

$y = 2x^2 - 4x + 1$ $(-\frac{b}{2a}, -\frac{a}{4a})$ $(\frac{E}{F} = 1, \frac{-A}{\Lambda} = -1)$ $(1, -1)$ $a > 0 \text{ min}$
 $y = -2x^2 + 2x - 1$ $\frac{-3}{-4} = \frac{3}{4}$ $\frac{-1}{4} = \frac{3}{-4}$
 $a < 0$
 max $(\frac{3}{4}, -\frac{3}{4})$

$y = x^2 - 4x + 1$ $x = \frac{4 \pm \sqrt{16}}{2} = \frac{4 \pm 4}{2} = 2 \pm 2$
 $a > 0 \text{ S} > 0 \text{ P} > 0$ $(2, -1)$
 $y = -x^2 + 4x + 1$ $x = \frac{-4 \pm \sqrt{16}}{-2} = \frac{-4 \pm 4}{-2} = 2 \pm 2$
 $a < 0 \text{ S} > 0 \text{ P} < 0$ $(2, 1)$

$S = 1$ $x^2 - 5x + P = x^2 - x - 2$ $E x^2 + K x^2 - 9x - 2 \mid x^2 - x - 2$
 $P = -2$ $-E x + E x^2 + \Lambda x$ $E x + (K + E)$
 $(K + E)x^2 - x - 2$
 $-(K + E)x^2 + (K + E)x + K + \Lambda$
 $(K + 2)x + (2K - 2) = 0$
 $K = -2$

$\sqrt{x} - \sqrt{y} = 1$ $x^2 - 4m x + m$ $2x^2 - x - 1 = 0$
 $x + y - 2\sqrt{xy} = 1$ $P = \frac{c}{a} = \frac{-1}{2}$
 $S - 2\sqrt{P} = 1$
 $2m - 2\sqrt{m} = 1$
 $\sqrt{m} = t$ $t = 1$ $\sqrt{m} = \frac{1}{2} \Rightarrow m = \frac{1}{4}$
 $2t^2 - 2t - 1 = 0$ $t = \frac{1}{2}$ $\sqrt{m} = 1 \Rightarrow m = 1$

$\frac{c \times \sqrt{a}}{\sqrt{|a|}} = \frac{3}{4} \Rightarrow \frac{m \times (m-2)}{2} = \frac{3}{4}$ $\Delta = m^2 + 4m + 4 - 16$
 $\Delta = (m-2)^2$ $m^2 - 2m = 3$
 $\frac{m^2 - 2m}{4} = \frac{3}{4}$ $m^2 - 2m - 3 = 0$
 $(m-3)(m+1)$
 $m = 3$
 $m = -1$

$m = 3 \Rightarrow y = x^2 - 2x + 1$
 $m = -1 \Rightarrow y = x^2 + 2x + 1$

$(-\frac{b}{2a} = \frac{3}{4})$
 $(-\frac{b}{2a} = -\frac{1}{2})$

$$y = ax^2 + 2x + a$$

$$a > 0$$

$$\frac{-\Delta}{2a} = \frac{V}{\Lambda} \quad \frac{-(9-4a^2)}{2a} = \frac{V}{\Lambda} \Rightarrow 2\Lambda a = 2Va^2 - V^2$$

$$2Va^2 - 2\Lambda a - V^2 = 0 \quad \Delta = 4Va$$

$$\Lambda a^2 - Va - 11$$

$$a = \frac{V \pm \sqrt{\Delta}}{2V} \Rightarrow a = \frac{V \pm \sqrt{4Va}}{2V} \Rightarrow a = \frac{V \pm 2\sqrt{Va}}{2V}$$

$$\Rightarrow a < 0 \quad \text{و } a > 0$$

بمقدار

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$$\frac{\sqrt{\Delta}}{|a|} = \gamma \quad \Delta = a^2 + 1 + 2a - 4a = a^2 - 2a + 1 = (a-1)^2 \quad \rho > 0$$

$$x^2 - \epsilon x + \gamma$$

$$x^2 - 10x + b = 0$$

$$\frac{\sqrt{a}}{|a|} = \gamma \Rightarrow \sqrt{100 - 4b} = \gamma \quad 100 - 4b = \frac{\epsilon}{\Lambda} = 9 \Rightarrow b = 25$$

$$x^2 - 10x + 25 \quad \rho = 25 \quad 25 - 25 = 0$$

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$$y = -ax^2 + ax + \gamma \quad \frac{2b(\frac{1}{\gamma})^2 - \frac{1}{\gamma}b - 1}{\frac{1}{\gamma}} = \frac{a}{\gamma} + \gamma \Rightarrow \frac{a}{\gamma} + \gamma = -1 \Rightarrow \frac{a}{\gamma} = -\gamma$$

$$a = -1\gamma$$

$$y = 2bx^2 - bx + 1$$

$$\frac{1\gamma(\frac{1}{\gamma})^2 - \gamma + \gamma}{\frac{1}{\gamma}} = \frac{-b}{\Lambda} \cdot 1$$

$$\frac{1\gamma}{1\gamma} - 1 = \frac{-b}{\Lambda} \cdot 1$$

$$\frac{1}{\Lambda} = \frac{1\gamma}{1\gamma} = \frac{-b}{\Lambda} \quad -b = 9 \quad b = -9$$

$$b - a = -9 - (-1) = -8$$

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$$y = \omega a x^2 + \epsilon x + \beta$$

$$a \times \beta = \frac{c}{a} = \frac{B}{\omega a}$$

$$a = \frac{1}{\omega a} \Rightarrow a^2 = \frac{1}{\omega} \Rightarrow a = \pm \frac{1}{\omega}$$

$$a = \frac{1}{\omega}$$

$$y = \omega x^2 + \epsilon x + \beta$$

$$S = -\frac{\epsilon}{\omega} = a + \beta = \frac{1}{\omega} + \beta = -\frac{\epsilon}{\omega} = \beta = -1 \times \beta < a$$

$$a = -\frac{1}{\omega}$$

$$y = -\omega x^2 + \epsilon x + \beta$$

$$S = \frac{\epsilon}{\omega} = a + \beta = -\frac{1}{\omega} + \beta = \frac{\epsilon}{\omega} \Rightarrow \beta = 1 \checkmark$$

$$y = -\omega x^2 + \epsilon x + 1 \quad \frac{-10 + \frac{1}{100} \cdot 1}{100} = -11$$

$$\text{و } \frac{-b}{\Lambda} = \frac{\epsilon}{\Lambda} \Rightarrow \frac{1}{10} = \frac{\epsilon}{10}$$

بمقدار

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$$x^2 - (a^2 + b^2 - 1)x + a + b - 1 = 0$$

$$P = ab = a + b - 1$$

$$S = a + b = a^2 + b^2 - 1x$$

$$1 + b = 1 + b^2 - 1x$$

$$b^2 - b - 1x = 0$$

$$(b - \epsilon)(b + 3) = 0$$

$$ab - b + 1 = 0$$

$$(a - 1)(b - 1) = 0$$

$$a = 1$$

$$b = -3 \times \text{و } b = \epsilon$$

$$b = \epsilon$$

$$a + b = 1 + \epsilon = \omega$$

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