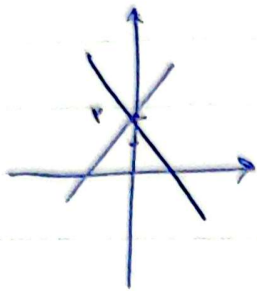
$$y + \frac{1}{r}x + c = 0 \quad \frac{|c|}{\sqrt{1 + \frac{1}{r^2}}} = \sqrt{r} \rightarrow |c| = \frac{\sqrt{r} \times \sqrt{\delta}}{r} = \delta \rightarrow c = \pm \delta \quad (3)$$



$$\overline{AB} = \sqrt{1 + r^2} = \sqrt{1 + \delta} = \omega \sqrt{\delta}$$

$$y = 0 \rightarrow \frac{1}{r}x + \delta = 0 \rightarrow x = \pm 1$$

$$\begin{cases} \textcircled{1} y = (1-m)x + 2 \\ \textcircled{2} y = \frac{\varepsilon}{m}x + 2 \end{cases} \rightarrow \text{نقطه تقاطع در } (2, 0) \quad \textcircled{1}$$



$$y=0 \xrightarrow{\textcircled{1}} x = \frac{-2}{1-m} = \frac{2}{m-1} \quad m \neq 1$$

$$\xrightarrow{\textcircled{2}} x = \frac{-2m}{\varepsilon} = -\frac{m}{\varepsilon}$$

$$\left| \frac{2}{m-1} + \frac{m}{\varepsilon} \right| x = \frac{\delta}{\varepsilon}$$

$$\rightarrow \frac{\varepsilon + m^2 - m}{\frac{\varepsilon}{m-1}} = \frac{\delta}{\varepsilon} \rightarrow \frac{m^2 - m + \varepsilon}{m-1} = \frac{\delta}{\varepsilon} \rightarrow m^2 - 4m + 9 = 0 \rightarrow m = 3$$

$$\xrightarrow{\textcircled{1}} \begin{vmatrix} 1 & 2 \\ -\varepsilon & -2 \end{vmatrix} \xrightarrow{\text{تبدیل سطر}} \begin{pmatrix} 1 & 2 \\ -\varepsilon & -2 \end{pmatrix} - \begin{pmatrix} 0 \\ -\varepsilon \end{pmatrix} = \begin{pmatrix} \varepsilon \\ -1 \end{pmatrix} \quad \textcircled{2}$$

$$\begin{vmatrix} 1 & 2 \\ -1 & -2 \end{vmatrix} \rightarrow \begin{pmatrix} \varepsilon \\ -1 \end{pmatrix} - \begin{pmatrix} 1 \\ -1 \end{pmatrix} = \begin{pmatrix} \varepsilon \\ -\varepsilon \end{pmatrix}$$

$$m = \frac{-2}{-1} = 2$$

$$y+1 = 2(x-1) \rightarrow y = 2x - 3$$

$$m = -1$$

$$y-2 = -(x-1) \rightarrow y = -x+3$$

$$-x+3 = x-1 \rightarrow x=2 \rightarrow y=1$$

$$\begin{cases} \frac{1+m}{\varepsilon} = -1 \rightarrow m = -\varepsilon \\ \frac{2+y}{\varepsilon} = 1 \rightarrow y = \varepsilon \end{cases}$$

$$\sim A'(-\varepsilon, \varepsilon) \rightarrow \begin{cases} a = -\varepsilon \\ b = \varepsilon \end{cases}$$

$$2b-a = 2\varepsilon + \varepsilon = 3\varepsilon$$