

$$\alpha, \beta: \begin{cases} \alpha = 3\beta \\ \frac{c}{a} = 3\beta^r \\ -\frac{b}{a} = 4\beta \end{cases} \quad \begin{cases} 3\alpha^r - a\alpha + 4 = 0 \\ \frac{c}{a} = \frac{4}{3} = 3\left(\frac{4}{9}\right) \Rightarrow \beta^r = \frac{4}{9} \Rightarrow \beta = \pm \frac{2}{3} \\ -\frac{b}{a} = \frac{a}{3} = 4\left(\frac{a}{12}\right) \Rightarrow \beta = \frac{a}{12} \end{cases} \quad \begin{cases} \frac{a}{12} = \frac{+2}{3} \Rightarrow a_1 = 12 \\ \frac{a}{12} = \frac{-2}{3} \Rightarrow a_2 = -12 \end{cases}$$

$$a_1 - a_2 = 12 - (-12) = 24$$

$$\sqrt{\frac{1}{\alpha}} + \sqrt{\frac{1}{\beta}} = \omega \quad S = \frac{(m+14)}{34} \quad \frac{S}{P} + 2\sqrt{\frac{1}{P}} = 2\omega \quad m\alpha^r + 2\alpha + 2 = 0$$

$$t \rightarrow t^r = 2\omega \quad P = \frac{1}{14} \quad \left(\frac{m+14}{34}\right) \times \frac{1}{1} + 2\sqrt{\frac{1}{14}} = 2\omega \quad m = -1$$

$$\frac{1}{\alpha} + \frac{1}{\beta} + 2\sqrt{\frac{1}{\alpha}}\sqrt{\frac{1}{\beta}} = 2\omega \quad m+14+12=2\omega \quad -m^2 + 2m + 2 = 0$$

$$\frac{\alpha+\beta}{\alpha\beta} = \frac{S}{P} \quad 2\sqrt{\frac{1}{P}} \quad \frac{c}{a} = \frac{2}{-1} = -2$$

معادله درجه ۳ در حالتی درجه ۲ را می بینیم (از طرفی ضرایب را مقایسه می کنیم)

$$5\alpha^r + K\alpha^r - 9\alpha - 2 = 0 \quad (2+b)(2^r + 2a\alpha + \alpha^r)$$

$$\alpha(5\alpha^r + K\alpha - 9) - 2 = 0 \quad (2+b)(2^r + 2a\alpha + \alpha^r)$$

در صورتی که ضرایب برابر باشند (یعنی $K=3$)

در صورتی که ضرایب برابر باشند (یعنی $K=7$)

$$2\alpha^r + 4\alpha + a = 0 \quad 2\alpha^r + 2\beta^r = \frac{\omega}{\gamma}(\alpha^r + \beta^r) + \frac{1}{\gamma}(\alpha^r - \beta^r)$$

$$\alpha < \beta < 0 \quad S = -\gamma \quad 12\alpha \quad | -12\sqrt{9-\alpha} | : \beta > \alpha$$

$$a > 0 \quad P = \alpha \quad 3\alpha^r + 2\beta^r = \omega(12-\alpha) + \gamma\sqrt{9-\alpha} = 12\sqrt{2} + 12\omega$$

$$12\omega \quad 12\sqrt{2}$$

$$12-\alpha = \frac{12\omega}{\omega} = 12, \sqrt{9-\alpha} = 2\sqrt{2} \Rightarrow \alpha = 1$$

$$t^r - Vt - \omega = 0 \quad t = \frac{V \pm \sqrt{V^2 + 4\omega}}{2} \quad t = 2^r \Rightarrow \frac{V + \sqrt{V^2 + 4\omega}}{2}$$

$$S = \begin{cases} z_1 = + \sqrt{\frac{V + \sqrt{V^2 + 4\omega}}{2}} \\ z_2 = - \sqrt{\frac{V + \sqrt{V^2 + 4\omega}}{2}} \end{cases}$$

$$2P^r = \omega + \sqrt{V^2 + 4\omega} \leftarrow P = -\left(\frac{V + \sqrt{V^2 + 4\omega}}{2}\right) \quad z_r = -\sqrt{\frac{V + \sqrt{V^2 + 4\omega}}{2}}$$

$$r_n^r - a_n + b = 0 \quad S = \frac{a}{r}$$

$$r_n^r + a_n - b = 0 \quad S = \frac{-a}{ra} = \frac{-1}{r}$$

$$\frac{a}{r} - \left(\frac{-1}{r}\right) = r\left(\frac{1}{r}\right) = 1 \rightarrow a = 1$$

$$r_n^r - n + b = 0 : 1 - r + b = 0 \quad b = 9$$

$$r_n^r + n - 4 = 0 \rightarrow \begin{cases} -r \\ -r + \frac{1}{r} = \frac{-r^2}{r} \end{cases} \quad \frac{r}{r} + \frac{1}{r} = r$$

$$\left[\frac{ab}{\varepsilon} \right] \xrightarrow{a=1} = \left[\frac{b}{\varepsilon} \right] = \left[\frac{-4}{\varepsilon} \right] = \boxed{-r}$$

$$S: \frac{-b}{A} = \frac{a}{a} = 1$$

$$a_n^r - a_n + b = 0$$

$$a\beta^r - a\beta - b = 0$$

$$\beta^r - \beta = \frac{b}{a}$$

$$(a^r + \beta^r) + (\beta^r - \beta) = \frac{14}{r}$$

$$1^r - \frac{rb}{a} + \frac{b}{a} = \frac{14}{r}$$

$$\frac{b}{a} = \frac{r}{r}$$

$$r_0 (a^r + \beta^r) + r_0 (\beta^r - \beta) = 14$$

$$\frac{\sqrt{a}}{|a|} = \frac{\sqrt{a^r - \varepsilon(a) (r_0 a)}}{|a|} = \frac{\sqrt{1,4 a^r}}{|a|} = \frac{|a| \sqrt{1,4}}{|a|} = \sqrt{1,4}$$

$$n^r - (a+1)n + a = 0$$

$$n^r - (ra+1)n + b = 0$$

$$(r_1^r - r_0^r = 1)$$

$$n^r + (-a-1)n + a = 0$$

$$n^r - (r+1)n + b = 0$$

$$(n-a)(n-1) = 0$$

$$n^r - 10n + b = 0$$

$$\Rightarrow a = r$$

$$\Rightarrow \alpha + \beta = \alpha + \alpha + r = 2\alpha + r$$

$$r = \begin{pmatrix} 1 \\ r \end{pmatrix}$$

$$r\alpha + r = 10 \rightarrow r(\alpha+1) = 10 \rightarrow \alpha = 9, \beta = 4$$

$$b = \alpha, \beta = r\varepsilon$$

$$\alpha+1 = 10$$

$$2n^r + n + (-1+m)r = 0 \xrightarrow{m=0} n^r + n - 1 = 0$$

$$\min \alpha^r + \beta^r = S^r - rp = 1 - r(-m^r - 1)$$

$$1 + r + rm^r = r + rm^r$$

$$r + rm^r \in [r, +\infty) \rightarrow \min \alpha^r + \beta^r = 1 + r = r \quad (m=0)$$

$$S^r - rp = 0$$

$$\begin{cases} \text{عقلاني} : 1 \\ \text{غير عقلاني} : -1 \end{cases}$$

$$S^r - rp = 0$$

$$\varepsilon - rp = 0 \rightarrow p = \frac{-1}{r}$$

$$\frac{r-\omega}{r} = -1 \rightarrow \frac{-b}{a} = \boxed{-r} \quad S = \boxed{-r}$$

$$n^r + rn = \frac{1}{r} = 0$$

$$n=-1 \rightarrow (-1)^r + r(-1) - \frac{1}{r} = \frac{-r^2}{r}$$

$$\xrightarrow{n=-1} \boxed{\left(n^r + rn - \frac{1}{r} \right) = 1} \Rightarrow \boxed{\square = \frac{r^2}{r}}$$

$$\frac{r}{r} n^r - \frac{\varepsilon}{r} n + \frac{1}{r} = 0$$

$$\frac{r}{r}$$

$$n=0 \rightarrow y = \boxed{\frac{1}{r}}$$