

معرفان یزدی دهم سری ۲۲ $\alpha^r - \delta \alpha + r = 0$ $\alpha + \beta = \delta$ $\alpha\beta = r$ $\xrightarrow{\text{سری ۲۲ دهم}} \underline{\underline{9}}$

$\Sigma \alpha + \beta = r \alpha + (\alpha + \beta) = r \alpha + \delta$

و نیز $\alpha = \frac{\delta + \sqrt{1r}}{r}$ $\beta = \frac{\delta - \sqrt{1r}}{r}$

$\Sigma \alpha + \beta = r \times \frac{\delta + \sqrt{1r}}{r} + \frac{\delta - \sqrt{1r}}{r} = \frac{r\delta + r\sqrt{1r}}{r}$

$(\Sigma \alpha + \beta)^\delta = \left(\frac{r\delta + r\sqrt{1r}}{r} \right)^\delta$ $\alpha\beta = r \rightarrow \beta = \frac{r}{\alpha} \rightarrow \beta^r = \frac{r^r}{\alpha^r}$
 $\frac{r\alpha + \beta^\delta}{\delta \beta^r} \xrightarrow{\text{بضرب}} \frac{r}{\delta} \times \frac{\alpha}{\beta^r} + \frac{\beta^r}{\delta} = \frac{r}{\delta} \times \frac{\alpha}{\frac{r^r}{\alpha^r}} + \frac{\beta^r}{\delta} = \frac{\alpha^r}{\delta} + \frac{\beta^r}{\delta} = \frac{\alpha^r + \beta^r}{\delta}$

$\delta \beta^r = \delta \left(\frac{\delta - \sqrt{1r}}{r} \right)^r = \delta \left(\frac{r(1 - \delta \sqrt{1r})}{r} \right)$

$\frac{S^r - rP}{\delta} = \frac{\delta^r - r \times \delta \times r}{\delta} = \frac{1\delta}{\delta} = 19$

$\frac{(\Sigma \alpha + \beta)^\delta}{\delta \beta^r} = \frac{\left(\frac{r\delta + r\sqrt{1r}}{r} \right)^\delta}{\delta \left(\frac{r(1 - \delta \sqrt{1r})}{r} \right)} = 12\delta$

$y = ax^r + bx + c$

$(r, -r) \rightarrow a + rb + c = -r$

$(r, -r) \rightarrow r, r\delta \neq 1/\delta b + c = -r$ $a + rb + c = r, r\delta - 1/\delta b + c = -r$
 $A(r, -r) \xrightarrow{\text{عقل}} f(x) = ax^r + bx + c$ $rb + 1/\delta b = r, r\delta - a$

$B(-1/\delta, -r) \xrightarrow{\text{عقل}} f(x) = ax^r + bx + c$

$\frac{rA + rB}{r} = \frac{r\delta}{r} \rightarrow \frac{-b}{\delta} \rightarrow \frac{-b}{\delta} = rA + rB = r + (-1/\delta) = 1/\delta$

$f, \delta b = -1/\delta$

$a + r \left(\frac{-1/\delta}{\delta} \right) + c = -r$

$b = \frac{-1/\delta}{\delta}$

$r + f, 1/\delta + c = -r \rightarrow \boxed{c = -1/r}$

$\alpha^r + \beta^r = \delta \rightarrow \frac{S^r - P}{\delta} = \delta \rightarrow \frac{1 - r}{r} - r \left(\frac{a+1}{a} \right) = \delta \rightarrow r - \frac{r(a+1)}{a} = \delta \rightarrow \frac{-a-r}{a} = 1 \rightarrow a = \frac{-r}{r}$

$\frac{\alpha + \beta}{r} \geq 1 \rightarrow \alpha + \beta = r$

$P = \frac{a+1}{a}$

$\alpha^r + \beta^r = (\alpha + \beta)^r - r\alpha\beta \rightarrow \delta = r^r - r\alpha\beta \rightarrow \alpha\beta = \frac{1}{r}$

$y = a(x - \alpha)(x - \beta) \xrightarrow{a=1} y = a(x^r - rx - \frac{1}{r})$

$\frac{r + (c - \delta)}{r} = -1 \neq 1$

$x = 0 \rightarrow y = 0 - 0 - \frac{1}{r} = -\frac{1}{r}$

$a = 1 \rightarrow y = x^r - rx - \frac{1}{r} \Rightarrow \boxed{(0, -\frac{1}{r})}$

$$y = ma^r - 12m + \Delta m - 1$$

عرفان یزدی قسم سری ۲۲

(۹)

$$y_{\min} = c - \frac{b^r}{ra} \rightarrow b = -12 \quad c = \Delta m$$

$$y_{\min} = \Delta m - 1 - \frac{144}{4m} = \Delta m - 1 - \frac{36}{m}$$

(۲)

$$\Delta m - 1 - \frac{36}{m} = 1 \rightarrow \Delta m - \frac{36}{m} = 2 \rightarrow \Delta m^r - 36 = 2m \rightarrow \Delta m^r - 2m - 36 = 0$$

$$m = 2 \quad m = -\frac{12}{8} \quad m > 0 \rightarrow m = 2$$

$$\rightarrow u = -\frac{b}{ra} = \frac{12}{4m} = \frac{4}{m} = \frac{4}{2} = 2 \rightarrow \boxed{k=2}$$

$$\Delta = 2\delta + 4m \quad (1)$$

$$\frac{-\delta \pm \sqrt{4\delta + 4m}}{-2} < \frac{9}{4}$$

$$-\delta \pm \sqrt{4\delta + 4m} > -9 \quad \pm \sqrt{4\delta + 4m} > -9$$

$$u = \frac{-b \pm \sqrt{\Delta}}{ra} \rightarrow \frac{-\delta \pm \sqrt{4\delta - 4(-1)(m)}}{-2} < \frac{9}{4} \rightarrow \pm \sqrt{4\delta + 4m} < 18$$

$$|4\delta + 4m| > 14 \quad 4m > -9 \quad m > -\frac{9}{4}$$

$$4\delta + 4m < 14 \rightarrow -4\delta < m < -2\delta \rightarrow m \in \{-3, -2, -1, 0\} \rightarrow \text{مقدار صحیح}$$

$$\frac{\sqrt{\Delta}}{a} = \text{اضلاع} = \frac{4}{2}k$$

$$4k^2 - 12 = 14k^2$$

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$$4\sqrt{k^2 - 3} = 4k$$

$$4 \cdot k^2 = 12 \quad k^2 = 3$$

$$k^2 = 9 \rightarrow \left\lceil \frac{k^2}{4} \right\rceil = \left\lceil \frac{9}{4} \right\rceil = 3$$

$$\boxed{k=3}$$

در مقدمه سوالات جای جای نوشته شده و به ترتیب نیست عددی توانم

سوال ۷

$$\rho = \alpha \cdot \beta = r\alpha - 1$$

$$\alpha^r = \alpha \cdot \beta \rightarrow \alpha^r = r\alpha - 1 \rightarrow \alpha^r - r\alpha + 1 = 0 \rightarrow \alpha = 1$$

$$\alpha = 1 \rightarrow \alpha^r + r\alpha + 1 = 0 \rightarrow \Delta > 0 \rightarrow \text{دو ریشه حقیقی}$$

سوال ۸

$$u^r - u u^r - \omega = 0 \quad u' + u'' = S, \quad u' \cdot u'' = \rho$$

$$u^r = t \rightarrow t^r - u t - \omega = 0 \rightarrow t = \frac{u \pm \sqrt{u^2}}{r} \rightarrow u^r = \frac{u \pm \sqrt{u^2}}{r} \quad \delta \delta$$

$$u = \pm \sqrt{\frac{u + \sqrt{u^2}}{r}} \rightarrow S = 0, \quad \rho = -\frac{u + \sqrt{u^2}}{r}$$

$$r\rho^r - r^2\rho + rS = r\left(-\frac{u + \sqrt{u^2}}{r}\right)^r = \frac{1}{r} (u^2 + u^2 + 1 \pm \sqrt{u^2}) = \omega^2 + u \sqrt{u^2}$$

سوال ۹

$$S(u_1, y_1) \rightarrow y_1 = -f(u_1) - f \rightarrow y_1 + f(u_1) = -f \quad (I)$$

$$y_1 = -f(u_1) - f \rightarrow y_1 = -\frac{b}{r\alpha} = \frac{f}{rK} = \frac{r}{K} \quad (II)$$

$$y_1 = K(u_1)^r - f(u_1) - f \xrightarrow{(I)} -f = K(u_1)^r - f \xrightarrow{(II)} r = K\left(\frac{r}{K}\right)^r \rightarrow K = r \rightarrow \begin{cases} u_1 = 1 \\ y_1 = -1 \end{cases}$$

سوال ۱۰

$$-m\alpha^r + m\alpha + 1 = -m - \alpha \rightarrow m\alpha^r - (m+1)\alpha - (m+1) = 0$$

$$\Delta < 0 \rightarrow (m+1)^r + f(m)(m+1) < 0 \rightarrow \omega m^r + f(m+1) < 0$$

$$a+c=b \rightarrow (m+1)(\omega m+1) < 0 \xrightarrow{\text{تعیین علامت}} \frac{-1}{+} \frac{-\frac{1}{\omega}}{-} \rightarrow -1 < m < -\frac{1}{\omega} \rightarrow \text{هیچ عدد صحیح}$$