

$$\alpha = 3\beta \quad \alpha\beta = 3\beta^2 = \frac{15}{3} \Rightarrow \beta^2 = \frac{5}{3} \Rightarrow \begin{cases} \beta = \frac{\sqrt{5}}{3} \Rightarrow \alpha = 3 \times \frac{\sqrt{5}}{3} = \sqrt{5} \Rightarrow s = \frac{1}{\sqrt{5}} = \frac{1}{\sqrt{5}} \Rightarrow \alpha = -1 \\ \beta = -\frac{\sqrt{5}}{3} \Rightarrow \alpha = -\sqrt{5} \Rightarrow s = \frac{-1}{\sqrt{5}} = \frac{-1}{\sqrt{5}} \Rightarrow \alpha = 1 \end{cases}$$

$$|\alpha' - \alpha| = \boxed{16}$$

$$s = \frac{m+14}{14}, \quad p = \frac{1}{14}$$

$$\frac{1}{\sqrt{\alpha}} + \frac{1}{\sqrt{\beta}} = 5$$

$$\Rightarrow m\alpha^2 + 3\alpha + 1 = -1\alpha^2 + 3\alpha + 1 = 0 \Rightarrow p' = \boxed{-2}$$

$$\frac{\sqrt{s+2\sqrt{p}}}{\sqrt{p}} = \frac{\sqrt{\frac{m+14}{14} + 2\sqrt{\frac{1}{14}}}}{\sqrt{\frac{1}{14}}} = \frac{\sqrt{m+14}}{\frac{1}{\sqrt{14}}} = 5 \Rightarrow m+14 = 25 \Rightarrow m = -1$$

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

$$\alpha\beta = -2$$

$$(1-\beta)\beta = -2$$

$$\beta - \beta^2 = -2$$

$$\beta^2 - \beta - 2 = 0$$

$$\beta = 2/-1 \Rightarrow 5(-1)^2 + K(-1)^2 - 1(-1) - 2 = K + 3 = 0 \Rightarrow K = \boxed{-3}$$

$$s = -6, \quad p = a, \quad \Delta = 36 - 4a \Rightarrow \alpha = \frac{-\sqrt{36-4a}-6}{2} = \sqrt{9-a}-3, \quad \beta = \sqrt{9-a}+3$$

$$\alpha^2 + \beta^2 = s^2 - 2p = 36 - 2a$$

$$3(-\sqrt{9-a}-3)^2 + 2(\sqrt{9-a}+3)^2 = 27 + 27 - 3a + 11\sqrt{9-a} + 11 - 2a + 11 + 12\sqrt{9-a}$$

$$= 90 - 5a + 6\sqrt{9-a} = 12\sqrt{2} + 15$$

$$5 - 5a + 6\sqrt{9-a} = 12\sqrt{2} \Rightarrow \boxed{a=1}$$

با اطمینان برن ریشه دبی

$$t = x^2 \Rightarrow t^2 - 7t - 6 = 0 \Rightarrow \Delta = 49 + 24 = 73 \Rightarrow t_1 = \frac{\sqrt{73}+7}{2} \quad G_0$$

$$x^2 = \frac{\sqrt{73}+7}{2} \Rightarrow \alpha = \sqrt{\frac{\sqrt{73}+7}{2}} \quad t_2 = \frac{-\sqrt{73}+7}{2} \quad G_0 \quad (x^2 > 0)$$

$$\Rightarrow s = 0, \quad p = -\frac{\sqrt{73}+7}{2}$$

$$\beta = -\sqrt{\frac{\sqrt{73}+7}{2}}$$

$$2p^2 - 3sp + 2s = 2p^2 = 2\left(-\frac{\sqrt{73}+7}{2}\right)^2 = 2 \times \frac{118}{4} = 59 + 7\sqrt{73} = \boxed{59 + 7\sqrt{73}}$$

$s - 1 = s'$ $\frac{a}{r} - 1 = \frac{-a}{ra} = -\frac{1}{r}$ $a - r = -1 \Rightarrow a = 1$	$(\alpha + \frac{1}{r})(\beta + \frac{1}{r}) = p' = \frac{-6}{r \times 1} = -\frac{6}{r}$ $\alpha\beta + \frac{1}{r}(\alpha + \beta) + \frac{1}{r^2} = -\frac{6}{r}$ $\Downarrow s = \frac{1}{r}, p = \frac{b}{r}$ $\frac{b}{r} + \frac{1}{r} \times \frac{1}{r} + \frac{1}{r^2} = -\frac{6}{r}$ $\frac{b}{r} + \frac{1}{r} = -\frac{6}{r}$ $b + 1 = -6 \Rightarrow b = -7$ $\left[\frac{ab}{r}\right] = \left[\frac{1 \times (-7)}{r}\right] = \left[-\frac{7}{r}\right] = \boxed{-7}$
$s = a + 1 \Rightarrow$ $p = a$ $s' = ra + 1 = 10 \Rightarrow$ $p' = b$ $ p' - p = rx - 1 = \boxed{21}$	$x + x + r = a + 1 \Rightarrow 2x + 1 = a = p \Rightarrow rx + 1 = x(x + r) = x^2 + rx$ $a = 2x + 1 = 3$ $y + y + r = 10$ $2y = 10 \Rightarrow y = 5 \Rightarrow y + r = 6$ $x^2 = 1$ $\begin{cases} x_1 = 1 \cdot \overline{0} \cdot \overline{5} \\ x_2 = -1 \cdot \overline{0} \cdot \overline{5} \end{cases} (x \in \mathbb{N})$ $x + r = 3 \Rightarrow \text{مقادیر } 2, 3, 4 \text{ و } 5$ (ل) ۶ و ۷، ۸ و ۹، ۱۰ و ۱۱ مقادیر دوم
$\alpha' + \beta' = s' - rp = 1 - 2(-1 - m^2) = 3 + 2m^2$ $s = -1$ $p = -1 - m^2$	$\alpha' + \beta' = 3 + 2m^2 \Rightarrow \alpha' + \beta' = 3 + 2m^2$ کمترین مقدار این عبارت زمانی است که m^2 کمترین مقدار باشد. و کمترین مقدار m^2 صفر است.
$x_s = \frac{-a+r}{r} = -1 = \frac{b}{ra} \Rightarrow b = ra$ $y_s = 1 = \frac{rac-b^r}{ra} \Rightarrow ra = rac - r^2a^r \Rightarrow 1 = c - a \Rightarrow c = a + 1$ $\alpha' + \beta' = a \Rightarrow s' - rp = r - 2\left(\frac{a+1}{a}\right) = a \Rightarrow \frac{-ra-r}{a} = 1 \Rightarrow -ra - r = a$ $c = a + 1 = -\frac{r}{r} + 1 = \boxed{\frac{1}{r}}$	$\Rightarrow s = -\frac{r}{a+1}$ $p = \frac{a+1}{a}$ $ra = -r$ $a = -\frac{r}{r}$