نام و نام خانوادگی: زهراسادات حسینی   پاسخنامه تشریحی تکلیف شماره ۲ ...   کلاس یازدهم تجربی B

۱۸,۲۵

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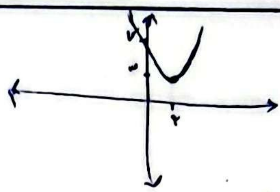
الف) $-\frac{b}{2a}=x_s=2$, $y_s=4-8+7=3$



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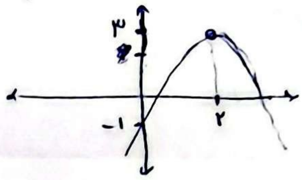
ب) $-\frac{b}{2a}=x_s=2$, $x=2 \to y_s=-4+8-1=3$



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الف) $\Delta>0 \to (m+1)^2-8(\frac{1}{2}m+2)>0 \to m^2-2m-15>0 \to (m-5)(m+3)>0$ $\quad \begin{array}{ccccc} & -3 & & 5 & \\ + & \phi & - & \phi & + \end{array}$

$m<-3$, $m>5$

ب) $\Delta=0 \to m^2-2m-15=0 \to (m-5)(m+3)=0 \to m=\{-3,5\}$

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ج) $\Delta<0 \to (m+1)^2-8(\frac{1}{2}m+2)<0 \to m^2-2m-15<0 \to \begin{array}{ccccc} & -3 & & 5 & \\ + & \phi & - & \phi & + \end{array} \to -3<m<5$

د) $\Delta\geq 0 \to (m+1)^2-8(\frac{1}{2}m+2)\geq 0 \to m^2-2m-15\geq 0 \to \begin{array}{ccccc} & -3 & & 5 & \\ + & \phi & - & \phi & + \end{array} \to m\leq -3$, $m\geq 5$

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الف)
$\Delta>0 \to 4(m+1)^2-40(m-2)>0 \to 4m^2-32m-84>0 \to \Delta_m<0 \to \begin{array}{c} m\in\mathbb{R} \\ + \end{array}$

$P>0 \to \frac{10}{m-2}>0 \to \begin{array}{ccc} & 2 & \\ - & \phi & + \end{array} \to (2,+\infty)=m$

$S<0 \to \frac{2(m+1)}{m-2}<0 \to \begin{array}{ccccc} & -1 & & 2 & \\ + & \phi & - & \phi & + \end{array} \to (-1,2)=m$

$\xrightarrow{\cap} \varnothing$ به ازای هیچ مقدار m

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ب)
$\Delta>0 \to \begin{array}{c} m\in\mathbb{R} \\ + \end{array}$

$P<0 \to \begin{array}{ccc} & 2 & \\ - & \phi & + \end{array}$

$S<0 \to \frac{2m+2}{m-2}<0 \to \begin{array}{ccccc} & -1 & & 2 & \\ + & \phi & - & \phi & + \end{array} \xrightarrow{\cap} m=(1,2)$

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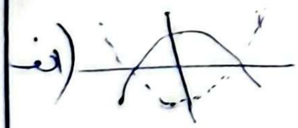
الف)



$\to \Delta>0 \to 4(m+1)^2-40(m-2)>0 \to \begin{array}{c} m\in\mathbb{R} \\ + \end{array}$

$P<0 \to \frac{10}{m-2}<0 \to \begin{array}{ccc} & 2 & \\ - & \phi & + \end{array} \to m<2 \xrightarrow{\text{اشتراک}} \boxed{m<2}$

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ب) $x_s=-2 \to -\frac{b}{2a}=-2=\frac{\cancel{2}(m+1)}{\cancel{2}(m-2)} \to -2m+4=m+1 \to \boxed{m=1}$

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$\Delta\geq 0 \to (2\sin\alpha)^2-4(\frac{2}{3})(\frac{3}{2})\geq 0 \to 4\sin^2\alpha\geq 4 \to \sin^2\alpha\geq 1 \to \sin^2\alpha=1$

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$\sin\alpha=\pm 1 \to \frac{2}{3}x^2-2x+\frac{3}{2}=0 \to x=\frac{2\pm\sqrt{4-4}}{\frac{4}{3}}=\boxed{\frac{3}{2}}$

غ ق ق (صدق نمی‌کند)

$y_s = \frac{-\Delta}{4a} = ? \Big/ \frac{-(3x+1)\cancel{(-x+1)}(2x-5)\cancel{(x+1)}}{\cancel{(1-x)}\cancel{(1+x)}} = -6x^2+13x+5$

$y_s = \frac{-(13^2-4(-6)(5))}{-24} = \boxed{\frac{1369}{24}}$ ۲۸۹

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$3(\alpha+\beta) = 5\alpha\beta + 1 \to 3\left(\frac{m+2}{m}\right) = \frac{-10}{m} + 1 \to \frac{3m+6}{m} = \frac{-10+7m}{m} \to 16 = 4m$

$4 = m$

$S = \alpha+\beta = \frac{m+2}{m} \to \alpha+\beta = +\frac{6}{4} = \frac{3}{2}$

$P = \alpha\beta = \frac{-2}{m} \to \alpha\beta = \frac{-2}{4} = \frac{-1}{2} \longrightarrow S^2 - 2P = \alpha^2+\beta^2 \Rightarrow \frac{9}{4}+1 = \boxed{\frac{13}{4}}$

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$\beta^2 = 5\beta - 2$

$\beta^3 = \beta \times \beta^2 = \beta(5\beta-2) = 5\beta^2 - 2\beta = 5(5\beta-2) - 2\beta = 23\beta - 10$

$\beta^4 = \beta \times \beta^3 = \beta(23\beta-10) = 23\beta^2 - 10\beta = 23(5\beta-2) - 10\beta = 105\beta - 46$

$\beta^5 = \beta \times \beta^4 = \beta(105\beta-46) = 105\beta^2 - 46\beta = 105(5\beta-2) - 46\beta = 479\beta - 210$

$\frac{4\alpha+\beta^5}{5\beta^2} = \frac{4(5-\beta) + 479\beta - 210}{5\beta^2} = \frac{475\beta - 190}{5\beta^2} = \frac{95\beta - 38}{5\beta - 2} = \boxed{19}$

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$y_1 = \Big|^{-3}_{4} \to 4 = 9a - 3b + 4 \to \boxed{3a - b = 0}$

$y_2 = \Big|^{2}_{14} \to 14 = 4a + 2b + 4 \to \boxed{4a + 4b = 10}$

$\begin{cases} 3a - b = 0 \\ 4a + 4b = 10 \end{cases} \to \begin{cases} 12a - \cancel{4b} = 0 \\ 4a + \cancel{4b} = 10 \end{cases}$

$16a = 10 \to a = \frac{10}{16} = \boxed{\frac{5}{8}}, \ b = \boxed{\frac{15}{8}} \to \frac{5}{8}x^2 - \frac{15}{8}x + 4 = 0$

$y_1 = 2x + 10 \begin{cases} \to x = 2 \to y = 14 \\ \to x = -3 \to y = 4 \end{cases}$

$\begin{cases} 4a + 2b = 10 \\ 9a - 3b = 0 \end{cases} \to a = 1, \ b = 3$, $x = -\frac{3}{2}$

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محور تقارن سهمی $= x_s = \frac{-b}{2a} = \frac{\frac{15}{8}}{\frac{10}{8}} = \boxed{\frac{3}{2}}$

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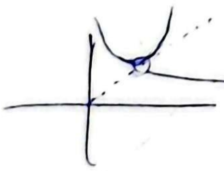
نیمساز ناحیه اول $\Rightarrow y = x \to 2x^2 + (m+1)x + m + 6 = x \to 2x^2 + mx + m + 6 = 0$

مماس $\Delta = 0 \Rightarrow m^2 - 8(m+6) = 0 \to m^2 - 8m - 48 = 0 \to (m-12)(m+4) = 0 \to m = \{-4, 12\}$



$a > 0$

$\to x_s = -\frac{b}{2a} > 0 \to b < 0 \begin{cases} \to m + 1 < 0 \to m < -1 \\ \to m = -4 \text{ ق ق}, \ m = 12 \text{ غ ق} \end{cases}$

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