نام و نام خانوادگی .... پاسخنامه تشریحی تکلیف شماره ..۱۱.. کلاس ....

۱

$y = a(x+1)^2 + 9 \rightarrow 1 = a(\underbrace{3+1}_{16})^2 + 9 \Rightarrow a = -\frac{1}{2}$

$y = -\frac{1}{2}(x+1)^2 + 9 = -\frac{1}{2}x^2 - x + \frac{17}{2}$

۲

① $\Delta > 0 \Rightarrow m^2 - 8(m+6) > 0 \qquad m^2 - 8m - 48 > 0$

② $P > 0 \quad \frac{m+6}{2} > 0 \Rightarrow m > -6 \qquad (m-12)(m+4) > 0$

③ $S > 0 \quad \frac{-m}{2} > 0 \Rightarrow m < 0$

	-4		12	
$+$	0	$-$	0	$+$

$(-6, -4)$

۳

$\Delta > 0 \Rightarrow 4m^2 - 4m + 1 - 24 + 12m > 0 \Rightarrow 4m^2 + 8m - 23 > 0$

$S = \frac{-b}{a} = \frac{1-2m}{3}$

$P = \frac{c}{a} = \frac{2-m}{3}$

$\frac{1-2m}{3} = \frac{3}{2-m} \Rightarrow 2 - 4m - m + 2m^2 = 9$

$2m^2 - 5m - 7 = 0 \rightarrow m = \frac{5+\sqrt{81}}{4} = \boxed{3/5}$

$\rightarrow m = \frac{5-\sqrt{81}}{4} = -1$ ✗ غ ق ق

۴

$x^2 - x - 4 = 0 \Rightarrow S = 1 \quad P = -4$

$S' = \alpha^3 + \frac{1}{\alpha} + \beta^3 + \frac{1}{\beta} = \frac{\alpha^4\beta + \beta + \alpha\beta^4 + \alpha}{\alpha\beta} = \frac{S + P(\alpha^3+\beta^3)}{P} = \frac{-51}{-4}$

$P' = \left(\alpha^3 + \frac{1}{\alpha}\right)\left(\beta^3 + \frac{1}{\beta}\right) = \alpha^3\beta^3 + \frac{\alpha^3}{\beta} + \frac{\beta^3}{\alpha} + \frac{1}{\alpha\beta} = -64 + \frac{1}{-4} + \frac{\alpha\beta(\alpha^2+\beta^2)^2}{\alpha\beta}$

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

۵

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

$t^2 + 1 + t - t - \frac{1}{t} - 1 = 2\sqrt{t} \Rightarrow t^2 - \frac{1}{t} = 2\sqrt{t}$

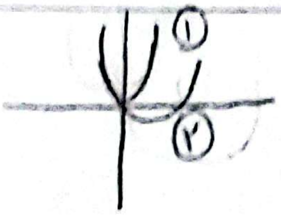
$t^3 - 1 = 2t\sqrt{t} \Rightarrow x^2 - 1 = 2\sqrt[3]{x^2}\left(\sqrt[3]{x}\right) = 2x$

$x^2 - 2x - 1 = 0 \qquad S = \frac{-b}{a} = \frac{2}{1} = 2$

$S = 3\beta + \beta = 4\beta = \frac{-(-a)}{3} \Rightarrow \pm\frac{8}{3} = \frac{a}{3} \Rightarrow \boxed{\begin{matrix} a = 8 \\ a = -8 \end{matrix}}$

$P = 3\beta \times \beta = \frac{4}{3} \Rightarrow \beta^2 = \frac{4}{9} \Rightarrow \beta = \pm\frac{2}{3}$ ۶

$8 - (-8) = \boxed{16}$



① $\Delta = 0 \quad 9 + 12a + 4a^2 - 4a^2 = 0 \quad 12a < -9$

$a > 0$ $\quad \varnothing$

② $S > 0 \quad \frac{-3-2a}{a} > 0 \quad \frac{-3}{2} \quad 0 \quad + \; + \; -$ ۷

$a > 0$ $\quad \varnothing$

برازای هیچ عددی

طول نقطه تقاطع $\rightarrow \frac{-b}{2a} \qquad \frac{-a}{2} = \frac{2}{-2} \Rightarrow a = 2$

$1 = x^2 + 2x - 2 \Rightarrow x^2 + 2x - 3 = 0 \Rightarrow x = -3, \; 1$ ۸

$1 = -x^2 - 2x + b = \begin{cases} -9 + 6 + b = 1 \Rightarrow b = 4 \\ -1 - 2 + b = 1 \Rightarrow b = 4 \end{cases} \qquad \boxed{4 \times 2 = 8}$

$S_1 = \frac{a}{2} \qquad S_2 = \frac{-a}{2a} \qquad S_1 - 1 = S_2 \Rightarrow \frac{a}{2} - 1 = \frac{-1}{2} \Rightarrow a = 1$

$2x^2 + x - 6 = 0 \quad P_2 = x_1 \times x_2 = -3$ ۹

$P_1 = \frac{b}{2} = (x_1 + 0.5)(x_2 + 0.5) = \underbrace{x_1 x_2}_{-3} + 0.5\underbrace{(x_1 + x_2)}_{-\frac{1}{2}} + \frac{1}{4} = -3 \Rightarrow b = -6$

$\boxed{\left[\frac{ab}{4}\right] = \left[\frac{-6 \times 1}{4}\right] = -2}$

$S_1 = \alpha_1 + \beta_1 = \frac{-6}{1} = -6 \qquad S_2 = \alpha_2 + \beta_2 = \frac{-2}{1} = -2$

$\alpha_1 = \alpha_2 \Rightarrow \alpha_1 + \beta_1 - (\alpha_2 + \beta_2) = -6 - (-2)$ ۱۰

$\beta_1 - \beta_2 = -4$

$\boxed{|\beta_1 - \beta_2| = 4}$ چهار واحد اختلاف دارند