

$$\begin{cases} \rightarrow \frac{-b}{r_a} = -1 \\ \rightarrow \frac{b^2 - r_a c}{-r_a} = 9 \end{cases} \quad , \quad \begin{cases} 1 = 9a + 3b + c \\ 4 = a - b + c \end{cases} \quad (1)$$

$$\begin{aligned} -1 &= 1a + 3b \\ -r, r_a + b \\ \rightarrow r_a &= -r - b \Rightarrow \frac{-b}{r_a} = \frac{-b}{-r-b} = -1 \end{aligned}$$

$$\rightarrow \frac{b}{r+b} = -1 \rightarrow b = -1, a = -\frac{1}{r}, c = 1, \Delta \Rightarrow y = -\frac{x^2}{r} - x + \frac{1}{r}$$

$$\rightarrow \Delta > 0 \rightarrow b^2 - r_a c, m^2 - r(r)(m+4), m^2 - 1m - 4, (m-1)(m+4) > 0 \quad (2)$$

$$\Rightarrow \frac{-r}{+} \quad \frac{r}{-} \rightarrow m > 1, m < -4 \rightarrow (-\infty, -4) \cup (1, +\infty)$$

$$S > 0 \rightarrow \frac{-b}{a} > 0 \rightarrow \frac{-m}{r} > 0 \rightarrow \frac{m}{r} < 0 \rightarrow (m < 0), P > 0 \rightarrow \frac{m+4}{r} > 0 \rightarrow m > -4 \Rightarrow m \in (-4, 0) \checkmark$$

$$S = \frac{1}{p} \rightarrow \frac{-b}{a} = \frac{a}{c} \rightarrow a^2 - bc \rightarrow 9 = -(r_m - 1)(r - m) = \quad (3)$$

$$r_m^2 - \Delta m + r - 9, r_m^2 - \Delta m - 4 = 0 \xrightarrow{\Delta} m^2 - \Delta m - 13 = 0, (m-1)(m+13)$$

$$\rightarrow m = \frac{1}{r}, m = -\frac{r}{r} = -1 \quad \left\{ \begin{array}{l} \Delta > 0 \rightarrow m = -1 \rightarrow r_a^2 - 4r + 1 = 0 \rightarrow \Delta = 9 - (r \times r \times 1) = -r \\ m = 13, \Delta \rightarrow r_a^2 - 4r - 13 = 0 \rightarrow \Delta = 4 + (r \times 1, \Delta \times r) = 4r \end{array} \right.$$

$$(m = 1, \Delta) \leftarrow$$

$$x_1 + x_2 = S = 1, x_1 x_2 = P = -r \quad (4)$$

$$\rightarrow S' = x_1^r + \frac{1}{x_2} + x_2^r + \frac{1}{x_1} = (S^r - r S P) + \frac{x_1 + x_2}{x_1 x_2} = 1^r + \left(-\frac{1}{r}\right) = \frac{\Delta}{r}$$

$$\rightarrow P' = \left(x_1^r + \frac{1}{x_2}\right) \left(x_2^r + \frac{1}{x_1}\right) = (x_1 x_2)^r + x_1^r \left(\frac{1}{x_1}\right) + \left(\frac{1}{x_2}\right) x_2^r + \frac{1}{x_1 x_2} =$$

$$\underbrace{(x_1 x_2)^r}_{-9r} + \underbrace{x_1^r + x_2^r}_{1} + \underbrace{\frac{1}{x_1 x_2}}_{-\frac{1}{r}} = -\frac{r-1}{r} \rightarrow x_1^r - \left(\frac{\Delta}{r}\right) x_1^r + \left(\frac{-r-1}{r}\right) = 0$$

$$(x_1^r) - \frac{\Delta}{r} x_1^r - \frac{r-1}{r} = 0$$



$$2x^2 - ax + b = 0, \quad 2ax^2 + ax - 9 = 0$$

$$L \quad S = \frac{a}{2}$$

$$L \quad S' = S + 1 = \frac{-a}{2a} = \frac{-1}{2} \Rightarrow \sqrt{a = 1}$$

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$$\Rightarrow 2x^2 - x + b = 0, \quad 2x^2 + x - 9 = 0$$

$$L \quad x^2 + x - 12 = (x+4)(x-3) = 0 \rightarrow x_1 = \frac{-1}{2} = -\frac{1}{2} \rightarrow x_1, x_2 = -2$$

$$L \quad x_2 = \frac{3}{2} = 1.5 \rightarrow (-3) = \frac{b}{2}$$

$$b = -4$$

$$\Rightarrow \begin{bmatrix} a & b \\ 2 & -4 \end{bmatrix} = \begin{bmatrix} -9 & 1 \\ 2 & -4 \end{bmatrix} = \begin{bmatrix} -3 \\ 2 \end{bmatrix} = -2$$

$$\alpha = \text{مميز}$$

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$$L \quad x^2 + 9x + m = 0$$

$$\Rightarrow 2x + 2m = 0 \rightarrow m = -x$$

$$x^2 + 2x - 3m = 0$$

$$m = -x$$

$$\Rightarrow x^2 + 9x + m = 0 \rightarrow x^2 + 9x - x = 0 \rightarrow x^2 + 8x = 0 \begin{cases} x = 0 \rightarrow \text{GG} \\ x = -8 \Rightarrow m = 8 \checkmark \end{cases}$$

$$\Rightarrow x^2 + 9x + m = 0 \rightarrow x^2 + 9x + 8 = (x+1)(x+8) = 0$$

$$\Rightarrow x^2 + 2x - 3m = 0 \rightarrow x^2 + 2x - 16 = (x-3)(x+5) = 0$$

← جواب غير مشترك لومعادله = -1 و 3 ← افتاف ثون = 4