نام و نام خانوادگی ......امیر پناه شمس...... پاسخنامه تشریحی تکلیف شماره ...۲۳... کلاس ...دهم ... شنبه ...

۱

$y = a(x-h)^2 + k$

$y = a(x+1)^2 + 9$

$(3,1)$

$1 = a(3+1)^2 + 9$

$1 = 16a + 9 \qquad -8 = 16a \qquad a = -\frac{1}{2}$

$y = -\frac{1}{2}(x+1)^2 + 9 \qquad y = -\frac{1}{2}(x^2+2x+1)+9$

$y = -\frac{1}{2}x^2 - x - \frac{1}{2} + 9$

$\boxed{y = -\frac{1}{2}x^2 - x + \frac{17}{2}}$

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$S = -\frac{b}{a} = -\frac{m}{2} > 0 \Rightarrow m < 0$

$P = \frac{c}{a} = \frac{m+6}{2} > 0 \Rightarrow m > -6$

$\Delta = b^2 - 4ac$

$m^2 - 4(2)(m+6) = m^2 - 8m - 48 > 0$

$(m-12)(m+4) > 0$

$m > 12$ یا $m < -4$

$-6 < m < -4$

$\boxed{(-6, -4)}$

۳

$\alpha + \beta = \frac{1}{\alpha\beta} \rightarrow \frac{-(2m-1)}{3} = \frac{3}{2-m} \rightarrow -4m + 2m^2 + 2 - m = 9 \rightarrow 2m^2 - 5m - 7 = 0$

$\frac{+5 \pm \sqrt{25 - 4(2)(-7)}}{4} = \boxed{\frac{7}{2}}$ ✓ ، -1 ✗

$m = \frac{7}{2}$

$m = -1$

$\Delta > 0$ جایگذاری

$(2m-1)^2 - 4(2-m) \times 3 > 0$

۴

$x^2 - x - 4 = 0$

$S = 1$

$P = -4$

$\alpha + \beta = (x_1+x_2)^3 - 3x_1x_2(x_1+x_2) + \frac{x_1+x_2}{x_1x_2}$

$= 1^3 - 3(-4)\times 1 - \frac{1}{4} = \frac{51}{4}$ (12)

$\alpha\beta = (x_1x_2)^3 + (x_1+x_2)^2 - 2x_1x_2 + \frac{1}{x_1x_2}$

$= -64 + 1 + 8 - \frac{1}{4} = -\frac{221}{4}$

$x^2 - \frac{51}{4}x - \frac{221}{4} = 0$

$\boxed{4x^2 - 51x - 221 = 0}$

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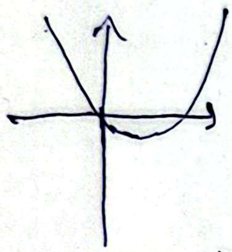
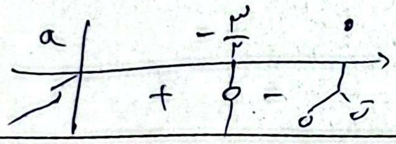
$\left(\frac{\sqrt[3]{x^4} + 1 + \sqrt[3]{x^2}}{\sqrt[3]{x^2}}\right)\left(\frac{\sqrt[3]{x^2} - 1}{1}\right) = 2\sqrt[3]{x}$

$x^2 - 1 = 2x \qquad x^2 - 2x - 1 = 0$

$x_1 + x_2 = -\frac{b}{a} = -(-2) = \boxed{2}$

امیررضا خوردنی

$\alpha=3\beta$ $\alpha\beta=\frac{4}{3} \Rightarrow 3\beta^2=\frac{4}{3} \Rightarrow \beta^2=\frac{4}{9} \Rightarrow \begin{cases}\beta=\frac{2}{3}\Rightarrow \alpha=2 \Rightarrow \alpha+\beta=\frac{8}{3}\\ \beta=\frac{-2}{3}\Rightarrow \alpha=-2\Rightarrow \alpha+\beta=-\frac{8}{3}\end{cases}$ $\alpha+\beta=\frac{a}{3} \to a=3(\alpha+\beta)=\pm 8 \Rightarrow \lvert a_1-a_2 \rvert=16$	۶
 U رو به بالا $\Rightarrow a>0$ ریشه غیر صفر $>0 \Rightarrow x=-\frac{2a+3}{a}>0 \Rightarrow -\frac{3}{2}<a<0$ $\delta>0 \to \frac{-3-2a}{a}>0 \Rightarrow \frac{3+2a}{a}<0$  $\emptyset$ هیچ مقدار	۷
$\frac{2}{-1}=\frac{-a}{1} \Rightarrow a=2$ $\qquad a\times b=2\times 4=\boxed{8}$ $y=x^2+2x-2=1 \Rightarrow x^2+2x-3=0 \quad \begin{cases}x=1\\ x=-3\end{cases}$ $(x+3)(x-1)=0$ $y=-(x-1)(x+3)+1=-x^2+2x+4 \Rightarrow b=4$	۸
$\alpha+\beta=\alpha'+\beta'+1 \Rightarrow \frac{a}{2}=\frac{-a}{2a}+1=\frac{1}{2} \Rightarrow a=1$ $\Rightarrow 2x^2+x-6=0 \Rightarrow \alpha',\beta'=-2,\frac{3}{2} \Rightarrow \alpha,\beta=-\frac{3}{2},2 \Rightarrow \frac{b}{2}$ $=\alpha\beta=-3 \Rightarrow b=-6$ $\left[\frac{ab}{4}\right]=\left[\frac{-6}{4}\right]=\boxed{-2}$	۹
$x^2+6x+m=0 \begin{cases}\alpha\\ \beta\end{cases}$ (مشترک) $\to S=\alpha+\beta=-6$ $x^2+2x-3m=0 \begin{cases}\alpha\\ \beta'\end{cases} \Rightarrow S'=\alpha+\beta'=-2$ $\left.\begin{matrix}\alpha+\beta=-6\\ \alpha+\beta'=-2\end{matrix}\right\rbrace \beta'-\beta=$ $\Rightarrow \beta'-\beta=\boxed{4}$	۱۰