

$$x_{ext} = \frac{-b}{2a} = \frac{-4}{2} = -1$$

min سے

الحق

$$y_{ext} = 2x^2 - 4x + 1 = 2(-1)^2 - 4(-1) + 1 = 2 + 4 + 1 = 7$$

$$E_{ext} = (-1, 7)$$

$$x_{ext} = \frac{-b}{2a} = \frac{-3}{-2} = \frac{3}{2}$$

max سے

$$y_{ext} = 2x^2 + 3x - 5 = 2\left(\frac{3}{2}\right)^2 + 3\left(\frac{3}{2}\right) - 5 = \frac{9}{2} + \frac{9}{2} - 5 = \frac{9+9-10}{2} = \frac{8}{2} = 4$$

$$E_{ext} = \left(\frac{3}{2}, 4\right)$$

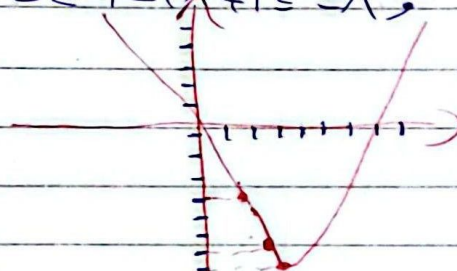
$$= \frac{31}{2}$$

$$x_{ext} = \frac{5}{2} = 2.5$$

$$y_{ext} = 9 - 11 + 1 = -1$$

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x	0	1	-1	2
y	1	-4	8	-5

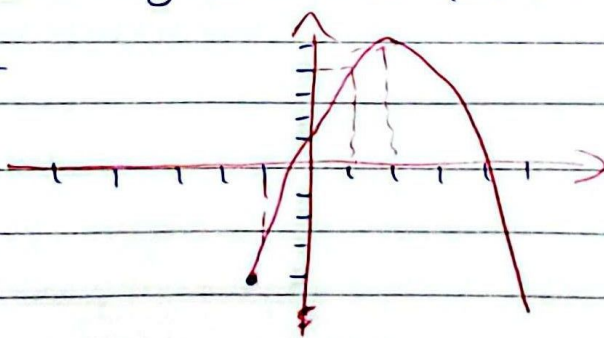


$$x_{ext} = \frac{3-4}{-2} = \frac{-1}{-2} = \frac{1}{2}$$

$$y_{ext} = 4 + 11 + 1 = 16$$

۳- ۱۰

x	0	1	-1	2
y	1	4	-4	-5



$$x^2 - 9x + p \quad \alpha + \beta = 1 \rightarrow x^2 - 1x - 2 = 0 \Rightarrow x^2 - x - 2$$

$$-2 = (x^2 + kx^2 - 9x - 2) \Rightarrow x^2 + kx^2 - x^2 - 9x + x - 2 + 2$$

$$\Rightarrow x^2 + (k-1)x^2 - 8x = 0 \quad x(x^2 + (k-1)x - 8) = 0$$

$$\Rightarrow x^2 + (k-1)x - 8 = 0 \quad \beta = \frac{1-k}{1} = 1 - k$$

$$k = -3$$

$$r+s=3 \quad r \times s = m \quad |r-s|=1 \quad (r-s)^2 = (r+s)^2 - 4rs$$

$$1 = 9 - 4m \quad m = \frac{9-1}{4} = \frac{8}{4} = 2$$

$$r, s = \frac{3 \pm \sqrt{3^2 - 4 \times 2}}{2} = \frac{3 \pm \sqrt{9-8}}{2} = \frac{3 \pm 1}{2}$$

$$r = \frac{3+1}{2} = 2, \quad s = \frac{3-1}{2} = 1$$

$$x = \frac{(m+2) \pm \sqrt{(m+2)^2 - 4m}}{2} = \frac{(m+2) \pm \sqrt{m^2 - 4m + 4}}{2}$$

$$\begin{aligned} x_1 = 1 \quad x_2 = \frac{m}{2} \quad |m| &= \text{ارتفاع} \\ \frac{1}{2}x + 1 = \frac{m}{2} \quad |x| \quad m = \frac{m}{2} \quad m - \frac{m^2}{2} = \frac{m}{2} \quad (m-2)(m+1) = 0 \\ m = 1 \quad m = 2 \quad y = \frac{m^2}{2} - m \times \frac{m}{2} + 1 = \frac{m^2}{2} - \frac{m^2}{2} + 1 = 1 \\ m = 2 \quad y = \frac{4}{2} - 2 \times \frac{2}{2} + 1 = 1 \end{aligned}$$

طول رأس $\left(\frac{3}{2}\right)$ $m = -1$ $\left(-\frac{1}{2}\right)$

$$\begin{aligned} ax^2 + 2x + a - \sqrt{a} &= 0 \quad \Delta = 4 - 4(a - \sqrt{a}) = 4(1 - a + \sqrt{a}) \\ a = 0 \quad \sqrt{a}x - \sqrt{a} &= 0 \quad a \neq 0 \quad \Delta = 4 - 4(a - \sqrt{a}) = 4(1 - a + \sqrt{a}) \\ \Delta > 0 \quad \Rightarrow \quad 4(1 - a + \sqrt{a}) > 0 \quad \Rightarrow \quad 1 - a + \sqrt{a} > 0 \\ \sqrt{a} - a + 1 > 0 \quad a = \frac{1 \pm \sqrt{1 - 4}}{2} = \frac{1 \pm \sqrt{-3}}{2} \\ a = \frac{1 \pm \sqrt{-3}}{2} \quad a = \frac{1 \pm \sqrt{-3}}{2} \quad a \in -1, 0, 1, 2 \end{aligned}$$

$$\begin{aligned} \alpha = \beta + 2, \quad \alpha^2 - (a+1)\alpha + a &= 0 \quad \Rightarrow \quad \alpha - \beta = 2 \\ \Rightarrow \quad \sqrt{a} &= \sqrt{a^2 + 1 + 2a - 4a} = \sqrt{a^2 - 2a + 1} = |\alpha - \beta| = 2 \\ \sqrt{(a-1)^2} = a - 1 = 2 \quad a = 3 \\ \alpha' = \beta' + 2 \quad \Rightarrow \quad \alpha' - \beta' = 2\sqrt{a} = 2\sqrt{3} \\ b = 9 \quad \Rightarrow \quad b = 2\sqrt{3} \quad \frac{b}{1} = \frac{a}{1} \quad \frac{a}{1} = 3 \quad b = 2\sqrt{3} \end{aligned}$$

$$\begin{aligned} y = -a\left(\frac{1}{2}\right) + a\left(\frac{1}{2}\right) + 2 &= \frac{a}{2} + 2 \\ y = 2bx - b\alpha - 1 \quad y = 2b\left(\frac{1}{2}\right) - b\left(\frac{1}{2}\right) - 1 &= \frac{b}{2} - \frac{b}{2} - 1 = -1 \\ \frac{a}{2} + 2 = \frac{b}{2} - 1 \quad \frac{a}{2} + 3 = \frac{b}{2} \\ 2a + 6 = b \quad -\frac{b}{2} - 1 = \frac{a}{2} + 2 \quad -\frac{b}{2} = \frac{a}{2} + 3 \\ 2a + 6 = -2b \quad 2a + 6 = -2b \quad 2a + 6 = -2b \\ 2a + 6 = -2b \quad 2a + 6 = -2b \quad 2a + 6 = -2b \\ a = -3 \quad b = 0 \quad a = -3 \quad b = 0 \quad a = -3 \quad b = 0 \\ b - a = 3 \end{aligned}$$

$$\alpha \times \beta = \frac{\beta}{\alpha} \quad \beta \neq 0 \quad \alpha = \frac{1}{\beta} \quad -9$$

$$\alpha + \beta = -\frac{1}{\alpha\beta} \quad \frac{1}{\alpha\beta} + \beta = -\frac{1}{\alpha\beta}$$

$$\frac{1}{\alpha\beta} + \beta = -\frac{1}{\alpha\beta} \quad \beta = -\frac{1}{\alpha\beta} \quad \alpha < 0$$

$$x = -\frac{1}{\alpha\beta} = -\frac{1}{\alpha\beta} \quad x = -\frac{1}{\alpha\beta} > 0$$

$$y = -\frac{1}{\alpha\beta} + \beta = -\frac{1}{\alpha\beta} - \frac{1}{\alpha\beta} = -\frac{2}{\alpha\beta}$$

$$x > 0 \quad y > 0 \quad \text{مس} \quad \text{در صورت 1}$$

$$a + b = a^2 + b^2 - 12 - 2ab \quad -10$$

$$s = s^2 - 2p - 12 \quad p = ab \quad s = a + b \quad \text{فرضی}$$

$$2(s-1) = s^2 - s - 12 \quad s^2 - 3s - 10 = 0$$

$$s = \checkmark \quad s = -2 \quad s = a + b > 0$$

$$a + b = 5 \quad ab = 4 \quad t^2 - 5t + 4 = 0$$

$$t = 1 \text{ و } 4 \quad a = 1 \quad b = 4 \quad \text{عکس}$$

$$x^2 - 5x + 4 = 0 \quad a + b = 1 + 4 = 5$$