

الف) $\min \left| \frac{b}{2a} \right| = 1 \quad 2(1)^2 - 4x + 1 = -1 \Rightarrow \text{ext: Min} \left| -1 \right| \leftarrow \text{پایخ}$ (۲)

ب) $\max \left| \frac{b}{2a} \right| = \frac{3}{2} \Rightarrow \text{ext: Max} \left| \frac{3}{2} \right| \leftarrow \text{پایخ}$ ۱

$\frac{-\Delta}{2a} = \frac{-9-4}{-2} = \left(\frac{13}{2} \right)$

الف) $y = x^2 - 4x + 1 + 8 - 8 = (x-2)^2 - 8 \Rightarrow$

ب) $y = -x^2 + 4x + 1 - \omega + \omega = -(x^2 - 4x + 4) + \omega = -(x-2)^2 + \omega$

(۲) ۲

$\alpha\beta = -2, \alpha + \beta = 1 \Rightarrow \alpha = -1, \beta = 2$

$4(-1)^2 + k(1)^2 - 9(1) - 2 = 0$

$-4 - 2 + 9 + k = 0$

$K = -3$ ✓ (۲) ۳

$(\sqrt{\alpha} - \sqrt{\beta})^2 = (1)^2$ $\alpha + \beta = 3m$ $\alpha\beta = m$ α, β دو ریشه معادله اول هستند.

$\alpha + \beta - 2\sqrt{\alpha\beta} = 1$

$3m - 2\sqrt{m} - 1 = 0 \Rightarrow \sqrt{m} = \begin{cases} -\frac{1}{2} \text{ (غیرممکن)} \\ 1 \end{cases} \rightarrow m = 1$ (۲) ۴

$P' = \frac{c}{a} = \frac{-m}{2} = \left[-\frac{1}{2} \right] \leftarrow \text{پایخ}$

از معادله اول \Rightarrow معضرتب $= 0 \Rightarrow x = \begin{cases} \frac{1}{m} \\ \frac{1}{m} \end{cases}$ اختلاف $= \left| \frac{m}{1} - 1 \right| = \left| \frac{m-2}{1} \right|$ رسیده

$\sum_{\text{تکلیف}} = \left| \frac{m-2}{1} \right| \times |m| \times \frac{1}{1} = \frac{2}{1} \Rightarrow |m^2 - 2m| = 2$ $\begin{cases} |m|^2 - 2|m| - 2 = 0 \quad * \checkmark \\ |m|^2 - 2|m| + 2 = 0 \quad \rightarrow \Delta \times \end{cases}$

$m(m-2) = 2$

$* \rightarrow |m| = \begin{cases} -1 \\ 2 \end{cases} \checkmark \quad m = 2$ $\left[m = +2 \right]$

$P' = \frac{m}{2} = \left[\frac{2}{2} \right] \leftarrow \text{پایخ}$

$P = \left[-\frac{1}{2}, \frac{2}{2} \right]$ (۱,۲,۴) ۵

$b \text{ Min} \Rightarrow a > 0$

$$\frac{-\Delta}{r a} = -\frac{9-4a^2}{4a} = \frac{N}{r a} \Rightarrow \Lambda a^2 - Va - 1\Lambda = 0$$

$$\Rightarrow a = \begin{cases} -\frac{9}{\Lambda} \text{ (غیر منطقی)} \\ 3 \end{cases}$$

$$a = 3$$

(بلصفا)

$\Rightarrow x = \left\{ \frac{a}{r} \right\}$ (در صورت طبیعی متوالی) $\Rightarrow a = 3 \quad p = \frac{c}{a} = 3$

$$x - 1 \cdot x + b = 0 \quad (\text{اختلاف نسبی} = 2) \Rightarrow \frac{\sqrt{\Delta}}{|a|} = 2 \Rightarrow \sqrt{100-4b} = 2 \Rightarrow 100-4b = 4$$

$$\Rightarrow b = 24$$

$$\Rightarrow x^2 - 1 \cdot x + 24 = 0$$

$$\hookrightarrow p' = \frac{r}{1} = 24$$

$$p' - p = 24 - 3 = 21$$

$y_1 = -ax^2 + ax + r \text{ ext}_1 \quad \left| \frac{1}{r} \right.$

$$y_r = 16x^2 - bx - 1$$

$$\text{ext}_r \quad \left| \frac{1}{r} \right.$$

$$y_r \Rightarrow \frac{1r}{19} + (-1) + r = -\frac{1}{r}$$

$$y_1 \text{ جانشین} \Rightarrow -\frac{a}{r} + \frac{a}{r} + r = -\frac{1}{r} \Rightarrow a = -12$$

$$y_r \text{ جانشین} \Rightarrow \frac{b}{r} - \frac{b}{r} - 1 = -1$$

$$y_1 \text{ جانشین} \Rightarrow \frac{b}{\Lambda} - \frac{b}{r} - 1 = -\frac{1}{r} \Rightarrow b = -9 \quad b - a = 9$$

$\alpha \beta = \frac{\beta}{r \omega \alpha} \Rightarrow \alpha = \pm \frac{1}{\omega} \left\{ \begin{aligned} \alpha + \beta &= \frac{-r}{r \omega \alpha} \\ \alpha = \frac{1}{\omega} &\Rightarrow \beta = -1 \quad (\text{غیر منطقی}) \quad \alpha < \beta \\ \alpha = -\frac{1}{\omega} &\Rightarrow \beta = 1 \quad \checkmark \end{aligned} \right.$

$$\beta = 0 \rightarrow \alpha + 0 = \frac{-r}{r \omega \alpha} \Rightarrow \alpha = -\frac{r}{r \omega} = -\frac{1}{\omega}$$

$$y = -\omega x + r x + 1 = 0 \quad \left\{ \begin{aligned} x &= 1 \\ x &= -\frac{1}{\omega} \end{aligned} \right.$$

رأس در ناحیه اول \checkmark

$ab = a + b - 1$

$$a + b = a^r + b^r - 1r \Rightarrow a + b = (a+b)^r - rab - 1r \xrightarrow{a+b=A} A = A^r - r(A-1) - 1r$$

$$\Rightarrow A^r - rA - 1 = 0 \Rightarrow A = \begin{cases} A = -r \text{ (غیر منطقی)} \\ A = \omega \quad \checkmark \end{cases}$$

$$A = a + b = \omega \quad \checkmark$$