

$$x^2 - 2x + 1 = 0 \Rightarrow \beta^2 - 2\beta - 1 = 0 \Rightarrow \beta^2 - 2\beta + 1 = 0 \Rightarrow (\beta - 1)^2 = 0 \Rightarrow \beta = 1$$

$$\beta = 1 \Rightarrow \beta^2 - 2\beta + 1 = 0 \Rightarrow 1 - 2 + 1 = 0 \Rightarrow 0 = 0$$

$$\beta = 1 \Rightarrow \frac{b}{a} = 2 \Rightarrow a = 2 - \beta = 1 \Rightarrow (a = 1, b = 1) \Rightarrow$$

$$\left\{ \begin{array}{l} (a + \beta^2) = (1 + 1) = 2 \\ (a\beta^2 - 1) = (1 - 1) = 0 \end{array} \right\} \Rightarrow \frac{2}{0} = \text{undefined}$$

$$(1, -1), \left(-\frac{1}{1}, -1\right) \xrightarrow{y_1 = y_2} \frac{-1 + 1}{1} = 0 \Rightarrow \frac{b}{a} = 0$$

$$f(x) = y = a\left(x - \frac{1}{1}\right)^2 + C \Rightarrow -1 = a\left(1 - \frac{1}{1}\right)^2 + C \Rightarrow -1 = a(0)^2 + C \Rightarrow C = -1$$

$$y = a\left(x - \frac{1}{1}\right)^2 - 1 \Rightarrow y = a(x - 1)^2 - 1$$

$$x = 0, \forall a \Rightarrow \frac{1 + \frac{1}{14}a}{a} \Rightarrow \left(0, \frac{1}{14}\right)$$

$$x^2 + 2Kx + 1 = 0 \Rightarrow \frac{\sqrt{\Delta}}{1} = \frac{2K}{1} \Rightarrow \sqrt{4K^2 - 4} = 2K \Rightarrow 2K^2 - 2 = 2K^2 \Rightarrow 0 = 0$$

$$4K^2 - 4 = \frac{16}{9}K^2 \Rightarrow \frac{16}{9}K^2 = 4 \Rightarrow K^2 = \frac{9}{4} \Rightarrow K = \frac{3}{2}$$

$$\left[\frac{K^2}{2}\right] \cdot \left[\frac{9}{2}\right] = 1$$

$A_2(r, y), B_2(-a, y), \alpha^2 + \beta^2 \cdot d_2 S^2 - 1p$

-۴

$\frac{-\Delta}{r\alpha} = 1 \Rightarrow \frac{r-a}{r} = -1 \Rightarrow \frac{-b}{r\alpha} \Rightarrow b = 2a$

$\frac{rac - b^2}{r\alpha} = \frac{rac - ra^2}{r\alpha} = 1 = c - a \Rightarrow S = \frac{-b}{a} = -2$

پابن صفہ بنین

$S^2 - 1p = a \Rightarrow c - 1p = a \Rightarrow p = \frac{1}{c} \Rightarrow x^2 + \frac{1}{c}x$

$(0, -\frac{1}{c}) \rightarrow y = -\frac{1}{c}$

$\frac{a+1}{a} = -\frac{1}{c} \rightarrow a = -\frac{c}{c+1}$

-۵

$x^2 - ax - m = 0 \quad \sqrt{\frac{a}{r}} \leftarrow \text{پابن صفہ بنین}$

$f(x, a) = 0 \leftarrow \text{پابن صفہ بنین}$

$y = (x, a)^2 - a(x, a) - m = 0$

$m \in (-2, 2a) \quad 2a + 2m > 0 \Rightarrow m > -a$

$-4/5(m \in (-2, 2a) \rightarrow \frac{4}{5} - a - c = 1 \Rightarrow \dots$

$x^2 - 1p + am - 1 \Rightarrow \Delta_{min} \Rightarrow m < 0 \rightarrow \frac{4}{r\alpha} = \frac{4}{m}$

-۶

$p = y_{min} = m(\frac{4}{m})^2 - 1r(\frac{4}{m}) + am - 1 = 2 \Rightarrow$

$am^2 - 3m - 34 = 0 \rightarrow \Delta = 9 + 4(3 \cdot 34) = 179$

$m_1, m_2, \frac{3 \pm \sqrt{179}}{2a} = 3, -\frac{4}{a} \rightarrow m > 0 \Rightarrow \frac{3}{2a}$

$\frac{4}{m} = \frac{4}{3} \Rightarrow \frac{4}{m} = \frac{4}{3}$

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

-V

$\alpha, \alpha, \beta \Rightarrow \frac{c}{a} \Rightarrow \alpha \beta \Rightarrow \alpha^2 \Rightarrow 2a - 1 \Rightarrow \alpha^2$

$$x^2 - 2(a+1)x + 2a - 1 = 0 \Rightarrow (a-1)^2 = 0 \Rightarrow \boxed{a=1}$$

پیدا

شرط وجود د برای $a=1$ بررسی کن

$$x^2 + 4x + 1 = 0 \Rightarrow \Delta$$

$a=1$

-A

$$x^2 - \sqrt{49}x^2 - 1 = 0 \rightarrow x^2 + \dots \rightarrow x^2 - \sqrt{49}x^2 - 1 = 0$$

$$x = \frac{-1 \pm \sqrt{1+49}}{2} \rightarrow x = \frac{-1 \pm \sqrt{50}}{2} \rightarrow x = \frac{-1 \pm 5\sqrt{2}}{2}$$

جواب

$$p_2 = \frac{(\sqrt{1+49})^2}{2} = \frac{50}{2} = 25$$

$$p_2 = \frac{c}{a} = \frac{1}{1} = 1 \Rightarrow \boxed{1}$$

$$S = \sqrt{1+49} - \sqrt{\frac{1+49}{2}} = 0 \Rightarrow \boxed{0}$$

-9

$$y = kx^2 - (x-4) \Rightarrow y = kx^2 - x + 4 \Rightarrow y = k\left(\frac{x}{k}\right)^2 - \left(\frac{x}{k}\right) + 4 \Rightarrow \frac{x}{k} = 4$$

$$y = -x + 4 \Rightarrow -\frac{x}{k} + 4 = -\left(\frac{x}{k}\right) + 4 \Rightarrow \frac{x}{k} = 4 \Rightarrow \boxed{K=2}$$

$$x^2 - (x-4) = y \Rightarrow \frac{\Delta}{4a} = \frac{-4}{1} \Rightarrow \boxed{-4}$$

پیدا

$$y_1 = y_2 \Rightarrow x_1 = x_2 \Rightarrow \Delta = 0$$

بعضی مواردی که جواب نداشته باشد

$$-mx^2 + mx + 1 = 0 \Rightarrow \Delta = (m+1)^2 - 4m = 0$$

$$-mx^2 + mx + 1 + m + m = 0 \Rightarrow \frac{-1}{2} \pm \sqrt{\frac{1}{4} - 1} = \frac{-1}{2} \pm \frac{\sqrt{3}}{2}$$

پیدا

توجه: در بعضی موارد جواب نداشته باشد!

۴ ← راس سهمی میانگین نقطه است

$$n_5 = \frac{-b+3}{2} = -1$$

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

$$(y-1) = a(x+1)^2$$

مسطح سهمی ←

$$y = \frac{ax^2}{a} + \frac{2ax}{b} + \frac{a+1}{c}$$

$$\alpha^2 + \beta^2 = 5 \rightarrow S^2 - 2P = 5$$

$$-\frac{2a-2}{a} = 1 \rightarrow a = -\frac{2}{3}$$

$$C = a+1 = -\frac{2}{3} + 1 = \boxed{\frac{1}{3}}$$