

$$y = a(x-h)^2 + k \rightarrow \begin{matrix} (-1, 9) \leftarrow \text{نقطه} \\ (1, 1) \leftarrow \text{نقطه} \end{matrix}$$

$$1 = a(1+1)^2 + 9$$

$$1 = 16a + 9 \rightarrow 16a = -8 \rightarrow a = -\frac{1}{2}$$

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

$$y = -\frac{1}{2}x^2 - x + \frac{17}{2}$$

①

$$2x^2 + mx + m + 4 = 0$$

دستگاه معادلات

$$\rightarrow \Delta > 0 \rightarrow m^2 - 4(2)(m+4) > 0 \rightarrow m^2 - 8m - 32 > 0$$

$$m < -4 \quad m > 12$$

$$m < -4$$

$$-4 < m < 0$$

$$\rightarrow -4 < m < 0$$

$$2 > 0 \rightarrow a > 0$$

$$-\frac{b}{a} > 0 \rightarrow -\frac{m}{2} > 0 \rightarrow m < 0$$

$$\frac{c}{a} > 0 \rightarrow \frac{m+4}{2} > 0 \rightarrow m > -4$$

$$-4 < m < 0$$

②

$$2x^2 + (2m-1)x + 4 - m = 0$$

دستگاه معادلات

$$\rightarrow \Delta > 0 \rightarrow (2m-1)^2 - 4(2)(4-m) > 0 \rightarrow 4m^2 - 4m - 24 > 0$$

$$-\frac{2m-1}{2} = \frac{4-m}{2} \Rightarrow (2m-1)(4-m) = 9 \Rightarrow 2m^2 - 8m + 4 = 9$$

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

$$\frac{c}{a} = \frac{4-m}{2}$$

$$2m^2 - 8m - 5 = 0$$

$$m^2 - 4m - \frac{5}{2} = 0$$

$$(m-5)(m+1) = 0$$

$$\frac{5}{2} \quad \frac{1}{2} = -1$$

$$x = x' - 1 \rightarrow x' - x - 1 = 0$$

$$\alpha + \beta = (x_1 + x_2) - 1 = x_1 + x_2 - 1$$

$$1 + 1 - 1 = 1$$

$$\alpha\beta = (x_1 x_2) - 1 = x_1 x_2 - 1$$

$$-9 + 1 + 1 - 1 = -8$$

$$f(x' - \frac{1}{2}x - \frac{1}{2}) = 0 \rightarrow 2x'^2 - 2x' - 1 = 0$$

③

$$-8$$

$$\left( \frac{\sqrt[p]{x^p} + 1 + \sqrt[p]{x^p}}{\sqrt[p]{x^p}} \right) (\sqrt[p]{x^p} - 1) = 1 \sqrt[p]{x^p} \Rightarrow \frac{x^p - 1}{\sqrt[p]{x^p}} = 1 \sqrt[p]{x^p}$$

$$x^p - 1 = x^p \Rightarrow x^p - x^p - 1 = 0$$

$$x_1 + x_2 = -\frac{b}{a} \rightarrow -\frac{1}{1} = -1$$

$$1x^p - 0x + 1 = 0 \quad \alpha = 1, \beta$$

$$\alpha + \beta = \frac{a}{p}$$

$$\alpha\beta = \frac{c}{p} \Rightarrow 1\beta = \frac{1}{p} \rightarrow \beta = \frac{1}{p} \rightarrow \alpha = 1 - \frac{1}{p} \rightarrow \alpha + \beta = 1 - \frac{1}{p} + \frac{1}{p} = 1 \rightarrow a = 1$$

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



$$y = x(ax + 1a + 1)$$

$$y = x(ax + 1a + 1)$$

$$\frac{1+p}{a} > 0 \rightarrow \frac{1+p}{a} < 0$$

$$1 + \frac{1}{p} > 0$$

$$-\frac{1}{p} < a < 0$$

$$y = x^p + ax - 1 \rightarrow \frac{b}{1a} = -\frac{a}{1}$$

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

$$y = -x^p - 1x + b \rightarrow -\frac{b}{1a} = -\frac{-1}{-1} = -1$$

$$-x^p - 1x + b = 1 \Rightarrow -1 - 1 + b = 1 \rightarrow b = 3$$

$$x^p + 1x - 1 = 1 \rightarrow x^p + 1x - 2 = 0$$

$$ab = 1 \times 1 = 1$$

$$1x^p - ax + b = 0 \rightarrow S = \frac{a}{p} \quad 1 \left( \frac{a}{1} = 1 - \frac{1}{p} \right) \Rightarrow a = 1 - \frac{1}{p} = 1$$

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

$$\left[ \frac{-1}{1} \right] = -1$$

$$1x^p + x - 1 = 0 \rightarrow x^p + x - 1 = 0$$

$$(x+1)(x-1) = 0$$

$$\frac{1}{p} + \frac{1}{p} = \frac{2}{p} = 1 \Rightarrow p = 2$$

$$-\frac{1}{1a} + \frac{1}{1} = -\frac{1}{1} \Rightarrow -1 + 1 = 0$$

$$\alpha\beta = -1 \rightarrow \frac{b}{p} = b = -1$$

$$x^p + 1x + m = 0 \quad \alpha + \beta = -\frac{b}{a} = -1$$

$$(\alpha + \beta) - (\alpha + \beta_p) = 1$$

$$x^p + 1x - 1m = 0 \quad \alpha + \beta_p = -1$$

$$\beta - \beta_p = 1$$