

$$y = a(x - x_5)^2 + y_5 \Rightarrow y = a(x + 1)^2 + 9$$

نقطه کبی
(۲, ۱) $1 = a(2 + 1)^2 + 9 \Rightarrow 19a = -8 \Rightarrow a = -\frac{8}{19}$

$$\Rightarrow y = -\frac{8}{19}(x + 1)^2 + 9$$

$$\Delta > 0 \Rightarrow m^2 - 12m - 81 > 0 \rightarrow (m - 12)(m + 9) > 0 \quad \left[\begin{array}{c} -9 \quad 12 \\ + \quad - \quad + \end{array} \right] \quad (1)$$

$$S > 0 \Rightarrow \frac{-m}{4} > 0 \Rightarrow m < 0 \quad (2)$$

$$P > 0 \Rightarrow \frac{m + 9}{4} > 0 \Rightarrow m > -9 \quad (3)$$

$$\text{①} \cap \text{②} \cap \text{③} \Rightarrow -9 < m < 0$$

$$\Delta > 0 \Rightarrow 8m^2 - 8m + 1 + 12m - 28 = 8m^2 + 10m - 27$$

$$S = \frac{1}{p} \Rightarrow \frac{-b}{a} = \frac{a}{c} \rightarrow a^2 = -bc \Rightarrow 9 = (1 - 2m)(2 - m)$$

$$\Rightarrow 9 = 2 - 2m - m + 2m^2 \Rightarrow 2m^2 - 3m - 7 = 0 \xrightarrow{a+c=b} \begin{cases} m = -1 \leftrightarrow \Delta < 0 \\ m = \frac{7}{2} \leftrightarrow \Delta > 0 \end{cases}$$

$$x^2 - x - 8 = 0 \rightarrow \begin{cases} S = 1 \\ P = -8 \end{cases}$$

$$x^2 - Sx + P = y \Rightarrow x^2 - (x_1^2 + x_2^2 + \frac{1}{x_1} + \frac{1}{x_2})x + (x_1^2 x_2^2 + \frac{1}{x_1 x_2} + x_1^2 + x_2^2)$$

$$\Rightarrow y = x^2 - (S^2 - 2PS + \frac{S}{P})x + (P^2 + \frac{1}{P} + S^2 - 2P)$$

$$\Rightarrow y = x^2 - (1 + 12 - \frac{1}{8})x + (64 - \frac{1}{8} + 1 + 1) \Rightarrow y = x^2 - \frac{61}{8}x + \frac{513}{8}$$

$$t = \sqrt[3]{x} \Rightarrow (t^3 + \frac{1}{t^3} + 1)(t^3 - 1) = t^6 - t^3 + 1 - \frac{1}{t^3} - 1 = t^6 - \frac{1}{t^3} = 2t$$

$$t^6 - \frac{1}{t^3} = 2t \xrightarrow{\times t^3} t^9 - 1 = 2t^4 \rightarrow 1(t^3)^3 - 2t^4 - 1 = 0$$

$$\rightarrow S = \frac{1}{t} = \sqrt[3]{2}$$

$$P = \sqrt{B} \times B = C B^T \Rightarrow \frac{\varepsilon}{c} = C B^T \rightarrow B^T = \frac{\varepsilon}{c} \Rightarrow B = \pm \frac{r}{c}$$

$$\begin{aligned} B = +\frac{r}{c} &\rightarrow \sqrt{B} = r \rightarrow S = \varepsilon B = \frac{\Lambda}{c} \Rightarrow a_1 = 1 \\ B = -\frac{r}{c} &\rightarrow \sqrt{B} = -r \rightarrow S = \varepsilon B = -\frac{\Lambda}{c} \Rightarrow a_2 = -1 \end{aligned} \quad \left. \begin{array}{l} \\ \end{array} \right\} \text{اختلاف} \quad (16)$$



$$\textcircled{1} \cap \textcircled{2} \rightarrow \left\{ \begin{array}{l} a \text{ مقدار } \varepsilon \end{array} \right\}$$

$$(a) \rightarrow$$

$$S \geq 0 \Rightarrow \frac{-c - r a}{a} \geq 0$$

$$\frac{\frac{\varepsilon}{r}}{-\frac{r}{a} + \frac{c}{a}} \rightarrow D_a = \left[-\frac{\varepsilon}{r}, 0 \right)$$

$$\frac{-a}{r} = -1 \Rightarrow a = r$$

$$y = x^2 + r x - r \xrightarrow{y=1} 0 = x^2 + r x - c \rightarrow (x+c)(x-1) = 0 \quad \begin{array}{l} x=1 \\ x=-c \end{array}$$

$$y = -x^2 - r x + b \rightarrow 1 = -(1)^2 - r + b \rightarrow b = \varepsilon$$

$$\Rightarrow ab = \Lambda$$

$$\frac{a}{r} = \frac{-1}{r} + 1 \rightarrow a = 1$$

$$\begin{cases} r x^2 - x + b = 0 & S_1 = \frac{1}{r} \Rightarrow P_1 = \frac{b}{r} \\ r x^2 + x - c = 0 & S_2 = \frac{1}{r} \Rightarrow P_2 = -c \end{cases}$$

$$\left(x + \frac{1}{r} \right) \left(B + \frac{1}{r} \right) = P_2 + \frac{\varepsilon}{r} + \frac{1}{\varepsilon} \rightarrow \frac{b}{r} = -c + \frac{1}{r} \times \frac{1}{r} + \frac{1}{\varepsilon} = -c$$

$$\rightarrow b = -c \Rightarrow \left[\frac{ab}{\varepsilon} \right] = \left[\frac{-c}{\varepsilon} \right] = \textcircled{-r}$$

$$\begin{aligned} x^2 + r x + m &= 0 \\ x^2 + r x - c m &= 0 \end{aligned} \quad \left. \begin{array}{l} \\ \end{array} \right\} \ominus \rightarrow \varepsilon x = -\varepsilon m \rightarrow x = -m$$

$$x = -m \rightarrow m^2 - r m - c m = 0 \rightarrow m(m - \Delta) = 0 \quad \xrightarrow{\text{غير صفر}} m = \Delta$$

$$\begin{aligned} x^2 + r x + \Delta &\rightarrow (x + \Delta)(x + 1) \\ x^2 + r x - 1\Delta &\rightarrow (x + \Delta)(x - c) \end{aligned} \quad \left. \begin{array}{l} \\ \end{array} \right\} \text{اختلاف} \rightarrow |-1 - c| = \varepsilon$$