

$$y = (a-1)n^r + m + r$$

$$n = r$$

$$n_s = \frac{-b}{r_a} \rightarrow \frac{-1}{r(a-1)} = r \rightarrow \epsilon a - \epsilon = -1 \rightarrow \epsilon a = r \rightarrow a = \frac{r}{\epsilon}$$

$$\left(\frac{r}{\epsilon} - 1\right)n^r + m + r \rightarrow -\frac{1}{\epsilon}n^r + m + r \rightarrow -n^r + \epsilon m + 1r \quad \Delta > 0$$

$$\Delta = b^r - \epsilon a c = \epsilon^r - \epsilon(-1)(1r) = 14 + \epsilon 1 = 4\epsilon$$

$$\frac{-\epsilon \pm \sqrt{4\epsilon}}{r(-1)} = \frac{-\epsilon \pm 1}{-r} \begin{cases} -r \\ 4 \end{cases} \text{ GO}$$

$$f(n) = mn^r - \Delta n + m$$

n	n_1	n_r
$f(n)$	$-$	$+$

$$m < 0$$

$$\Delta > 0$$

$$(-\Delta)^r - \epsilon(m)(m) > 0 \rightarrow r\Delta - \epsilon m^r > 0 \rightarrow r\Delta > \epsilon m^r$$

$$-\frac{\Delta}{r} < m < 0$$

$$|m| < \frac{\Delta}{r}$$

$$\frac{r - \sqrt{\Delta}}{r}, \frac{r + \sqrt{\Delta}}{r}$$

$$n^r - 5n + p \rightarrow n^r - 2n + \frac{\epsilon}{9}$$

$$S = \frac{r - \sqrt{\Delta} + r + \sqrt{\Delta}}{r} = r$$

$$9m^r - 14n + \epsilon$$

$$P = \frac{r - \sqrt{\Delta}}{r} \times \frac{r + \sqrt{\Delta}}{r} = \frac{9 - 4}{9} = \frac{\epsilon}{9}$$

$$r m^r - 14n + m + r = 0$$

$$\alpha < \beta$$

$$r\alpha^r + \beta^r = 1r$$

$$m = ?$$

$$S = \frac{1}{r} = \epsilon$$

$$\alpha^r + \beta^r = (\alpha + \beta)^r - r\alpha\beta = 14 - r\beta$$

$$14 - r\beta + r\alpha^r = 1r$$

$$r\alpha^r - r\beta = -\epsilon \leq \alpha^r - \beta = -r$$

$$\beta = \epsilon - \alpha \rightarrow \beta = \alpha(\epsilon - \alpha) = \epsilon\alpha - \alpha^r$$

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

$$\alpha = 1 \rightarrow \epsilon - 1 = r = \beta$$

$$\frac{m+r}{r} = r \rightarrow m+r=4 \rightarrow m=\epsilon$$

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$$S(r, q)$$

که ام باز، بار محرم؟ $\alpha = 1$ عرض

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$$y = a(m-r)^r + q \rightarrow a(m-r)^r + q \rightarrow 0 = a(-r+\alpha)^r + q \rightarrow a(r)^r + q = 9a + q = 0$$

$$9a = -q \rightarrow a = -1$$

$$\rightarrow y = -(m-r)^r + q = -(m^r - \epsilon m + \epsilon) + q = -m^r + \epsilon m - \epsilon + q =$$

$$y = -m^r + \epsilon m + \Delta \rightarrow 0 = -(m-r)^r + q \rightarrow (m-r)^r = q \rightarrow m-r = \pm \sqrt[r]{q} \rightarrow m = r \pm \sqrt[r]{q}$$

$$m = r - \sqrt[r]{q} = -1$$

$$m = r + \sqrt[r]{q} = 5$$

$$y > 0 \rightarrow y = -(m-r)^r + q > 0$$

$$q > (m-r)^r \rightarrow |m-r| < \sqrt[r]{q} \rightarrow -\sqrt[r]{q} < m-r < \sqrt[r]{q} \rightarrow -1 < m < 5$$

$$(-1, 5) \leftarrow \text{جواب}$$

$$\alpha m^r - Vm + q\beta = 0$$

$$S = \frac{V}{\alpha}$$

$$\beta \rightarrow + \text{وس}$$

$$\frac{1}{\alpha} + \frac{1}{\beta} = ?$$

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$$P = \frac{q\beta}{\alpha}$$

$$\alpha = \frac{q}{\alpha} \rightarrow \alpha^r = q \rightarrow \alpha = \pm \sqrt[r]{q}$$

$$r + \beta = \frac{V}{\mu} \quad \alpha = \sqrt[r]{q} \quad \text{و } \epsilon$$

$$\beta = \frac{V}{\mu} - r = \frac{V-q}{r} = -\frac{r}{r} \quad \text{و } \epsilon$$

$$\alpha = -\sqrt[r]{q} \quad \text{و } \epsilon$$

$$-r + \beta = -\frac{V}{\mu}$$

$$\frac{1}{-r} + \frac{1}{\frac{r}{\mu}} = -\frac{1}{r} + \frac{\mu}{r} = \frac{V}{q} \quad \text{جواب}$$

$$\beta = -\frac{V}{\mu} + r = \frac{r}{\mu} \quad \text{و } \epsilon$$

$$\alpha^r + m\alpha - r\alpha = 0$$

$$\alpha^r - m\beta = 1$$

جمع شده ها؟

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$$S = -m$$

$$\alpha^r = -m\alpha + r\alpha$$

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

$$P = -r\alpha$$

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

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

$$S = -m$$

$$S = -r \rightarrow m = r$$

$$S = \epsilon \rightarrow m = -\epsilon$$

$$m = -\epsilon$$

$$f(m) = m\alpha^r + \epsilon m + \frac{m}{r} + V$$

$$m = -r \rightarrow -\frac{(14 - \epsilon(-r)(4))}{-1} = 1 \quad \checkmark$$

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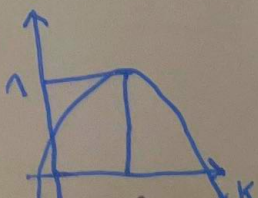
$$m = \epsilon \rightarrow -\frac{(14 - \epsilon(\epsilon)(4))}{14} = -1 \quad \text{و } \epsilon$$

$$x_s = \frac{-b}{ra} = \frac{-r}{r\alpha} = -\frac{r}{m}$$

$$y_s = 1$$

$$m(-\frac{r}{m})^r + \epsilon(-\frac{r}{m}) + \frac{m}{r} + V = \frac{\epsilon}{m} - \frac{1}{m} + \frac{m}{r} + V = 1$$

$$-\frac{\epsilon}{m} + \frac{m}{r} = 1 - V \rightarrow -1 + m^r = r\alpha \rightarrow (m - \epsilon)(m + r) \quad m = \epsilon, m = -r$$



$$(0, \varepsilon)$$

$$y = a(m-r)^2 + 4$$

$$\varepsilon = a(-r)^2 + 4 \rightarrow \varepsilon a + 4 = \varepsilon \rightarrow \varepsilon a = -r \rightarrow a = -\frac{1}{r}$$

$$y = -\frac{1}{r}m^2 + 2m - 2$$

$$\frac{1}{\alpha} + \frac{1}{\beta} = \frac{\alpha + \beta}{\alpha\beta} = -\frac{\varepsilon}{\Delta}$$

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سوال ۹

$$n_r - (\varepsilon a + \varepsilon)m + (3a^2 + 4a + 2) = 0$$

سوال ۱۵

$$n_1 + n_r = \varepsilon a + \varepsilon$$

$$n_1 n_r = 3a^2 + 4a + 2$$

$$2 + n_r = \varepsilon a + \varepsilon \rightarrow n_r = \varepsilon a + \varepsilon - 2$$

$$2(\varepsilon a + \varepsilon) = 3a^2 + 4a + 2 \rightarrow 1a + \varepsilon = 3a^2 + 4a + 2$$

$$0 = 3a^2 + 4a + 2 - 1a - \varepsilon \rightarrow 3a^2 - 2a - 1 = 0$$

$$3a^2 - 2a - 1 = 0$$

$$\Delta = (-2)^2 - 4(3)(-1) = 4 + 12 = 16$$

$$\frac{2 \pm \sqrt{16}}{2 \times 3} \quad \left\{ \begin{array}{l} \alpha = 1 \rightarrow \varepsilon a + 2 = \varepsilon + 2 = 4 \\ \alpha = -\frac{1}{3} \rightarrow \varepsilon(-\frac{1}{3}) + 2 = \frac{2}{3} \end{array} \right.$$

$$\frac{2 \pm \sqrt{16}}{2 \times 3}$$

$$\left\{ \begin{array}{l} \alpha = 1 \rightarrow \varepsilon a + 2 = \varepsilon + 2 = 4 \\ \alpha = -\frac{1}{3} \rightarrow \varepsilon(-\frac{1}{3}) + 2 = \frac{2}{3} \end{array} \right.$$

بسته به مقدار a یا یکی از ریشه ها ۴ یا $\frac{2}{3}$ می باشد