

$$y = a(x-h)^2 + k$$

نکته: (199) و (200) را از (1) و (2) به دست آوریم

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

$$\Rightarrow y = -\frac{1}{9}(x+1)^2 + 9 \Rightarrow -\frac{1}{9}x^2 - \frac{2}{9}x + \frac{17}{9}$$

$$rx^2 + mx + m + 9 \rightarrow \frac{-b}{a} > 0 \rightarrow \frac{-m}{r} > 0 \rightarrow m < 0$$

$$\rightarrow \frac{c}{a} > 0 \rightarrow \frac{m+9}{r} > 0 \Rightarrow m > -9$$

$$\left. \begin{array}{l} m < 0 \\ m > -9 \end{array} \right\} -9 < m < 0$$

$$\Delta > 0 \rightarrow m^2 - 4(m+9) = m^2 - 4m - 36 > 0 \Rightarrow (m-12)(m+6) > 0 \Rightarrow \begin{cases} m < -6 \\ m > 12 \end{cases}$$

$$\Rightarrow -9 < m < -6$$

$$rx^2 + (rm-1)x + r-m = 0 \rightarrow \frac{-a}{b} = \frac{c}{a} \Rightarrow \frac{-r}{rm-1} = \frac{r-m}{r}$$

$$\Rightarrow (rm-1)(r-m) = -9 \Rightarrow m^2 + 9m - 19 = 0 \Rightarrow (m+12)(m-1)$$

$$\Rightarrow m = \frac{-9 \pm \sqrt{81-4(-19)}}{2} = \frac{-9 \pm 13}{2} \Rightarrow m = 2 \text{ or } m = -11$$

$$x^2 - x - 1 = 0 \rightarrow s = 1, p = -1 \Rightarrow s = x_1 + x_2 = 1, p = x_1 x_2 = -1$$

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

$$\Rightarrow (t^2 + t^2 + 1)(t^2 - 1) = 2t$$

$$\begin{cases} t^2 - 1 = 0 \Rightarrow t = 1 \text{ or } t = -1 \\ t^2 + t^2 + 1 = 0 \Rightarrow t^2 = -\frac{1}{2} \end{cases}$$

$$rx^r - ax + r \xrightarrow{\omega \rightarrow 1} rB, B \Rightarrow S = \frac{a}{r} - fB$$

$$P = B \times rB \times rB^r = \frac{r}{r} \Rightarrow B^r = \frac{r}{r} \Rightarrow B = \pm \frac{r}{r}$$

$$\Rightarrow S = rB = \frac{a}{r} \rightarrow \frac{r \times r}{r} = \frac{1}{r} = \frac{B}{r} \Rightarrow B = 1$$

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

$$\left. \begin{array}{l} \Rightarrow S = rB = \frac{a}{r} \\ \downarrow \frac{r \times -r}{r} = -\frac{1}{r} = \frac{a}{r} = -1 \end{array} \right\} 1 - (-1) = 2$$

$$y = ax^r + (r+a)x \xrightarrow{\text{نقطة}} \frac{a > 0}{\text{نقطة}}, \rightarrow x = -\frac{r+a}{a} \Rightarrow -\frac{r}{a} < a < 0$$

$$(a > 0) \cap (-\frac{r}{a} < a < 0) \rightarrow \text{نقطة}$$

$$y = x^r + ax - r, y = -x^r - rx + b \quad \frac{-a}{r} = -1 \Rightarrow a = r$$

$$\left. \begin{array}{l} x^r + ax - r = 1 \\ -x^r - rx + b = 1 \end{array} \right\} \begin{array}{l} -r + b = r \Rightarrow b = r \\ ab = r + r = 1 \end{array}$$

$$rx^r - ax + b = 0 \quad \frac{r \times x + a \times x - r}{\alpha, \beta} \quad \alpha + \beta = -\frac{1}{r}$$

$$\alpha + 0/a, \beta + 0/a \quad \alpha\beta = \frac{-r}{r} = -\frac{r}{a}$$

$$(\alpha + 0/a)(\beta + 0/a) = \frac{c}{a} = \frac{b}{r} \Rightarrow \alpha + \beta + 0/a(\alpha + \beta) + 0/ra = \frac{b}{r}$$

$$\Rightarrow b = \frac{ab}{r} = \left[\frac{1 \times (-r)}{r} \right] = \left[-\frac{r}{r} \right] = -r$$

$$\left. \begin{array}{l} x^r + rx + m \\ x^r + rx - m \end{array} \right\} -rx - rm = 0 \Rightarrow x = -m$$

$$-m^r - rm + m = -m \Rightarrow 0$$

$$x^r - rx + a \rightarrow (x+1)(x+a)$$

$$x^r - rx - 1 \rightarrow (x+a)(x-r)$$

$$\text{اختلاف غير مشترك} = r - (-1) = r + 1$$