

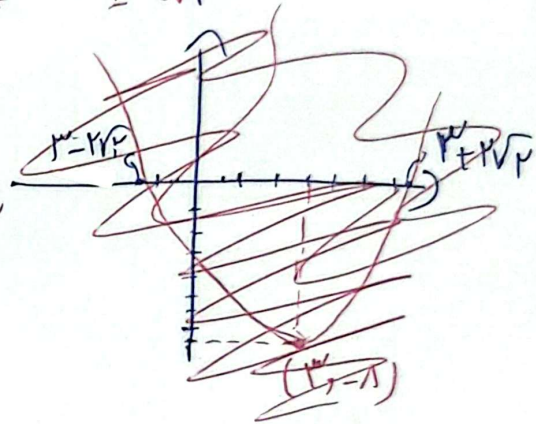
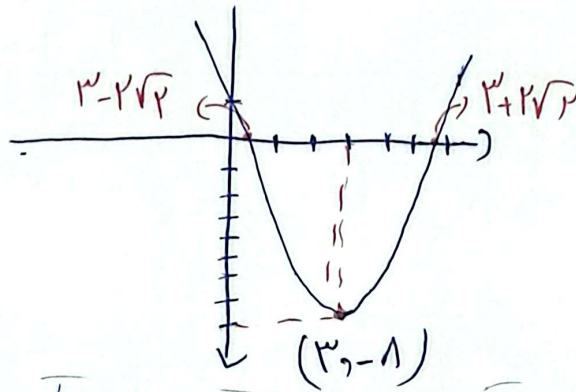
الف)  $y = 2x^2 - 4x + 1 \rightarrow a > 0 \rightarrow \max \rightarrow \text{ext}$   $\left| \begin{array}{l} \frac{-b}{2a} = \frac{4}{4} = 1 \\ \frac{-\Delta}{4a} = \frac{-1}{1} = -1 \end{array} \right.$

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ب)  $-2x^2 + 4x - 5 = y \rightarrow a < 0 \rightarrow \min \rightarrow \text{ext}$   $\left| \begin{array}{l} \frac{-b}{2a} = \frac{4}{-4} \\ \frac{-\Delta}{4a} = \frac{11}{-1} \end{array} \right.$

الف)  $y = x^2 - 4x + 1$   
 $\text{ext} \left| \begin{array}{l} \frac{-b}{2a} = 2 \\ 9 - 16 + 1 = -1 \end{array} \right.$

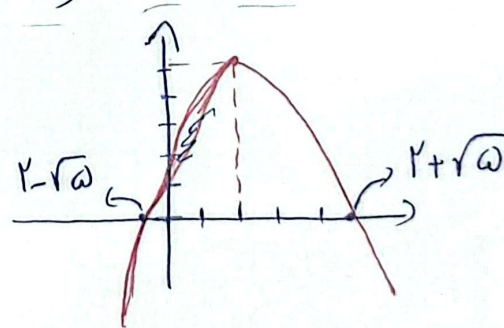
ریشه ها  $= \frac{-b \pm \sqrt{\Delta}}{2a} = \frac{4 \pm \sqrt{16}}{2} = 2 \pm 2$



ب)  $y = -x^2 + 4x + 1$

$\text{ext} \left| \begin{array}{l} \frac{-b}{2a} = 2 \\ \Delta \end{array} \right.$

ریشه ها  $= \frac{-4 \pm \sqrt{16 + 4}}{-2} = 2 \pm \sqrt{5}$



$$\begin{aligned}
\gamma(x-\alpha)^\gamma(x-\beta) &= \gamma(x^\gamma + \alpha^\gamma - \gamma\alpha x)(x-\beta) = \gamma(x^\gamma - \beta x^\gamma + \alpha^\gamma x - \beta\alpha^\gamma - \gamma\alpha x^\gamma \\
&+ \gamma\alpha\beta x) \\
&= \gamma x^\gamma + \gamma(-\beta - \gamma\alpha)x^\gamma - \gamma(\alpha^\gamma + \gamma\alpha\beta x) - \gamma\alpha^\gamma\beta \\
&- \gamma\alpha^\gamma\beta = -\gamma \Rightarrow \alpha^\gamma\beta = \frac{1}{\gamma} \Rightarrow \alpha\beta(\alpha = \frac{1}{\gamma} \Rightarrow \alpha = \frac{-1}{\gamma} \Rightarrow \beta = 1) \\
K &= \gamma(-\beta - \gamma\alpha) = \gamma x \frac{1}{\gamma} = \underline{\underline{\gamma x}}
\end{aligned}$$

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$$x^2 - \gamma m x + m = 0 \rightarrow x = \frac{\gamma m \pm \sqrt{9m^2 - 4m}}{2}$$

$$\Rightarrow \left( \frac{\gamma m + \sqrt{9m^2 - 4m}}{2} - \frac{\gamma m - \sqrt{9m^2 - 4m}}{2} \right)^2 = (1)^2$$

$$\Rightarrow \frac{\gamma m + \sqrt{9m^2 - 4m}}{2} + \frac{\gamma m - \sqrt{9m^2 - 4m}}{2} - \gamma \sqrt{\frac{9m^2 - 9m^2 + 4m}{4}} = \gamma m - \gamma \sqrt{m} = 1$$

$$\Rightarrow \gamma m - \gamma \sqrt{m} - 1 = 0 \rightarrow \sqrt{m} - \frac{1}{\gamma} = 0$$

$$\sqrt{m} = \frac{1}{\gamma} \rightarrow m = \frac{1}{\gamma^2}$$

$$\gamma x^2 - m x - m = 0 \Rightarrow \gamma x^2 - x - 1 = 0 \rightarrow x = \frac{1 \pm \sqrt{1 + 4\gamma}}{2\gamma}$$

$$P = \frac{c}{a} = \frac{-1}{\gamma}$$

$$\frac{|\alpha - \beta| \times c}{\rho} = \frac{\rho}{\rho} \rightarrow |\alpha - \beta| \times |m| = \frac{\rho}{\rho} \rightarrow \frac{\sqrt{4}}{|a|} \times |m| = \frac{\rho}{\rho} = \frac{\sqrt{m^2 + \rho^2} - \cancel{\rho} \times m}{\rho}$$

$$\Rightarrow \frac{|m - \rho|}{\rho} \times |m| = \frac{\rho}{\rho} \rightarrow m^2 - \rho m - \frac{\rho}{\rho} = 0 \rightarrow m = \rho, -1$$

امكان  $\rho$  في النسبة  $\rightarrow -m^2 + \rho m - \rho = 0$

$$y = x^{\rho} - mx + 1 \rightarrow y = x^{\rho} - \rho x + 1 \rightarrow \text{طول رأس} \rightarrow \frac{-b}{\rho a} = \frac{\rho}{\rho}$$

$$y = x^{\rho} + x + 1 \rightarrow \text{طول رأس} = \frac{-b}{\rho a} = \frac{-1}{\rho}$$

$$ax^r + r^m x + a = y \rightarrow a > 0$$

$$ax^r + r^m x + a \geq \frac{V}{\lambda} \Rightarrow \cancel{ax^r + r^m x + a} \geq \frac{V}{\lambda}$$

$$\Rightarrow \frac{-\Delta}{r^c a} = \frac{V}{\lambda} \quad - \frac{9 + r^c a^r}{r^c a} = \frac{V}{rA} \Rightarrow V_a = -1\lambda + \lambda a^r \Rightarrow \Lambda a^r - V a - \Lambda = 0 \quad a = r, -\frac{9}{\lambda}$$

$$\Rightarrow \cancel{A a^r + r a} \Rightarrow a = \pm \sqrt{\frac{r a}{A}}$$

$$x^r - (a+1)x + a = 0 \Rightarrow x = \frac{a+1 \pm \sqrt{a^2 + 1 + r a - r a}}{r} \rightarrow x = a \rightarrow a = r \rightarrow p_1, r$$

$$x^r - (r a + 1)x + b = 0 \rightarrow x^r - 10x + b = 0 \Rightarrow x = \frac{10 \pm \sqrt{100 - r b}}{r} \Rightarrow x = \omega \pm \sqrt{r \omega - b} \rightarrow x = 1$$

$$\begin{aligned} x_1 - x_2 = r &\Rightarrow \omega + \sqrt{r \omega - b} - (\omega - \sqrt{r \omega - b}) = r \Rightarrow r \sqrt{r \omega - b} = r \Rightarrow \sqrt{r \omega - b} = 1 \Rightarrow r \omega - b = 1 \\ &\Rightarrow b = r^2 \end{aligned}$$

$$x^r - 10x + r^2 = 0 \rightarrow (x-9)(x-r) = 0 \Rightarrow p_r = r^2$$

$$p_r - p_1 = r^2 - r = \underline{r1}$$

$$y = -ax^2 + ax + 1 \Rightarrow \text{ext} \left| \begin{array}{l} \frac{-b}{2a} = \frac{-a}{-2a} = \frac{1}{2} \\ \frac{1}{2}a + \frac{1}{2}a + 1 \Rightarrow \frac{a+1}{2} \end{array} \right.$$

$$y = 1bx^2 - bx - 1 \Rightarrow \text{ext} \left| \begin{array}{l} \frac{-b}{2a} = \frac{b}{2b} = \frac{1}{2} \\ \frac{1}{2}b - \frac{1}{2}b - 1 = \frac{-b}{2} - 1 \end{array} \right.$$

$$\frac{a+1}{2} = 1 \times \frac{1}{2}b - \frac{b \times 1}{2} - 1 \Rightarrow \frac{a}{2} + 1 = -1 \Rightarrow \underline{a = -1}$$

$$\frac{-b}{2} - 1 = -(-1) \left( \frac{1}{2} \right) + 1 \times \frac{1}{2} + 1 \Rightarrow b = -4$$

$$b - a = -4 - (-1) = -3$$

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$$y = \gamma \omega \alpha x^{\gamma} + \gamma^{\epsilon} x + \beta$$

$$\alpha \beta = \frac{c}{a} = \frac{\beta}{\gamma \omega \alpha} \Rightarrow \alpha = \pm \frac{1}{\omega}$$

$$a = \frac{1}{\omega} \Rightarrow \gamma \omega \times \frac{1}{\omega} \times \frac{1}{\gamma \omega} + \gamma^{\epsilon} \times \frac{1}{\omega} + \beta = 0 \Rightarrow \beta = -1 \quad \alpha \times$$

$$a = -\frac{1}{\omega} \Rightarrow \gamma \omega \times -\frac{1}{\omega} \times \frac{1}{\gamma \omega} + \gamma^{\epsilon} \times \frac{1}{\omega} + \beta = 0 \Rightarrow \beta = 1 \quad \alpha \checkmark$$

ext

$$\frac{-b}{\gamma a} = \frac{-\gamma^{\epsilon}}{\omega \alpha \alpha} = \frac{\gamma^{\epsilon}}{\gamma_0}$$

$$\frac{-4}{\gamma a} = \frac{14 - \gamma_0}{-\gamma_0} \Rightarrow a$$

ناحیه اول

$$x^r - (a^r + b^r - 1)x + a + b - 1 = 0 \rightarrow x^r - Sx + P = 0$$

$$S = a + b = a^r + b^r - 1 \rightarrow ab + 1 = a^r + b^r - 1 \Rightarrow a^r + b^r - ab = 1 \Rightarrow a^r + b^r + ab - ab = 1$$

$$P = a \cdot b = a + b - 1 \rightarrow a + b = ab + 1$$

$$\Rightarrow (a+b)^r - r^w ab = 1 \Rightarrow (a+b)^r - r^w(a+b) + r^w = 1$$

$$\Rightarrow (a+b)(a+b - r^w) = 1 \Rightarrow \omega_{x^r} = 1 \Rightarrow a+b = \omega$$

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