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$$y = ax^2 + bx + c \rightarrow \text{نقطه } (2, 1) \rightarrow 1 = 9a + 3b + c \rightarrow 1 = 9a + 4a + 4 + a \rightarrow -8 = 14a$$

$$a = -\frac{1}{7}$$

$$\frac{-b}{2a} = -1 \rightarrow -b = -2a \rightarrow b = 2a \rightarrow b = -\frac{2}{7}$$

$$\frac{-\Delta}{2a} = \frac{-b^2 + 4ac}{2a} = 9 \rightarrow \frac{-\frac{4}{49} + 4ac}{2a} = 9 \rightarrow \frac{-\frac{4}{49} + 4(-\frac{2}{7})c}{2(-\frac{1}{7})} = 9 \rightarrow c = 9 + a \rightarrow c = \frac{14}{7}$$

$$C_{\text{ش}} \rightarrow y = -\frac{1}{7}x^2 - \frac{2}{7}x + \frac{14}{7}$$

$$-\frac{1}{7}x^2 - x + \frac{14}{7}$$

$$\Delta \geq 0 \rightarrow b^2 - 4ac = m^2 - 4(r)(m+4) \geq 0 \rightarrow m^2 - 4m - 16 \geq 0 \rightarrow (m-12)(m+4) \geq 0$$

$$\frac{-b}{2a} \geq 0, \frac{c}{a} \geq 0$$

$$2r \rightarrow (-\infty, -4] \cup [12, +\infty)$$

$$\begin{array}{c} -4 \quad 12 \\ + \quad \phi \quad - \quad \phi \quad + \end{array}$$

$$\frac{-b}{a} = \frac{a}{c} \rightarrow -bc = a^2 \quad (1-2m)(r-m) = 9 \rightarrow r-m-4m+2m^2 = 9 \rightarrow 2m^2 - 5m - 9 = 0$$

$$2m^2 - 5m - 9 = 0 \rightarrow (m-9)(m+1) = 0 \rightarrow m = \frac{9}{2}, m = -\frac{1}{2}$$

$$x = x^2 - 4 \rightarrow x^2 - x - 4 = 0 \rightarrow \frac{-b}{a} = \frac{1}{1} = 1 \text{ و } \frac{c}{a} = \frac{-4}{1} = -4$$

$$m_1^2 + \frac{1}{m_1} + m_2^2 + \frac{1}{m_2} \rightarrow x_1^2 + x_2^2 + \frac{x_1 + x_2}{m_1 m_2} = 5 - \frac{1}{4} = \frac{19}{4}$$

$$m_1^2 + m_2^2 = (m_1 + m_2)(m_1^2 + m_2^2 + m_1 m_2) = (1)(\frac{m_1 + m_2}{1}) = 0$$

$$x = x^2 - 4 \rightarrow m_1 = x_1^2 - 4, m_2 = x_2^2 - 4$$

$$m_1^2 = m_1 + 4, m_2^2 = m_2 + 4$$

$$(m_1^2 + \frac{1}{m_1})(m_2^2 + \frac{1}{m_2}) = (\frac{m_1 + 4}{1})(\frac{m_2 + 4}{1}) = m_1 m_2 + 4(m_1 + m_2) + 16 = -4 + 4(1) + 16 = 16$$

$$x^2 - \frac{14}{7}x - \frac{221}{7}$$

②

1/ω (4)

$$r\left(\frac{r}{9}\right) + \frac{r}{11} + r = 0 \rightarrow \frac{r}{11} + r = -\frac{r}{9} \rightarrow \frac{10}{11}r = -\frac{r}{9} \rightarrow r = -\frac{1}{9}$$

$$1 - 1 - 1 = 14$$

$$-\frac{b}{a} \gamma_1 \Rightarrow -\frac{r' - r_2 a}{a} \gamma_1$$

$$\begin{aligned} -r - 2a &= 0 \\ -r &= 2a \\ a &= \frac{-r}{2} \\ a &= 0 \end{aligned}$$

~~$$[-\frac{3}{2}, 0) \rightarrow$$~~

$\min_{a \geq 0} I$

$$\begin{array}{c} \frac{r}{-} \quad 0 \\ + \quad | \quad - \quad | \quad + \end{array} \quad \frac{r}{-} < a < 0 \quad \underline{II}$$
$$I \cap II = \emptyset$$

⑤

$$1 = x^2 + rx - r \rightarrow x^2 + rx - r = 0 \rightarrow (x+1)(x-1) = 0 \rightarrow \begin{matrix} x=1 \\ x=-1 \end{matrix}$$

$$y = -x^2 - rx + b$$

$$1 = -1 \pm 2 + b \rightarrow b = 2 \quad \text{aus } \rightarrow a \cdot b = 2 \times 2 = 4$$

معادله را به این شکل می‌نویسیم: $\frac{-b}{a} = \frac{a}{r} = \frac{-a}{ra} + 1 \rightarrow \frac{a}{r} = \frac{-a+ra}{ra} \rightarrow \frac{a}{r} = \frac{a}{ra} \rightarrow ra^r = ra \rightarrow a^r = a \rightarrow a = 1$ (د)

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

$$\left[\frac{-4 \times 1}{1} \right] = \left[\frac{-4}{1} \right] = \boxed{-4} \quad (x^2 + 0.5x - 4)^2 = 1x^2 + 0.5x - 4 \leftarrow -1, 0.5, 2 \leftarrow \text{معاملات اولیه}$$

$$x^k + \gamma_n - \gamma_m = x^k + 4n + m$$

$$0 = r_n + r_m \rightarrow r_n = -r_m \rightarrow n = -m$$

$$x^2 + 4x + m = 0 \rightarrow \frac{c}{a} = m \rightarrow -m \times 2 = m \rightarrow m = -1$$

$$r_n + r_m - r_m = 0 \rightarrow \frac{c}{\lambda} = -r_m \rightarrow m \times n = -r_m \rightarrow n = \frac{-r_m}{m}$$

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