

الف)  $y = 2x^2 - 4x + 1$   $\left| \begin{array}{l} \frac{-b}{2a} \rightsquigarrow \frac{4}{4} = 1 \\ \frac{-\Delta}{4a} \rightsquigarrow -1 \end{array} \right.$  min در  $x=1$

$f(1) - f(2) + 1$   $\leftarrow$  ثابتی

$\Delta = 16 - 4(2) = 8$   $\frac{-4}{4} = -1$

ب)  $y = -2x^2 + 4x - 5$   $\left| \begin{array}{l} \frac{-b}{-2a} = \frac{4}{-4} = -1 \\ \frac{4}{-8} = -\frac{1}{2} \end{array} \right.$  max در  $x=1$

$\Delta = 9 - 4(1) = -31$

الف)  $y = x^2 - 4x + 1$   $34 - f(1) = 32 = 0$

$\frac{4}{x} = 3$   $\left| \begin{array}{l} \frac{-32}{4} = -8 \\ \frac{4}{4} = 1 \end{array} \right.$

$x = \frac{-b \pm \sqrt{\Delta}}{2a} = 2 \pm \sqrt{2}$

$(x+2)(x-2)$   $n = -2$   $m = 2$

ب)  $y = -x^2 + 4x + 1$   $\left| \begin{array}{l} \frac{4}{-2} = -2 \\ \frac{4}{-4} = -1 \end{array} \right.$

$x = 2 \pm \sqrt{5}$

$kx^2 + kx^2 - 9x - 2 = 0$   $\alpha + \beta + \gamma = \frac{-b}{a} = 5$   $\rho = \alpha\beta\gamma = -2 \times \gamma = \frac{1}{\gamma}$

$\alpha + \beta = 1$   $\left| \begin{array}{l} \frac{-k}{k} = -1 \\ \frac{1}{k} = \frac{1}{k} \end{array} \right.$   $\gamma = -\frac{1}{2}$

$\alpha\beta = -2$   $\frac{-k}{k} = -\frac{1}{k} = \frac{1}{2}$

$k = 2$   $|k = -13|$

$x^2 - 2mx + m = 0$   $\sqrt{t} = 1$   $t = \frac{1}{m}x \rightarrow m = 1$

$\sqrt{\alpha} - \sqrt{\beta} = 1 \rightarrow \alpha + \beta - 2\sqrt{\frac{\alpha\beta}{t}} = 1 \rightarrow 2t^2 - 2t - 1 = 0$

$x^2 - mx - m = 0$   $2x^2 - x - 1 = 0$

$\alpha\beta = \frac{c}{a} = -\frac{1}{2}$

$y = ax^2 + 2x + a$   $a > 0$  min  $|a = 2|$  جواب: ۲

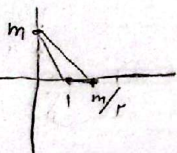
min  $\left| \begin{array}{l} \frac{v}{a} = \frac{-\Delta}{4a} \rightarrow -(9 - 4a^2) \rightarrow \frac{4a^2 - 9}{4a} = \frac{v}{a} \end{array} \right.$

$4a^2 = 4a^2 - 9$

$4a^2 - 4a^2 - 9 = 0$   $\Delta = 100$   $a = \frac{2A \pm 100}{4B} = -1, 100$   $a = 100$   $\checkmark$

$$y = rmx - (m+r)x + m$$

$$x=0 \quad y=m$$



$$S\Delta = \frac{1}{2} = \frac{(m-r)m}{2} = r$$

$$m^2 - rm - r^2 = 0 \quad r - f(-r) = 1 \quad m = \frac{r \pm f}{r} = 3, -1$$

$$y = x^2 - mx + 1$$

$$\frac{b}{r} \rightarrow \text{...}$$

$$\frac{m}{r} = \sqrt{\frac{r}{r}} \sqrt{\frac{-1}{r}}$$

$$x^2 - (a+1)x + a = 0 \quad s = a+1 \quad p = a \rightarrow r$$

$$n \Rightarrow n+r$$

$$rn+r = a+1$$

$$n(n+r) = a$$

$$a = rn+1$$

$$n^2 + rn = rn+1 \rightarrow n = 1 \rightarrow n=1 \quad n+r=3$$

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

$$m, m+r$$

$$m+m+r = 10 \rightarrow rm+r = 1 \rightarrow m=1 \quad m+r=9$$

$$y = -ax^2 + ax + r$$

$$\frac{-a}{-2a} = \frac{1}{2} = r$$

$$a = ar - \varepsilon(-ra) = ar + ra = y$$

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

$$\frac{-b^2 - 4b}{4b} = \frac{-b}{4} - 1$$

$$\frac{-a^2 - 4a}{-4a} = \frac{a}{4} + 1$$

$$b-a = -9+11 = \sqrt{4}$$

$$x = \frac{b}{4b} = \frac{1}{4} \quad \frac{a}{4a} + \frac{a}{4} + 1 = \frac{-b}{4} - 1 \rightarrow b = -9$$

$$\textcircled{1} \rightarrow -ax \frac{1}{2} + \frac{1}{4}a + r = y \quad \frac{1}{2}a + r = -1$$

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

$$y = r\alpha x^2 + \beta x + \gamma$$

$$\alpha + \beta = \frac{-f}{r\alpha\alpha} \rightarrow r\alpha\alpha^2 + r\alpha\alpha\beta = -f$$

باس من در کلمه نامیده

$$\beta > \alpha$$

$$\alpha\beta = \frac{\beta}{r\alpha\alpha} \rightarrow r\alpha\alpha^2\beta = \beta$$

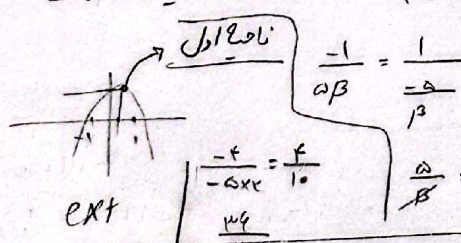
$$r\alpha\alpha^2 + r\alpha\alpha\beta + \varepsilon = 0$$

$$r\alpha\alpha\beta = \alpha - 1$$

$$r\alpha\alpha^2 = 1$$

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

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



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

$$\frac{1}{\beta} = \alpha\beta^2 \rightarrow \alpha\beta^2 - \alpha = 0$$

$$\alpha(\beta^2 - 1) = \alpha(\beta-1)(\beta+1)$$

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

$$s = a + b = a^2 + b^2 - 1r$$

$$p = a + b - 1$$

$$a + b = p + 1$$

$$a, b \rightarrow \text{...}$$

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

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

$$(p+1)^2 - r(p+1) - (p+1) - 1r = 0$$

$$p^2 + 2p + 1 - rp - r - p - 1 - r = 0$$

$$p^2 - p - 1r = 0$$

$$a + b = p$$

$$f = a + b - 1 \quad a + b = \omega$$

$$(p+r)(p-f) = 0$$

$$p = -r \quad X$$

$$p = 2 \quad \checkmark$$