نام و نام خانوادگی ......مینا پروین...... پاسخنامه تشریحی تکلیف شماره ...... کلاس ......یازدهم ریاضی B......

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$y=(a-1)x^{2}+x+3$, $x=2$

$\frac{-b}{2a}=\frac{-1}{2a-2}=2 \to 4a-4=-1 \to 4a=3 \to a=\frac{3}{4} \to -\frac{1}{4}x^{2}+x+3=0$

$x^{2}-4x-12=0 \to (x-6)(x+2)=0 \to x=-2 , 6 \to x=6$

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$f(x)=mx^{2}-5x+m$

x		x_1		x_2	
$f(x)$	$-$	0	$+$	0	$-$

$\to m<0$ ①

$\Delta>0 \to 25-4m^{2}>0 \to -\frac{5}{2}<m<\frac{5}{2}$ ②

① $\cap$ ② $= -\frac{5}{2}<m<0$

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$\frac{3-\sqrt{5}}{3}$, $\frac{3+\sqrt{5}}{3} \to S=\frac{3-\sqrt{5}+3+\sqrt{5}}{3}=2$, $P=\frac{(3-\sqrt{5})(3+\sqrt{5})}{9}=\frac{9-5}{9}=\frac{4}{9}$

$x^{2}-Sx+P=0 \to (x^{2}-2x+\frac{4}{9}=0)\times 9 \to 9x^{2}-18x+4=0$

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$2x^{2}-8x+m+2=0$ $\quad \alpha<\beta$, $3\alpha^{2}+\beta^{2}=12 \to 2\alpha^{2}+\alpha^{2}+2\beta^{2}-\beta^{2}=12$

$2(\alpha^{2}+\beta^{2})+(\alpha^{2}-\beta^{2})=12 \to 2(S^{2}-2P)+\left(S\left(\frac{-\sqrt{\Delta}}{|a|}\right)\right)=12$

$\alpha-\beta<0$

$28-2m-4\sqrt{12-2m}=12 \to (8-m=2\sqrt{12-2m})^{2} \to m^{2}-16m+64=48-8m \to$

$m^{2}-8m+16=0 \to m=4$

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$S(2,9) \to c=5$ $\quad \frac{-b}{2a}=2 \to 4a=-b \to \frac{-\Delta}{4a}=9 \to a^{2}+a=0$

$a(a+1)=0 \to a=0$ (غ ق ق ← سهمی نیست) $, -1 \to a=-1 \to b=4 \to -x^{2}+4x+5=0$

$(x-5)(x+1)=0$

	-1		5	
$-$	0	$+$	0	$-$

$\to$ در بازه $(-1,5)$ در بالای محور xها است

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$qx^2 - 4x + q\beta = 0 \rightarrow S = \frac{4}{q} \Rightarrow q + \beta = \frac{4}{q}$, $q\beta = \frac{q\beta}{q} \rightarrow q^2 = q$

$q = 1$

$\alpha = 1 \rightarrow \beta = \frac{-1}{1}\alpha$ $\Big\}$ $\frac{1}{\alpha} + \frac{1}{\beta} = -\frac{1}{1^2} + \frac{1^2}{1} = \frac{4}{q}$

$\alpha = -1 \rightarrow \beta = \frac{1}{1^2}$ ✓

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$x^2 + mx - 1m + 0$ $\quad$ $\alpha^2 - m\beta = 1 \rightarrow \alpha \rightarrow \alpha^2 + \alpha m - 1m = 0$

$\alpha^2 = 1m - \alpha m$

$m\beta + 1 = 1m - \alpha m \rightarrow \underline{\alpha m + m\beta} = 1m - 1 \rightarrow m(\alpha + \beta) = 1m - 1$

$-m$

$-m^2 = 1m - 1 \rightarrow m^2 + 1m - 1 = 0 \rightarrow m = 1, -4$

$\Delta > 0$ $\quad$ $m = 1 \rightarrow S = -1$

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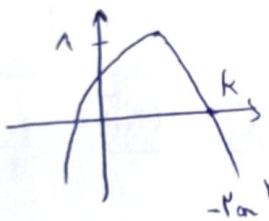

$f(\alpha) = -m\alpha^2 + 4\alpha + \frac{m}{1} + 4 \rightarrow \frac{-\Delta}{4a} = 1 \rightarrow \frac{m^2 + 14m - 1}{4m} = 4$

$m^2 - 1m - 1 = 0 \rightarrow m \rightarrow m = 4 \rightarrow m < 0$ ✗

$\rightarrow m = -1 \rightarrow m < 0$ ✓

$-1\alpha^2 + 4\alpha + 4 \rightarrow \alpha^2 - 1\alpha - 3 = f(\alpha) \rightarrow (\alpha - 3)(\alpha + 1) \rightarrow \begin{matrix} \alpha = 3 \\ \alpha = -1 \end{matrix} \Big\} K > 0$

$\alpha = 3 \rightarrow K > 0 \rightarrow K = 3$

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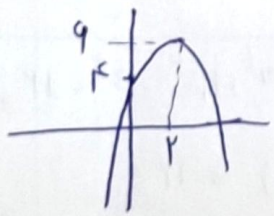

$\rightarrow c = 4$, $\frac{-b}{4a} = 1 \rightarrow 4a = -b$, $\frac{-\Delta}{4a} = 4 \rightarrow a = -\frac{1}{1}$, $b = 1$

$-\frac{1}{1}\alpha^2 + 1\alpha + 4 = f(\alpha) \rightarrow \frac{1}{\alpha} + \frac{1}{\beta} = \frac{\alpha + \beta}{\alpha\beta} = \frac{-1}{1}$

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$a^2 - (4a + 4)\alpha + (3a^2 + 6a + 3) = 0 \rightarrow \alpha = 1$ ~~$= 3$~~ $\quad 3a^2 - 1a - 1 = 0 \rightarrow a = 1, -\frac{1}{3}$

$a = 1 \rightarrow x^2 - 8x + 12 = 0 \rightarrow (x - 1)(x - 6) \rightarrow x = 6, 1$

$a = -\frac{1}{3} \rightarrow x^2 - \frac{8}{3}x + \frac{5}{3} = 0 \rightarrow (x - 1)(x - \frac{5}{3}) \rightarrow x = \frac{5}{3}, 1$

$\Delta > 0 \rightarrow (4a + 4)^2 - 4(3a^2 + 6a + 3) = 16a^2 + 32a + 16 - 12a^2 - 24a - 12 =$

$4a^2 - 8a + 4 \rightarrow a^2 - 2a + 1 = (a - 1)^2 = 0 \rightarrow a \neq 1$ $\quad x = 6, \frac{5}{3}$