

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 $x=1$

$f(1) - f(0) + 1$ \leftarrow ثابت

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

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 $x=1$

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

مستقیم است \rightarrow min

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

$\left| \begin{array}{l} \frac{4}{2} = 2 \\ \frac{-32}{4} = -8 \end{array} \right.$ $x = \frac{-b \pm \sqrt{\Delta}}{2a} = 2 \pm \sqrt{2}$

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

ب) $y = -x^2 + 4x + 1$ $\left| \begin{array}{l} \frac{4}{-2} = -2 \\ \frac{17}{-4} = -\frac{17}{4} \end{array} \right.$ $x = 2 \pm \sqrt{5}$

درستوار

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

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

$\alpha\beta = -2$ $\left| \begin{array}{l} \frac{-k}{2} = -\frac{1}{2} \frac{1}{\rho} \\ |k = -3| \end{array} \right.$

$k = 3$

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

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

$\left\{ \begin{array}{l} x^2 - mx - m = 0 \\ x^2 - x - 1 = 0 \end{array} \right.$

$\alpha\beta = \frac{c}{a} = \frac{1}{\rho}$

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

مستقیم است \rightarrow min

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

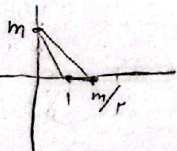
$4a^2 = 4a^2 - 9$

$4a^2 - 4a^2 - 9 = 0$ $\Delta = 100$ $a = \frac{2A \pm 100}{4S} = -1/100$ $(2) \checkmark$

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

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



$$m^2 + \epsilon + fm - f(rm)$$

$$m^2 - fm + \epsilon = \Delta$$

$$(m-r)^2 = \Delta$$

$$x = \frac{m+r \pm (m-r)}{r} = 1 \pm \frac{m}{r}$$

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

$$m^2 - rm - r^2 = 0$$

$$r - f(-r) = 1 \quad m = \frac{r \pm f}{r} = r, -1$$

محل

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

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

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

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$$rx^2 - (a+1)x + a = 0 \quad s = \frac{a+1}{r} \quad p = \frac{a}{r}$$

$$n \Rightarrow n+r$$

$$\boxed{\alpha = 3}$$

$$|\alpha\beta - \alpha'\beta'| = r$$

$$rn+r = a+1 \quad n(n+r) = a$$

$$\boxed{\alpha = m+1}$$

$$n^2 + rn = a \rightarrow n = \dots \rightarrow \boxed{n=1} \quad \boxed{n+r=3}$$

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

$$m, m+r$$

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

1) $y = -ax^2 + ax + r \quad \frac{-a}{-2a} = \frac{1}{2} = n \quad a = ar - \epsilon(-ra) = ar + na = y$

2) $y = rbx^2 - bx - 1 \rightarrow \frac{-b^2 - 4b}{4b} = \frac{-b}{4} - 1$

$$b^2 - 4(-2b) = \dots$$

$$b - a = -9 + 12 = \sqrt{4}$$

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

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

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

$$\frac{1}{2}a = -4 \rightarrow \boxed{a = -8}$$

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

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

$$\beta > \alpha$$

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

$$ra\alpha^2 + ra\alpha\beta + \epsilon = 0$$

$$ra\alpha\beta = \alpha - 1$$

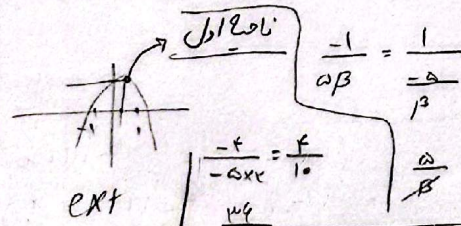
$$ap = -1$$

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

باس ...

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

$$\alpha = \frac{-1}{ra} = \frac{1}{5}$$



ext

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

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

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

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

$$a, b \rightarrow \dots$$

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

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

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

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

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

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

$$(p+r)(p-r) = \dots$$

$$a+b = p$$

$$f = a+b-1 \quad \boxed{a+b = 5}$$

$$p = -r \quad p = 2 \checkmark$$

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