نام و نام خانوادگی ...آرین محبت... پاسخنامه تشریحی تکلیف شماره ...۱۲... کلاس ...یازدهم ریاضی B...

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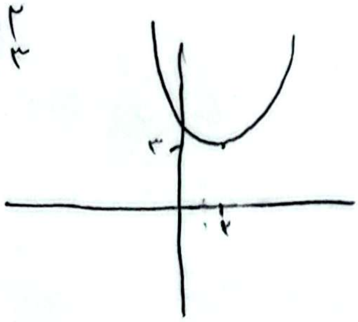
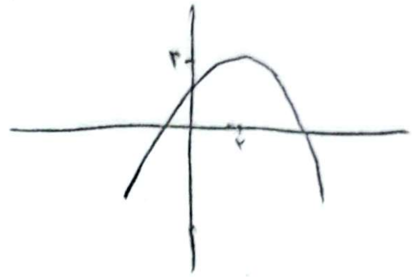
الف) $\max x \,|\, \frac{3}{2}$



ب) $\min x \,|\, \frac{3}{2}$



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الف) $2x^2+(m+1)x+\frac{1}{2}m+2=0 \xrightarrow{\Delta>0} (m+1)^2-4m-16>0 \to m^2-2m-15>0$

$\to (m-5)(m+3)>0 \to m\in \mathbb{R}-[-3,5]$

ب) $\xrightarrow{\Delta=0} m^2-2m-15=0 \longrightarrow m=\{-3,5\}$

ج) $\xrightarrow{\Delta<0} m^2-2m-15<0 \longrightarrow (m-5)(m+3)<0 \to m\in(-3,5)$

د) $\xrightarrow{\Delta\geq 0} (m-5)(m+3)\geq 0 \longrightarrow m\in \mathbb{R}-(-3,5)$

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الف) $S<0 \longrightarrow \frac{2m+2}{m-2}<0 \longrightarrow$ (-1 ، 2 : $+\ -\ +$) $-1<m<2$ I

$P>0 \longrightarrow \frac{10}{m-2}>0 \longrightarrow m>2$ II $\Rightarrow$ I $\cap$ II $=\varnothing$

ب) $S<0 \longrightarrow \frac{2m+2}{m-2}<0 \longrightarrow -1<m<2$ $P<0 \to m<2$

$\xrightarrow{P<0} \Delta>0$ I $\cap$ II $\Rightarrow m=(-1,2)$

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الف) $P<0 \to \frac{10}{m-2}<0 \longrightarrow m<2$ I $\Delta>0 \to x^2-8x+21>0$ $\longrightarrow \mathbb{R}$ II

I $\cap$ II $\Rightarrow m<2$

ب) $\frac{-b}{2a}=-2 \longrightarrow \frac{-2m-2}{2m-4}=2 \longrightarrow -2m-2=4m-8 \to 6m=6$

$\longrightarrow m=1$

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ریشه مضاعف $\to$ $\Delta\geq 0 \longrightarrow 4\sin^2\alpha-4\geq 0 \longrightarrow \sin^2\alpha\geq 1 \Rightarrow \sin\alpha=\pm 1$

$S>0 \to \frac{2\sin\alpha}{\frac{2}{3}}>0 \to \sin\alpha=1$ $4x^2-12x+9=0$

$\Rightarrow (2x-3)^2=0 \Rightarrow x=\frac{3}{2}$

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$y = \frac{(x+1)(2x+1)(x+1)(2x-5)}{-(x+1)(x-1)} = -(2x+1)(2x-5) = -(4x^2-10x+2x-5)$

$\longleftrightarrow y = -4x^2+12x+5 \quad max = \frac{-\Delta}{4a} = -\frac{144+120}{-24} = \frac{264}{24}$

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$3S = 2P+7 \rightarrow \frac{2m+4}{m} = \frac{-10}{m}+7 \rightarrow 2m+4 = -10+7m$

$\rightarrow 5m = 14 \Rightarrow m = 4 \rightarrow 4x^2-4x-3 = 0$

$\alpha^2+\beta^2 = S^2-2P = \frac{36}{16}+1 = \frac{52}{16} = \frac{13}{4}$

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$\frac{2\alpha+\beta^2}{3\beta^2} \xrightarrow{\alpha^2\beta^2=4} \frac{\alpha^3\beta^2+\beta^4}{3\beta^2} = \frac{\alpha^3+\beta^3}{3} = \frac{S^3-3SP}{3} = \frac{12-30}{3}$

$= \frac{99}{3} = 19$

$\alpha\beta = 2 \Rightarrow \alpha^2\beta^2 = 4$

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$ax^2+bx+4 = 2x+10 \xrightarrow{x=2} 4a+2b = 10$

$ax^2+bx+4 = 2x+10 \xrightarrow{x=-3} 9a-3b = 0$ $\Big\} \rightarrow a = 1, \; b = 3$

$\Rightarrow x^2+3x+4 \rightarrow \frac{-b}{2a} = \frac{-3}{2}$

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$2x^2+(m+1)x+m+4 = x \rightarrow 2x^2+mx+(m+4) = 0$

$\xrightarrow{\Delta=0} m^2-8m-48 = 0 \rightarrow (m-12)(m+4) = 0$ $\Big\{$ $m = -4$ ✓ ; $m = 12$ ✗ غ ق ق

$\xrightarrow{m=-4} \frac{-b}{2a} = \frac{4}{4}$ ✓

$\xrightarrow{m=12} \frac{-b}{2a} = \frac{-16}{4}$ ✗