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سری

پیران A یازم

علیرضا مودی

(۲)

$$\begin{aligned} \frac{4}{r} & \rightarrow m = \frac{r - (-r)}{r - \omega} = -\varepsilon \quad y = -\varepsilon x + 18 \\ y = -\varepsilon x + b & \rightarrow r = -\varepsilon \cdot \varepsilon + b \rightarrow b = 18 \end{aligned}$$

$$\begin{aligned} \text{مردار } x, y & \rightarrow \frac{1}{m_1} = \frac{1}{m_2} \rightarrow m_1 = m_2 \\ m_1 = -\frac{1}{m_2} & \rightarrow m_1 = \frac{1}{\varepsilon} \rightarrow m_1 = \varepsilon \\ y = \varepsilon x + b & \rightarrow r = \varepsilon \cdot \varepsilon + b \rightarrow b = 18 \rightarrow y = \varepsilon x + 18 \end{aligned}$$

$$\begin{aligned} \text{ب) } 2y + 4x = -1 & \rightarrow m_1 = m_2 \\ m_1 = -\frac{1}{m_2} & \rightarrow m_1 = -\frac{1}{2} \rightarrow m_1 = -\frac{1}{2} \\ y = -\frac{1}{2}x + b & \rightarrow r = -\frac{1}{2} \cdot \varepsilon + b \rightarrow b = \frac{1}{2} \Rightarrow y = -\frac{1}{2}x + \frac{1}{2} \end{aligned}$$

$$\begin{aligned} \text{ب) زاویه } \alpha & \rightarrow y = \varepsilon x + r - \varepsilon \cdot \varepsilon \\ m_1 \tan(\frac{\alpha}{2}) & = \frac{1}{\sqrt{1+m_1^2}} \\ y = \varepsilon x + b & \rightarrow r = \varepsilon \cdot \varepsilon + b \rightarrow b = r - \varepsilon \cdot \varepsilon \end{aligned}$$

فاصله بین دو خط موازی

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$$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

$$r_1 + \varepsilon y - r_2 = 0$$

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$$\frac{|r_1 + \varepsilon y - r_2|}{\sqrt{\varepsilon^2 + 1}} = \frac{18}{\omega} = r$$

$$d = \sqrt{2\omega} = \omega$$

$$\begin{aligned} \varepsilon x + 4y = 18 & \quad r_1 + \varepsilon y = 4 \\ r_1 + \varepsilon y = 4 & \end{aligned}$$

فاصله بین دو خط موازی

$$\frac{|C' - C|}{\sqrt{a^2 + b^2}} = \frac{|14 - \varepsilon|}{\sqrt{r_1^2 + r_2^2}} = \frac{r\sqrt{13}}{13}$$

$$C^* = \frac{C' + C}{2} = \frac{\varepsilon + 4}{2} = d$$

$$\rightarrow r_1 + r_2 = \omega$$

$$\begin{aligned} r_1 + \varepsilon y = r & \\ r_1 - r_2 = 1 & \end{aligned}$$

$$\frac{|r_1 + \varepsilon y - r|}{\sqrt{r_1^2 + \varepsilon^2}} = \frac{|r_1 - r_2 - 1|}{\sqrt{r_1^2 + r_2^2}}$$

$$\begin{aligned} r_1 + \varepsilon y - r & = r_1 - r_2 - 1 \rightarrow \omega y - r - r = 0 \rightarrow y = \frac{r+r}{\omega} \\ r_1 + \varepsilon y - r & = r_2 + 1 - r_1 \rightarrow \omega x + y - \varepsilon = 0 \rightarrow y = -\omega x - \varepsilon \end{aligned}$$

$$\begin{aligned} y - r_1 & = \omega \\ y + r_2 & = r \end{aligned}$$

$$\tan(\alpha) = \frac{m_1 - m_2}{1 + m_1 m_2}$$

$$\tan(\alpha) = \frac{r - (-r)}{1 + r_1 - \varepsilon} = \frac{\omega}{-1} = -1 \rightarrow \alpha = 45^\circ$$

نصف الف

$$\sqrt{[3-(-5)]^2 + (-4-2)^2} = \sqrt{64+36} = 10 \quad \checkmark$$

ب) $\begin{vmatrix} \frac{m_1+m_2}{2} \\ \frac{y_1+y_2}{2} \end{vmatrix} \Rightarrow \begin{vmatrix} \frac{-5+3}{2} \\ \frac{-2+4}{2} \end{vmatrix} = \begin{vmatrix} -1 \\ +1 \end{vmatrix} \quad \checkmark$ (2)

سر رأس كـ صلب

(1,5)

الف $\rightarrow$ محل برخورد صلب $\rightarrow \begin{vmatrix} \frac{m_1+m_2}{2} \\ \frac{y_1+y_2}{2} \end{vmatrix} \Rightarrow \begin{vmatrix} \frac{3-2-10}{2} \\ \frac{1+5-14}{2} \end{vmatrix} \Rightarrow \begin{vmatrix} -3 \\ -3 \end{vmatrix} \quad \checkmark$

برعکس رفتیم! $\frac{1}{2} \begin{vmatrix} 3 & -2 & -10 \\ 1 & 5 & -14 \\ 1 & 1 & 1 \end{vmatrix} = \frac{1}{2} \begin{vmatrix} -20-29-2-9+24+10 \\ 9+24-10+30+2+39 \end{vmatrix} = \begin{vmatrix} -26 \\ 48 \end{vmatrix}$

$y = \frac{2n+1}{5n-2} \rightarrow n = \frac{2y+1}{5y-2}$

قرینه نهایه اول

داریم: $n = \frac{2y+1}{5y-2} \Rightarrow y = \frac{2n+1}{5n-2} \quad \checkmark$ (2)

الف $y = -\frac{2n+1}{5n-2} \quad \checkmark$

ب $n = -\frac{2y+1}{5y-2} : y = \frac{2n-1}{5n+2} \quad \checkmark$

قرینه نه نهم اول

داریم: $-n = \frac{-2y+1}{-5y-2} \rightarrow y = \frac{2n+1}{5n+2} \quad \checkmark$

$y = \frac{2n+1}{5n-2}$

اینجا بوده نه ی!!

~~$y = \frac{2n-5}{n-5} + 2 = \frac{5n-18}{n-5}$~~

الف $\begin{vmatrix} 2 \\ -5 \end{vmatrix} : y = y+3 \rightarrow y = y'-3$ $n' = n-2 \rightarrow n = n'+2$

ب $\begin{vmatrix} 2 \\ 1 \end{vmatrix} : y' = y-2 \rightarrow y = \frac{2n-5}{n-5} + 2 = \frac{5n-14}{n-5}$ $n' = n-2 \rightarrow y = y-2$

$\begin{cases} 2n+5y=2 \\ n-5y=1 \end{cases} \begin{vmatrix} 2 & 5 \\ 1 & -5 \end{vmatrix} = -10-5 = -15 \quad \checkmark$
 $\begin{vmatrix} 2 & 5 \\ 1 & -5 \end{vmatrix} = 15 \quad \checkmark$
 $\begin{vmatrix} 2 & 5 \\ 1 & -5 \end{vmatrix} = 1 \quad \checkmark$

کابر: $n = -\frac{14}{-19} \quad y = \frac{1}{-19}$
 $\rightarrow n = \frac{14}{19} \quad y = -\frac{1}{19} \quad (2)$

روش حذفی: $\begin{cases} 2n+5y=2 \\ 2n-15y=2 \end{cases} \begin{vmatrix} 2 & 5 \\ 2 & -15 \end{vmatrix} = -30-10 = -40 \quad \checkmark$
 $\begin{vmatrix} 2 & 5 \\ 2 & -15 \end{vmatrix} = 14 \quad \checkmark$
 $\begin{vmatrix} 2 & 5 \\ 2 & -15 \end{vmatrix} = 1 \quad \checkmark$
 $y = -\frac{1}{19} \quad n = \frac{14}{19} \quad \checkmark$

$$\begin{cases} x' = x - 2 \rightarrow x = x' + 2 \\ y' = y + 3 \rightarrow y = y' - 3 \end{cases} \quad y' - 3 = \frac{2(x' + 2) + 1}{x' + 2 - 3}$$

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الف

$$y' = \frac{5x' + 7}{x' - 1}$$

$$y' = \frac{V}{u'}$$

ب) ضربه مورد قبل