

(1)

$$-\frac{b}{2a} = -1$$

$$a+b+c=9$$

$$9a+2b+c=1$$

$$2a=b \Rightarrow c+a=9$$

$$10a+c=1 \Rightarrow 19a=-1$$

$$\Rightarrow a = -\frac{1}{19}, c = \frac{10}{19}, b = -1 \Rightarrow y = -\frac{x^2}{19}, x = \frac{10}{19}$$

$$\Delta > 0 \Rightarrow m^2 - 1(m+4) > 0 \Rightarrow (m-1)(m+4) > 0 \quad (1)$$

$$S > 0 \Rightarrow -\frac{m}{1} > 0 \Rightarrow m < 0$$

$$P > 0 \Rightarrow \frac{m+4}{1} > 0 \Rightarrow m > -4 \Rightarrow -4 < m < 0$$

$$\begin{array}{c} -4 \qquad -1 \\ \hline + \quad - \quad + \end{array}$$

$$\Delta > 0 \Rightarrow 4m^2 - 4(m+1) - 2\varepsilon + 12m > 0 \Rightarrow 4m^2 + 8m - 2\varepsilon > 0 \quad (2)$$

$$\alpha + \beta = \frac{1}{\alpha\beta} \Rightarrow \frac{1-2m}{1} = \frac{2}{1-m} \Rightarrow 4m^2 - 10m - 1\varepsilon = 0$$

$$(2m-1)(2m+2) = 0$$

$$\Rightarrow m = \frac{1}{2} \text{ or } m = -1$$

$$9a + 2b - 2\varepsilon > 0 \quad \varepsilon = 1 - 2\varepsilon < 0$$

$$x^2 - x - \varepsilon = 0 \quad x_1 + x_2 = 1, \quad x_1 x_2 = -\varepsilon \quad (3)$$

$$\left(x_1^2 + \frac{1}{x_1} + x_2^2 + \frac{1}{x_2} \right) = 1^2 - \frac{1}{1} = \frac{0}{1} = -\frac{b}{a}$$

$$\frac{x_1 + x_2}{x_1 x_2} = -\frac{1}{\varepsilon}$$

$$(x_1 + x_2)^2$$

$$-2x_1 x_2 (x_1 + x_2) = 1^2$$

$$\left(x_1^2 + \frac{1}{x_1} \right) \left(x_2^2 + \frac{1}{x_2} \right) = x_1^2 x_2^2 + x_1^2 + x_2^2 + \frac{1}{x_1 x_2}$$

$$(x_1 x_2)^2 - 2x_1 x_2 = 9 = -4\varepsilon + 9 - \frac{1}{\varepsilon} = -\frac{2\varepsilon}{1}$$

$$x\sqrt[3]{x} + 1 + \sqrt[3]{x^2} - \frac{1}{\sqrt[3]{x^2}} - 1 = 2\sqrt[3]{x}$$

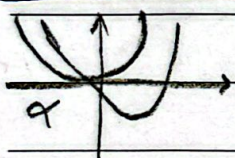
$$(x-2)\sqrt[3]{x} = \frac{1}{\sqrt[3]{x^2}} \leadsto x(x-2) = 1 \leadsto x^2 - 2x - 1 = 0$$

$$\boxed{x_1 + x_2 = 2}$$

$$\beta, \sqrt[3]{\beta} \leadsto \sqrt[3]{\beta} = \frac{a}{p}, \sqrt[3]{\beta^2} = \frac{c}{p} \leadsto \beta = \pm \frac{r}{p}$$

$$\frac{\pm 1}{p} = \frac{a}{p} \rightarrow a = \pm 1$$

اختلاف $\rightarrow |1 - (-1)| = 2$
ریشه ها



$$a > 0$$

$$p > 0 \leadsto \frac{-p - p_0}{a} > 0$$

$$p = 0$$

$$\frac{-p}{p} = -1$$

اگرچه در اینجا

$$\left. \begin{array}{l} x = -a \\ x' = \frac{r}{-1} = -r \end{array} \right\} x = x' \Rightarrow a = r$$

$$y=1 \leadsto 1 = x^2 + 2x - 2 \leadsto x^2 + 2x - 3 = 0 \leadsto (x+3)(x-1) = 0$$

$$-x^2 - 2x + b = 1 \quad x = -3, 1$$

$$x=1 \leadsto -1 + 2 + b = 1 \leadsto \boxed{b=0}$$

$$x=-3 \leadsto -9 + 4 + b = 1 \leadsto b=6$$

$$2) \cdot t \rightarrow rat^r - at - y = 0 \rightarrow r(t + \frac{1}{r})^r - a(t + \frac{1}{r}) + b = 0$$

(9)

IDEA

$$rt^r + rt + \frac{1}{r} - at - \frac{a}{r} + b = 0$$

$$rt^r + (r-a)t + \frac{1-a}{r} + b = rat^r + at - y = 0$$

$$ra=r \rightarrow a=1, \quad b=-y \quad \boxed{ab} = \boxed{-r}$$

$$x^r + rx - rm = x^r + yx + m \rightarrow x = -m$$

$$m^r - ym + m = 0 \rightarrow m^r = 0m \rightarrow m = 0$$

$$x^r + rx - 10 = 0 \rightarrow (x+5)(x-2) = 0 \quad x = 2, -5$$

Subject:

$$x^r + yx + 2 = 0 \rightarrow (x+5)(x+1) = 0 \rightarrow x = -5, -1$$

$$r - (-1) = \boxed{6}$$