نام و نام خانوادگی ..... پاسخنامه تشریحی تکلیف شماره ۲۴ ... کلاس ... دهم ریاضی B .....

۱

الف) $x_s = \frac{-b}{2a} = \frac{4}{4} = 1 \Rightarrow y_s = 1-2-1 = -2 \Rightarrow S(1,-2)$ ، $a>0$ ← min دارد

ب) $x_s = \frac{-b}{2a} = \frac{-4}{-16} = \frac{4}{16} \to y = 2\left(\frac{9}{16}\right) + 4\left(\frac{-3}{4}\right) - 3 = \frac{9}{8} + 15 - \frac{48}{8} = -\frac{21}{8}$

$S\left(\frac{4}{4}, \frac{-21}{8}\right)$

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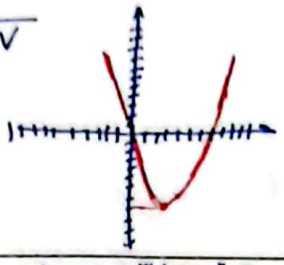
الف) $x_s = \frac{-b}{2a} = \frac{-8}{4} = 2 \Rightarrow y_s = 9-18+1 = -8 \Rightarrow S(2,-8)$ min

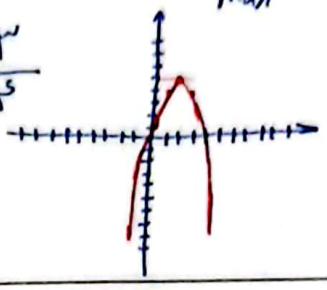
x	1	2	3
y	-7	-8	-7

$c=1$



ب) $x_s = 2$ ، $y_s = 3 \Rightarrow S(2,3)$ max

x	1	2	3
y	4	3	5



۳

$(x^2-x-2)(4x+1) = 4x^3 + kx^2 - 9x - 2$

$4x^3 - 4x^2 - 8x + \square = 4x^3 + kx^2 - 9x - 2 \to \square = (k+4)x^2 - x - 2 \to 0 = +1$

$(x^2-x-2)(4x+1) = 4x^3 - 4x^2 - 8x - x - 2 = 4x^3 - 5x^2 - 9x - 2$

$k = -5$

۴

$\sqrt{\alpha} - \sqrt{\beta} = 1 \to \alpha + \beta - 2\sqrt{\alpha\beta} = 1 \to 3m - 2\sqrt{m} = 1 \to 3m - 2\sqrt{m} - 1 = 0 \to m - 2\sqrt{m} - 3 = 0 \to (\sqrt{m}-3)(\sqrt{m}+1) = 0$

$\alpha+\beta = 3m$ ، $\alpha\beta = m$

$\sqrt{m} = 1 \to 2x^2 - x - 1 = 0 \to \frac{c}{a} = -\frac{1}{2}$

$\sqrt{m} = -\frac{1}{3}$ ✗

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$x = 1, \frac{m}{2} \to a+b+c = 0$ چون

$\frac{m}{2} = \frac{\sqrt{\Delta}}{|2a|} = \frac{3}{4} \to \frac{m = \sqrt{m^2 - 4m + 4}}{4} = \frac{m|m-4|}{4} = \frac{3}{4} \to m|m-4| = 3$

۱) $m \geq 4 \to m^2 - 4m - 3 = 0 \to m = 3, 1$

$m=3 \to y = x^2 + x + 1 \to x_s = \frac{-1}{2}$

$m=1 \to y = x^2 - 3x + 1 \to x = \frac{3}{2}$

۲) $m < 4 \to m^2 - 4m + 3 = 0$ ✗

چون $\Delta < 0$ است

۶

$\frac{-\Delta}{4a} = \frac{9-12a^2}{4a} = \frac{V}{4} \rightarrow 18 - 8a^2 = Va \rightarrow 8a^2 + Va - 18 = 0 \rightarrow \Delta = 529$

$a = \frac{-V \pm 23}{16} \rightarrow \frac{18}{16}$ ← min ماکزیمم

-2 ← max مینیمم

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$m = \frac{\sqrt{\Delta}}{11} = \frac{3}{4} \rightarrow \sqrt{\Delta} = 3 \rightarrow m(m-2) = 3 \rightarrow m^2 - 2m - 3 = 0 \rightarrow m = 3, -1$

$\Delta = m^2 + 12m - 8m = m^2 + 4m$ $\quad m=3 \rightarrow x_S = \frac{-b}{2a} = \frac{m}{2} = \frac{3}{2}$

$m=-1 \rightarrow x_S = \frac{m}{2} = \frac{-1}{2}$

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$x_S = \frac{-a}{-2a} = \frac{1}{2} \rightarrow 2b\left(\frac{1}{2}\right) - b\left(\frac{1}{2}\right) - 1 = -1 \rightarrow -1 = \underbrace{\frac{1}{4}a + \frac{1}{2}a}_{\frac{1}{4}a} + 2 \rightarrow \frac{1}{4}a = -3 \rightarrow a = -12$

$2 + 12x - 12x^2 = y$

$x_S = \frac{b}{2b} = \frac{1}{4} \rightarrow 11\left(\frac{1}{11}\right) - 11\left(\frac{1}{4}\right) + 2 = \frac{3}{2} - 1 = \frac{1}{2}$

$\frac{-1}{4} = 2b\left(\frac{1}{11}\right) - b\left(\frac{1}{4}\right) - 1 \Rightarrow \frac{3}{11} = \frac{-b}{22} \rightarrow -b = 6 \quad b = -6$

$b - a = -6 - 12 = 6$

$\frac{b}{8} - \frac{b}{4} = \frac{b}{8}$

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$B = 0 \rightarrow \alpha < 0$

$\delta \begin{cases} \frac{-b}{2a} = \frac{-3}{100\alpha} > 0 \\ \frac{-\Delta}{2a} = \frac{-16}{100\alpha} > 0 \end{cases}$ ← ناحیه اول

۱۰

$S = \frac{-b}{a} = \alpha + b = 12 = a + b \quad P = \frac{c}{a} = \alpha + b - 1 = ab \rightarrow a + b = ab + 1$

$(a+b)^2 - 2ab - 12 = ab + 1 \rightarrow a^2 + b^2 + 2ab + 1 - 2ab - 12 = ab + 2$

$a^2 + b^2 - ab - 12 = (ab - 4)(ab + 3) = 0$

$ab = 4 \quad ab = -3$ ← اعداد طبیعی

$a + b = ab + 1$

$a + b = 4 + 1 = 5$