نام و نام خانوادگی ......پارمیس عباسیان...... پاسخنامه تشریحی تکلیف شماره ۱۳...... کلاس ......یازدهم ریاضی......

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ردیف	پاسخ	نمره
۱	$y=(a-1)^2x^2+x+3 \to y=-\frac{1}{4}x^2+x+3$ $-\frac{b}{2a}=2 \Rightarrow \frac{-1}{2a-2} \to 2 \to 4a=3 \to a=\frac{3}{4}$ $y=-\frac{1}{4}x^2+x+3 \Rightarrow x^2-4x-12 \Rightarrow (x-6)(x+2)$ 6 ، -2 α	۲
۲	I $\to x<0$ مختلف‌العلامت $\Delta=b^2-4ac=25-4x^2>0 \to (5-2x)(5+2x)>0$ بین $\left[\frac{5}{2},-\frac{5}{2}\right]$ II $x\in\left(-\frac{5}{2},\frac{5}{2}\right)$ $I\cap II \to \left(-\frac{5}{2},0\right)$	۲
۳	$\alpha=\frac{3-\sqrt{5}}{3} \to \alpha+\beta=\frac{3-\sqrt{5}+3+\sqrt{5}}{3}=2$ $\beta=\frac{3+\sqrt{5}}{3} \to \alpha\beta=\frac{3-\sqrt{5}}{3}\times\frac{3+\sqrt{5}}{3}=\frac{9-5}{9}=\frac{4}{9}$ $x^2-Sx+P \to x^2-2x+\frac{4}{9} \to 9x^2-18x+4$	۲
۴	$3\alpha^2+\beta^2=12 \to 2\alpha^2+2\beta^2+\alpha^2-\beta^2=12 \to 2(\alpha^2+\beta^2)+(\alpha+\beta)(\alpha-\beta)$ ، S^2-2P $2(16-m-2)+4\left(\frac{\sqrt{\Delta}}{\lvert a\rvert}\right)=12$ $28-2m+4\left(\frac{\sqrt{48-8m-16}}{2}\right)=12 \to 28-2m+2\sqrt{48-8m}=12$ $2\sqrt{48-8m}=-16+2m \to 192-32m=256+4m^2-64m \to 4m^2-32m+64=0$ $m^2-8m+16=0 \to (m-4)^2=0 \to m=4$	۲
۵	$12 \to \frac{-b}{2a}=2 \to -b=4a \quad b=-4a$ $y=a(x-h)^2+k \to 5=a(0-2)^2+9 \to a=-1$ $y=-x^2+4x+5 \to \Delta>0 \to y=(x-5)(x+1)=0$ ، 5 ، -1 $y=x^2-4x-5$ ، $-1 \quad 5$: $+ \mid - \mid +$ $\Rightarrow \Delta<0 \to (-1,5)$	۲

$\alpha x^2 - 7x + 9\beta > 0 \quad \beta > 0$ $\rightarrow \alpha(\alpha^2) - 7\alpha + 9\beta = 0 \rightarrow \alpha^3 - 7\alpha + 9\beta = 0 \rightarrow \alpha^3 - 9\alpha = 0$ $\alpha(\alpha^2 - 9) = 0 \rightarrow \alpha > 0 \rightarrow \alpha = \pm 3 \rightarrow 3 \checkmark$ $\alpha\beta^2 - 7\beta + 9\beta = 0 \rightarrow \beta^2\alpha + 2\beta = 0 \quad \beta(\beta\alpha + 2) = 0 \rightarrow \alpha\beta = -2$ $\frac{9\beta}{\alpha} \rightarrow 9\beta = -2\alpha \quad \beta > 0 \quad \alpha < 0 \rightarrow \alpha = -3 \quad \frac{1}{\beta} + \frac{1}{\alpha} = \frac{S}{P} = \frac{7}{9}$	(۲)	۶
$x^2 + mx - 2m = 0 \quad \alpha^2 = 2m - m\alpha$ $\alpha^2 - m\beta = 8 \rightarrow 2m - m\alpha - m\beta = 8 \rightarrow 2m - m(\alpha+\beta) = 8$ $m^2 + 2m - 8 = 0 \quad (m+4)(m-2) = 0$ $\rightarrow m = -4 \rightarrow x^2 - 4x + 8 \rightarrow 16 - 4(8) < 0$ ✗ $\rightarrow m = 2 \rightarrow x^2 + 2x - 4 = 0 \rightarrow 4 - (4)(-4) > 0 \checkmark$ $x^2 + 2x + 4 = 0 \quad \frac{-b}{a} = -2 \rightarrow \alpha + \beta = -2$	(۲)	۷
$y = mx^2 + 4x + \frac{m}{2} + 7 \rightarrow m(\frac{m}{2} + 7) = \frac{m^2}{2} + 7m$ $\frac{-\Delta}{4a} = 8 \quad \frac{16 - 2m^2 - 28m}{-4m} = 8 \rightarrow -2m^2 - 28m + 16 = -32m$ $-2m^2 + 4m + 16 = 0$ $m^2 - 4m - 32 \rightarrow (m-8)(m+4) \rightarrow -4 \checkmark$ (4a) $y = -2x^2 + 4x + 6 \rightarrow (x-3)(x+1) \rightarrow k = 3$	(۲)	۸
$S = \{2, 6\} \rightarrow y = a(x-h)^2 + k \rightarrow 2 = a(-2)^2 + 6 \rightarrow 4a = -2 \quad a = -\frac{1}{2}$ $y = -\frac{1}{2}(x-2)^2 + 6 \rightarrow y = -\frac{1}{2}x^2 + 2x + 4$ $A = [4$ $\Delta > 0 \rightarrow 4 - 4(-\frac{1}{2} \times 4) = 12 \quad x_1 = \frac{-2 + 2\sqrt{3}}{-1} = 2 + 2\sqrt{3} \quad x_2 = \frac{-2 - 2\sqrt{3}}{-1} = 2 - 2\sqrt{3}$ $\frac{1}{2+2\sqrt{3}} + \frac{1}{2-2\sqrt{3}} \rightarrow \frac{2 - 2\sqrt{3} + 2 + 2\sqrt{3}}{4 - 12} = \frac{4}{-8} = \frac{-1}{2}$	(۲)	۹
$x = 2$ $4 - (4a+4)2 + (3a^2 + 6a + 3) = 0 \rightarrow 4 - 8a - 8 + 3a^2 + 6a + 2 = 0$ $3a^2 - 2a - 1 = 0 \rightarrow a^2 - 2a - 3 = 0 \quad (a+1)(a-3) = 0 \rightarrow = 1, \; = -\frac{1}{3}$ $a = 1 \rightarrow x^2 - 8x + 12 \quad (x-2)(x-6) \rightarrow 2, 6$ $a = -\frac{1}{3} \rightarrow x^2 - \frac{8}{3}x + \frac{4}{3} \rightarrow 3x^2 - 8x + 4 = 0 \quad x^2 - 8x + 12 = (3x-2)(x-2)$ $x \in \{\frac{2}{3}, 2, 6\}$	(۲) (۲)	۱۰