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نام و نام خانوادگی ......سینا محمدیان...... پاسخنامه تشریحی تکلیف شماره ..۲۲.. کلاس ......دهم ریاضی A......

$\frac{-b}{2a} = -1 \Rightarrow b = 2a \Rightarrow ax^2 + 2ax + c \Rightarrow \left\|^{-1}_{9}\right. \Rightarrow a - 2a + c = 9$ $\left\|^{3}_{1}\right. \Rightarrow 9a + 6a + c = 1$ $\Rightarrow a = -\frac{1}{2},\ b = -1,\ c = \frac{17}{2} \Rightarrow y = -\frac{1}{2}x^2 - x + \frac{17}{2}$ ✓	۲	۱
$\Delta, P, S > 0 \} \Delta > 0 \Rightarrow m^2 - 8m - 48 > 0$ $\frac{-4 \quad 12}{+ \ \| - \ \| +}$ $m = \mathbb{R} - [-4, 12]$ * $S > 0 \Rightarrow \frac{-m}{4} > 0 \Rightarrow m < 0$ * $P > 0 \Rightarrow \frac{m+6}{2} > 0 \Rightarrow m > -6$ * اشتراک * ها $\Rightarrow m = (-6, -4)$ ✓	۲	۲
$\alpha + \beta = \frac{1}{\alpha\beta} \Rightarrow \frac{1-2m}{3} = \frac{3}{2-m} \Rightarrow 2m^2 - 5m + 2 = 9 \Rightarrow 2m^2 - 5m - 7 = 0$ $\Rightarrow m = \begin{cases} -1 \rightarrow \Delta < 0 \Rightarrow \text{غ ق ق} \\ \frac{7}{2} \leftarrow \text{پاسخ} \end{cases}$ ✓	۲	۳
$x^2 - x - 4 = 0 \Rightarrow S = 1 \quad P = -4$ | $S' = x_1^3 + x_2^3 + \frac{1}{x_1} + \frac{1}{x_2} = x_1^3 + x_2^3 + \frac{x_1 + x_2}{x_1 x_2}$ $S' = S^3 - 3SP + \frac{S}{P} = 1 + 12 - \frac{1}{4} = \frac{51}{4}$ | $P' = \left(x_2^3 + \frac{1}{x_1}\right)\left(x_1^3 + \frac{1}{x_2}\right) = (x_1 x_2)^3 + \frac{1}{x_1 x_2} + x_2^2 + x_1^2$ $= P^3 + \frac{1}{P} + S^2 - 2P = -64 - \frac{1}{4} + 1 + 8 = -\frac{221}{4}$ $\Rightarrow x^2 - S'x + P' = \Rightarrow y = x^2 - \frac{51}{4}x - \frac{221}{4}$ ✓ ← پاسخ	۲	۴
$\sqrt[3]{x} = t \Rightarrow \left(t^2 + \frac{1}{t^2} + 1\right)\left(t^2 - 1\right) = 2t \Rightarrow t^4 - \frac{1}{t^2} = 2t \Rightarrow t^6 - 1 = 2t^3 \Rightarrow t^6 - 2t^3 - 1 = 0$ $\Rightarrow t^3 = \begin{cases} 1 + \sqrt{2} \\ 1 - \sqrt{2} \end{cases} \Rightarrow t^3 = (\sqrt[3]{x})^3 = x \Rightarrow x = \begin{cases} 1 + \sqrt{2} \\ 1 - \sqrt{2} \end{cases}$ $x_1 + x_2 = 1 + \sqrt{2} + 1 - \sqrt{2} = 2$ ✓	۲	۵

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۶ (۲)

$x_1=\alpha \quad x_2=3\alpha \Rightarrow P=\frac{c}{a}=\frac{4}{3}=3\alpha^2 \Rightarrow \alpha^2=\frac{4}{9} \Rightarrow \alpha=\pm\frac{2}{3}$

$S=\frac{-b}{a}=\frac{a}{3}=4\alpha \Rightarrow a=12\alpha \Rightarrow a=\begin{cases}+8\\-8\end{cases}$

$8-(-8)=\boxed{16}$ ✓

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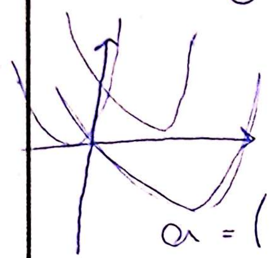
۷ (۲)

$a=0 \Rightarrow y=3x$ غ ق ق $\Rightarrow \boxed{a\neq 0}$ $\quad \boxed{a>0}$



$S\geq 0 \Rightarrow \frac{-3-2a}{a}\geq 0 \Rightarrow$ $-\frac{3}{2}$, 0 : $-\ |\ +\ |\ -$ $\Rightarrow -\frac{3}{2}\leq a<0$

$a=(0,+\infty)\cap[-\frac{3}{2},0]=\emptyset$ هیچ مقدار ✓

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۸ (۲)

$-\frac{b}{2a}=\frac{2}{-2}=\frac{-a}{2} \Rightarrow a=2$

در عرض ۱ مشترک اند $\Rightarrow$ $\begin{cases}-x^2-2x+b=1\\x^2+2x-2=1\end{cases}$

$b-2=2 \Rightarrow b=4$

$\Rightarrow ab=2\times 4=\boxed{8}$ ✓

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۹ (۲)

$2ax^2+ax-6=0 \quad \alpha+\beta=\frac{-a}{2a}=-\frac{1}{2}$

$\begin{cases}2x^2-ax+b=0\\(\alpha+\frac{1}{2})+(\beta+\frac{1}{2})=\alpha+\beta+1=-\frac{1}{2}+1=\frac{1}{2}=\frac{a}{2}\end{cases}$ $\quad \boxed{a=1}$

$\frac{c}{a}=\frac{-6}{2}=-3=\alpha\beta$

$(\alpha+\frac{1}{2})(\beta+\frac{1}{2})=\alpha\beta+\frac{1}{4}+\frac{\alpha+\beta}{2}$

$-3+\frac{1}{4}-\frac{1}{4}=-3 \Rightarrow -3=\frac{b}{2} \Rightarrow b=-6$

$\boxed{a=1,\ b=-6}$ $\quad [\frac{ab}{4}]=[\frac{-6}{4}]=\boxed{-2}$ ✓

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۱۰ (۲)

$x^2+2x-3m=0 \Rightarrow x=\begin{cases}w\\y\end{cases}$ $\quad w+y=-2$ ☆

$x^2+6x+m=0 \Rightarrow x=\begin{cases}z\\y\end{cases}$ $\quad z+y=-6$ ☆

☆ $\Rightarrow |(w+y)-(z+y)|=|w-z|$

$\Rightarrow |-2-(-6)|=\boxed{4}$ ✓