

$$f(n) = (a-1)n^2 + n + 3$$

$$x_{\max} \Rightarrow \frac{b}{2a} = 2 \Rightarrow \frac{-1}{2(a-1)} = 2 \Rightarrow a = \frac{3}{4}$$

$$\begin{cases} -\frac{1}{4}n^2 + n + 3 = 0 \\ -n^2 + 4n + 12 = 0 \end{cases} \Rightarrow (n-4)(n+3) = 0 \Rightarrow \begin{cases} n = 4 \\ n = -3 \end{cases} \Rightarrow \boxed{n = 4}$$

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$$mn^2 - \delta n + m \quad (1) \quad a < 0 \Rightarrow n > m < 0$$

$$-\frac{\delta}{4} < m < \frac{\delta}{4}$$

$$(2) \quad \Delta > 0 \quad b^2 - 4ac > 0 \quad \delta^2 - 4m^2 > 0 \Rightarrow m^2 < \frac{\delta^2}{4} \Rightarrow$$

$$(1) \quad (2) \quad m < 0 \cup \left(-\frac{\delta}{4}, \frac{\delta}{4} \right) \Rightarrow \boxed{\left(-\frac{\delta}{4}, 0 \right)}$$

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$$n^2 - 5n + p$$

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$$n^2 - \left(\frac{5 - \sqrt{5}}{2} + \frac{5 + \sqrt{5}}{2} \right)n + \left(\frac{(5 - \sqrt{5})(5 + \sqrt{5})}{4} \right) = \boxed{n^2 - 5n + \frac{5}{4}}$$

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$$4\alpha^2 + \beta^2 = 4\alpha^2 + 4\beta^2 + \alpha^2 - \beta^2 = 4(5 - 2p) + (\alpha - \beta)(\alpha + \beta) \leq -(\beta + \alpha)(\beta - \alpha) = 12$$

$$4\alpha^2 + 4\beta^2 - 4\left(\frac{m+2}{2}\right) - \sqrt{-4m+4} \leq 12$$

$$4\alpha^2 + 4\beta^2 - 4 - 2\sqrt{-4m+4} = 12$$

$$4\alpha^2 + 4\beta^2 - 4 = 2\sqrt{-4m+4} \Rightarrow 2\alpha^2 + 2\beta^2 - 2 = \sqrt{-4m+4}$$

$$m^2 - 4m + 4 = -4m + 4$$

$$m^2 - 4m + 4 = 0 \Rightarrow (m-2)(m-2) = 0 \Rightarrow \boxed{m = 2}$$

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$$f = \frac{1}{2}(n-2)^2 + a \Rightarrow f > 0 \Rightarrow a = 4 \cdot 0 + 9 \Rightarrow 0 = -1$$

$$\text{اگر } n = 2 \text{ جواب شود}$$

$$f = -\frac{1}{2}(n-2)^2 + a = -n^2 + 2n + a \Rightarrow (n+1)(n-5)(-1) \Rightarrow n = -1, 5$$

$$\text{if } f > 0 \quad (-1)(n+1)(n-5) \quad \begin{array}{c} -1 \quad 5 \\ - \quad + \quad - \end{array} \Rightarrow \boxed{(-1, 5)}$$

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$$\alpha \alpha^r - V \alpha + q \beta = 0, \beta > 0$$

$$q \beta^r - V \beta + q \alpha = 0$$

$$\beta (\alpha \beta + \gamma) = 0$$

$$\alpha \beta + \gamma = 0 \Rightarrow \alpha \beta = -\gamma \quad \frac{-\gamma}{\alpha} = \beta$$

$$\alpha^r - V \alpha + q \beta = 0$$

$$\alpha^r - V \alpha^r - 1 \Lambda = 0$$

$$t^r - V t - 1 \Lambda = 0 \Rightarrow (t - q)(t + \gamma)$$

$$\left. \begin{array}{l} t^r = -\gamma \quad \text{و } \hat{O} \hat{O} \hat{E} \\ t^r = q \Rightarrow t = \pm \gamma \\ \frac{-\gamma}{\alpha} > 0 \\ \alpha = -\gamma \\ \beta = \frac{\gamma}{\gamma} \end{array} \right\} \quad \frac{1}{\alpha} + \frac{1}{\beta} = \frac{1}{\gamma} \Rightarrow \frac{\gamma}{\gamma} \quad \boxed{\frac{V}{\gamma}}$$

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

$$\alpha^r = -m \alpha + \gamma m, -m \beta = \beta^r - \gamma m$$

$$\alpha^r = m \beta + \Lambda \Rightarrow -m \alpha + \gamma m + \beta^r - \gamma m = \Lambda$$

$$-m \alpha + \gamma m - m \beta + \gamma m = \Lambda$$

$$-m(-m) + \gamma m = \Lambda$$

$$m^2 + \gamma m - \Lambda = 0$$

$$S \Rightarrow m^2 - S m + P$$

$$\boxed{S = -\gamma}$$

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$$y = O(m - m_{\max})^r + y_{\max}$$

$$y = O(m - \gamma)^r + \gamma \Rightarrow y = O(-\gamma)^r + \gamma \Rightarrow 0 = -\frac{1}{\gamma}$$

$$-\frac{1}{\gamma}(m^r - \gamma m + \gamma) + \gamma \Rightarrow -\frac{1}{\gamma} m^r + \gamma m + \gamma$$

$$-m^r + \gamma m + \Lambda$$

$$S = \gamma$$

$$P = -\Lambda$$

$$\frac{1}{\alpha} + \frac{1}{\beta} = \frac{S}{P} = \frac{\gamma}{-\Lambda} = \boxed{-\frac{1}{\gamma}}$$

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$$y_{\max} = \frac{-\Delta}{f_a} \Rightarrow -\frac{b^r + f_a c}{f_a} = -\frac{((1 - f_m)(\frac{m}{\gamma} + V))}{f_m} = \Lambda$$

$$\gamma m^r + \gamma \Lambda m - 1\gamma = \gamma \gamma m$$

$$\gamma m^r - f_m - 1\gamma = 0$$

$$m^r - f_m - \gamma \gamma = 0$$

$$(m - \Lambda)(m + \gamma)$$

$$\frac{\Lambda}{\gamma} \quad \frac{-\gamma}{\gamma}$$

$$a < 0 \Rightarrow f \Rightarrow \hat{O} \hat{O} \hat{E}$$

$$\left. \begin{array}{l} m m^r + f_m + \frac{m}{\gamma} + V \\ -\gamma m^r + f_m + \gamma \end{array} \right\} \Rightarrow \boxed{n = \gamma} \quad \begin{array}{l} -\alpha^r f_m + 1\gamma = (n + \gamma)(n + \gamma) \\ + \frac{\gamma}{\gamma} \quad \frac{-\gamma}{\gamma} \\ n = -1 \end{array}$$

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$$n^r - (f_a + \gamma) m + (\gamma a^r + \gamma a + \gamma) = 0 \Rightarrow n = \gamma \Rightarrow 0$$

$$f - \Lambda a - \Lambda + \gamma a^r + \gamma a + \gamma = 0$$

$$a = 1 \Rightarrow n^r - \Lambda n + 1\gamma = 0 \quad (n - \gamma)(n - \gamma) = 0$$

$$\gamma a^r - \gamma a - 1 = 0$$

$$a^r - \gamma a - \gamma = 0$$

$$(a - \gamma)(a + \gamma) = 0$$

$$a = \frac{\gamma}{\gamma} \quad \frac{-1}{\gamma}$$

$$a = -\frac{1}{\gamma} \Rightarrow n^r - \frac{\Lambda n}{\gamma} + \frac{\gamma}{\gamma} = 0$$

$$\gamma a^r - \Lambda n + \gamma = 0$$

$$\left. \begin{array}{l} \frac{\gamma}{\gamma} \\ \frac{\gamma}{\gamma} \end{array} \right\} \Rightarrow \boxed{\gamma}$$

$$n^r - \Lambda n + 1\gamma = 0 \quad (n - \gamma)(n - \gamma)$$

القيمة المشتركة (7)