Subject: Date:

سارا عزیزی

(۱)

الف) min → $x=\frac{-b}{2a}=\frac{4}{4}=1$, $y=2(1)^2-4(1)+1=-1$ → $\begin{vmatrix}1\\-1\end{vmatrix}$

ب) max → $x=\frac{-b}{2a}=\frac{-3}{-4}=\frac{3}{4}$, $y=\frac{-\Delta}{4a}=\frac{-(9-40)}{-8}=\frac{-31}{8}$ → $\begin{vmatrix}\frac{3}{4}\\-\frac{31}{8}\end{vmatrix}$

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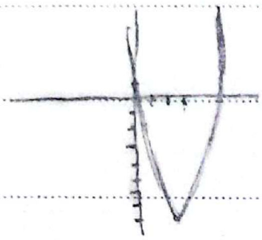
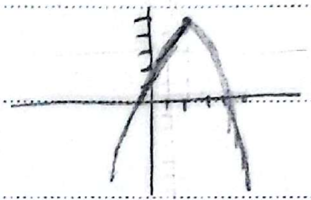
الف) ext $\begin{vmatrix}-\frac{b}{2a}=\frac{6}{2}=3\\ 9-18+1=-8\end{vmatrix}$

ب) ext $\begin{vmatrix}-\frac{b}{2a}=\frac{-4}{-2}=2\\ -4+8+1=5\end{vmatrix}$





(۳)

$\alpha\beta m=-\left(\frac{2}{4}\right)=\frac{1}{2} \rightarrow m=-\frac{1}{4}$

$2\beta+m\gamma=-\frac{k}{4} \rightarrow \frac{3}{4}=\frac{-k}{4} \rightarrow \boxed{k=-3}$

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$x^2-3mx+m=0$ $\quad (\sqrt{x_1}-\sqrt{x_2})^2=(1)^2 \rightarrow x_1+x_2-2\sqrt{x_1x_2}=1$

$S=\frac{-b}{a}=\frac{3m}{1}=3m \quad P=\frac{c}{a}=\frac{m}{1}=m$

$3m-2\sqrt{m}=1 \rightarrow 3m-2\sqrt{m}-1=0 \xrightarrow{\sqrt{m}=t} 3t^2-2t-1=0 \rightarrow t^2-2t-3=0$

$\rightarrow (t-3)(t+1)=0$: $t=\frac{3}{3}=1=\sqrt{m} \rightarrow m=1 \rightarrow 2x^2-x-1=0 \rightarrow \frac{c}{a}=\boxed{-\frac{1}{2}}$; $t=-\frac{1}{3}$ ×

$2m+1$

$2m+3$

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$2\,m-2+m=0$

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$y=2x^2-(m+2)x+m \to x=1, m \to S=\frac{1}{2}\left|m\left(\frac{m}{2}-1\right)\right|=\frac{3}{4}$

$\to |m(m-2)|=3 \to m=-1 \to \frac{m}{2}=-\frac{1}{2}$; $m=3 \to \frac{m}{2}=\frac{3}{2}$ $\to$ ext $\left|\frac{-b}{2a}=\frac{m}{2}=-\frac{1}{2}, \frac{3}{2}\right.$

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$y_{min}=\frac{7}{8}=\frac{-\Delta}{4a}=\frac{-(9-4a^2)}{4a}=\frac{4a^2-9}{4a}=\frac{7}{8} \to 8a^2-18=7a$

$\to 8a^2-7a-18=0 \to a^2-7a-144=0 \to (a-16)(a+9)=0 \to a=\frac{16}{8}=2 \times \; (a>0)$

$\to a=\frac{-9}{8}$ ✓ [illegible]

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فاصله ریشه ها $=\frac{\sqrt{\Delta}}{|a|}=\frac{\sqrt{b^2-4ac}}{|a|}=\sqrt{a^2+1+2a-4a}=2 \to a^2+1-2a=4$

$\to (a-1)^2=4 \to a-1=\pm 2 \to a=3$; $a=-1$

طول پاره خط $=\frac{\sqrt{\Delta}}{|a|}=\sqrt{9a^2+1+6a-4b}$; $a=-1 \to b=0 \to P=\frac{c}{a}=0$; $a=3 \to b=24 \to \frac{c}{a}=24$

$\to 0, -1 \to 1=$ اختلاف $\qquad \to 24, 3 \to 21=$ اختلاف

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رأس دو تابع ext $\left|\begin{array}{l}\frac{-b}{-2a}=\frac{1}{2} \\ \frac{a^2+8a}{4}\end{array}\right.$ رأس مشترک ext $\left|\begin{array}{l}\frac{-b}{4b}=\frac{1}{2} \\ \frac{-b-8}{8}\end{array}\right.$ $\to 2b\left(\frac{1}{4}\right)-b\left(\frac{1}{2}\right)-1=\frac{a}{4}+2 \to a=-12$

$\frac{-a}{16}+\frac{a}{4}+2=\frac{-b}{8}-1 \to b=-6$

$\to b-a=6$

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$\alpha\beta=\frac{\beta}{25\alpha} \to \alpha^2=\frac{1}{25} \to \alpha=\pm\frac{1}{5} \to \left(25\alpha\times\frac{1}{25}\right)+5\alpha+\beta=0$

$\to 5\alpha+\beta=0 \to \beta=-5\alpha \xrightarrow{\beta>\alpha} \alpha=-\frac{1}{5}, \beta=1 \to y=25\left(-\frac{1}{5}\right)x^2+4x+1=$

$=-5x^2+4x+1 \to$ ext $\left|\begin{array}{l}\frac{-b}{2a}=0/4 \\ \frac{-\Delta}{4a}=\frac{4ac-b^2}{4a}=\frac{(4\times -5)-16}{-20}=1/8\end{array}\right.$

ناحیه اول

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$S = a^2+b^2-12 = a+b$ $P = a+b-1 = ab$

$a^2+b^2 = (a+b)^2 - 2ab \rightarrow (a+b)^2 - 2(a+b-1) = 12 \Rightarrow a+b$

$a+b=y \rightarrow y^2-2y-15=0 \rightarrow (y-5)(y+3)=0 \rightarrow a+b=5$

$\backslash\!\backslash\ a+b=-3$ X