

نام و نام خانوادگی ... هنادنه. سالم پاسخنامه تشریحی تکلیف شماره ۲۴۰ کلاس ۲۰۰۰م. دهه: ...

الف $y = 2x^2 - 4x + 1$
 $a > 0 \rightarrow \text{Min}$
 $x = \frac{-b}{2a} = \frac{4}{4} = 1$
 $\text{Min} \left| \begin{array}{l} y = 2(1)^2 - 4(1) + 1 = -1 \\ \text{باید از } 2 - 4 + 1 = -1 \end{array} \right.$

ب $y = -2x^2 + 4x - 5$
 $a < 0 \rightarrow \text{Max}$
 $x = \frac{-b}{2a} = \frac{4}{-4} = -1$
 $\text{Max} \left| \begin{array}{l} y = \frac{-\Delta}{4a} = \frac{4 - 16 - 20}{-4} = \frac{-32}{-4} = 8 \\ \Delta = b^2 - 4ac = 16 - 4(-2)(-5) = 16 - 40 = -24 \end{array} \right.$

الف $y = x^2 - 4x + 1$ $x = 0$ $y = 1$
 $S \left| \begin{array}{l} x = \frac{b}{a} = \frac{4}{1} = 4 \quad a > 0 \\ y = 9 - 16 + 1 = -1 \quad (\text{Min}(U)) \end{array} \right.$

ب $y = -x^2 + 4x + 1$ $a < 0 \rightarrow \text{Max}(N)$
 $S \left| \begin{array}{l} x = \frac{-b}{2a} = \frac{-4}{-2} = 2 \\ y = -4 + 8 + 1 = 5 \end{array} \right.$

دو روش: $\Delta = b^2 - 4ac = 16 - 4(-1)(1) = 20$
 $x = \frac{-b \pm \sqrt{\Delta}}{2a} = \frac{-4 \pm \sqrt{20}}{-2}$
 $\frac{-4 + \sqrt{20}}{-2} = \frac{-4 + 2\sqrt{5}}{-2} = 2 - \sqrt{5} \approx 0.76$
 $\frac{-4 - \sqrt{20}}{-2} = \frac{-4 - 2\sqrt{5}}{-2} = 2 + \sqrt{5} \approx 4.24$

α, β $x^2 + Kx^2 - 9x - 2 = 0$
 $(x - \alpha)(x - \beta)(x - \delta) = x^2 + Kx^2 - 9x - 2$
 $\alpha + \beta = 1$
 $\alpha\beta = -2$
 $K = 0$
 $x \uparrow \quad K \alpha \beta \delta = 2$
 $\alpha \beta \delta = \frac{2}{K}$
 $-2\delta = \frac{2}{K}$
 $\delta = \frac{-1}{K}$
 $-2(\alpha + \beta + \delta) = K$
 $-2(1 - \frac{1}{K}) = K$
 $-2 + \frac{2}{K} = K$
 $K = -1$

α, β $x^2 - mx + m = 0$ $1 + 1 - 2 + -1 = 0$
 $\Delta = 1 - 4m(m - 1) = 1 - 4m^2 + 4m = -4m^2 + 4m + 1$
 $t = \frac{-4 \pm \sqrt{16m^2 - 16m - 4}}{-8}$
 $\frac{4 \pm \sqrt{4m^2 - 4m - 1}}{-4} = \frac{1 \pm \sqrt{m^2 - m - \frac{1}{4}}}{-1}$
 $\frac{1 - \sqrt{m^2 - m - \frac{1}{4}}}{-1} = \frac{1}{-1} = -1$
 $\frac{1 + \sqrt{m^2 - m - \frac{1}{4}}}{-1} = \frac{1}{-1} = -1$
 $m = 1$
 $\alpha \beta = \frac{-1}{1} = -1$

نقطه‌ای تقاطع آن با محور عرضها در کس یک نقطه اند.
 $y = 2x^2 - (m+2)x + m \rightarrow a+b+c = 2 - m - 2 + m = 0$
 $x_1 = 1$
 $x_2 = \frac{c}{a} = \frac{m}{2}$
 $S_{\Delta} = \frac{1}{2} |m(\frac{m}{2} - 1)| = \frac{m}{4} |m - 2|$
 $|m(\frac{m}{2} - 1)| = \frac{m}{2} |m - 2| = \frac{m}{2} \times 2 = m$
 $|m(\frac{m}{2} - 1)| = 4$
 $|m(m - 2)| = 8 \rightarrow m = -1$

چند مقدار مختلف a !

$y = ax^2 + 4x + a$ → دو بین مقدار
 $= \frac{4}{a}$

$g_0 = -\frac{\Delta}{4a}$

$\Delta = b^2 - 4ac = 9 - 4a^2$

$g_0 = \frac{4a^2 - 9}{4a} = \frac{4}{a}$

① $y = 2x^2 + 4x + 2 \quad \Delta = 9 - 4 \times 2 \times 2 = -1$

$g_0 = \frac{4}{2} = 2$

② $y = \frac{9}{4}x^2 + 4x - \frac{9}{4} \quad \Delta = 9 - 4 \times \frac{9}{4} \times \frac{9}{4} = 9 - \frac{81}{4} = -\frac{63}{4}$

$g_0 = \frac{4 \times \frac{9}{4} - 9}{4 \times \frac{9}{4}} = \frac{9 - 9}{9} = 0$

* چون سعی داری بهترین مقدار باشی

* چون نگاه حقان را با یکا کرده منظره

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

$4x^2 - 4x + 2 = 0 \rightarrow 2x^2 - 2x + 1 = 0$

$\Delta = b^2 - 4ac = 4 - 4 \times 2 \times 1 = -4$

$x = \frac{-b \pm \sqrt{\Delta}}{2a} = \frac{2 \pm \sqrt{-4}}{4} = \frac{2 \pm 2i}{4} = \frac{1 \pm i}{2}$

جواب آخر

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

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

$S = 4a+1 = 4+1 = 5$

$P = b$

$\delta, \epsilon \begin{cases} \delta = 4 \\ \epsilon = \delta + 4 \end{cases}$

$\delta + \epsilon + 4 = 10$

$4\delta = 1 - 4 = -3$

$\epsilon = \delta + 4 = 4 + 4 = 8$

$-b = 4$

$\alpha + \alpha + 4 = a + 1 \rightarrow \alpha(\alpha + 2) = a$

$2\alpha + 4 = a + 1 \rightarrow \alpha + 2 = \frac{a+1}{2}$

$\alpha^2 + 2\alpha = a$

$\alpha^2 - 1 = a - 2$

$\alpha^2 = 1 \rightarrow \alpha = \pm 1$

$\alpha = 1 \rightarrow \alpha + 2 = 3$

$\alpha = -1 \rightarrow \alpha + 2 = 1$

$\beta = \alpha + 4 = 3$

اختلاف حاصلضرب ریشه‌های دو معادله؟

$\alpha\beta - \delta\epsilon = a - b = 4 - 2 = 2$

$\epsilon\delta - \alpha\beta = b - a = 2 - 4 = -2$

$y = ax^2 + ax + 2$

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

$b - a = 0$

$y = ax^2 + ax + 2$

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

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

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

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

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

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

$x = \frac{b}{2a} = \frac{2}{2a} = \frac{1}{a}$

$g = -\frac{1}{2}a + \frac{1}{2}a + 2 = \frac{1}{2}a + 2$

$x = \frac{b}{2a} = \frac{1}{2}$

$g = 2 \times \frac{1}{2} - \frac{1}{2} - 1 = 1 - \frac{1}{2} - 1 = -\frac{1}{2}$

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

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

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

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

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

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

α, β ریشه‌های $y = 2ax^2 + 4x + \beta$

$\alpha + \beta = 0$

$\beta = -2\alpha$

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

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

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

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

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

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

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

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

$2ax^2 + 4x + \beta$

$2ax^2 + 4x + \beta = 0$

$\alpha + \beta = 0$

$\beta = -2\alpha$

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

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

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

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

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

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

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

$x^2 - (a+b^2-12)x + a+b-1 = 0$

$a+b = a+b^2-12$

$ab = a+b-1$

$(a+b)^2 - 2(a+b) - 12 + 1 = 0$

$(a+b)^2 - 2(a+b) - 11 = 0$

$(a+b)^2 - 2(a+b) - 10 = 0$

$* a^2 + b^2 = (a+b)^2 - 2ab$

$(a+b)^2 - 2(a+b) - 12 + 1 = 0$

$(a+b)^2 - 2(a+b) - 11 = 0$

$(a+b)^2 - 2(a+b) - 10 = 0$

$\Delta = 9 - 4 \times 1 \times -10 = 49$

$t = \frac{2 \pm \sqrt{49}}{2} = \frac{2 \pm 7}{2}$

$t = \frac{2+7}{2} = \frac{9}{2}$

$t = \frac{2-7}{2} = -\frac{5}{2}$

$t = \frac{2+7}{2} = \frac{9}{2}$

$t = \frac{2-7}{2} = -\frac{5}{2}$

$a+b = 9$

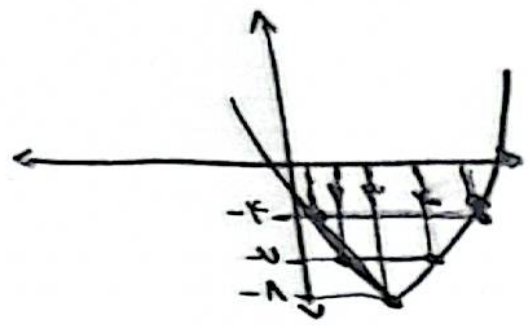
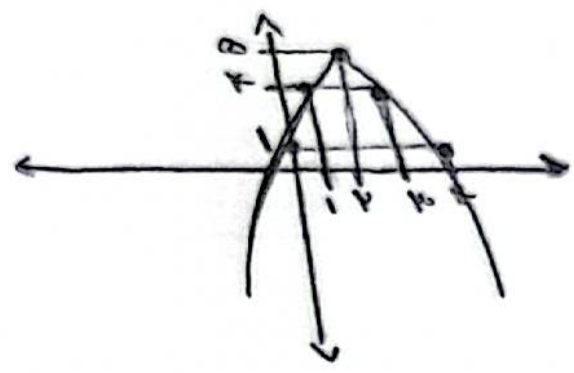
$a+b = 9$



① روش :

0	1	2	3	4
1	2	3	4	1

1	2	3	4	5
-1	-2	-3	-4	-5



مقدار ج :

الف -