پارسا اکبیر دهم ۵ برای چهارشنبه ۲۵

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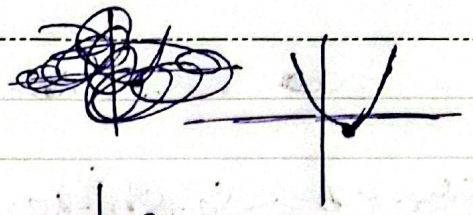
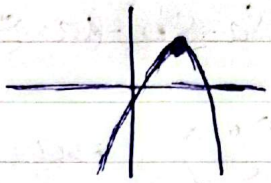
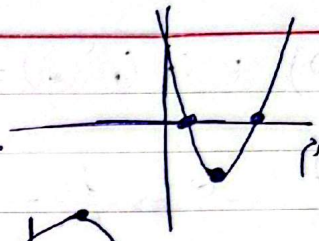
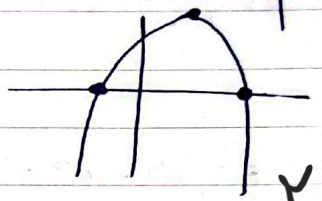
۱- الف) $\min \left| \frac{1}{2} \right| = \frac{1}{2}$ $\Rightarrow$  ناحیه ۴

ب) $\max \left| \frac{2}{3} \right|$ $\Rightarrow$  ناحیه ۲

۲- الف) $\frac{-b \pm \sqrt{\Delta}}{2a} = \frac{3 \pm \sqrt{9}}{8} < \frac{1}{2}$ $a>0$ $\Rightarrow$  نواحی اول، دوم و چهارم

ب) $\frac{-4 \pm \sqrt{16}}{-4} < \begin{matrix} \alpha \Rightarrow \alpha < 0 \\ \beta \Rightarrow \beta > 0 \end{matrix} \Rightarrow$  همه نواحی

$a<0$

به جز ناحیه ۲

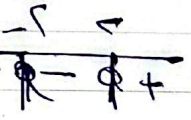
۳- الف) $\frac{\alpha+\beta}{\alpha+\beta} = \frac{5}{\frac{\sqrt{\Delta}}{|a|}} \Rightarrow \frac{\frac{-b}{a}}{\frac{\sqrt{\Delta}}{|a|}} = \frac{1}{\sqrt{16}} = \frac{\sqrt{16}}{16}$

ب) $5^2 - 2\beta = 1 - (2)(-3) = 7$

ج) $5^3 - 3 \times 5\beta = 1 - (3)(1)(-3) = 10$

د) $(\alpha-\beta)(\alpha^2+\alpha\beta+\beta^2) \Rightarrow (\sqrt{16})(7+(-3)) = 4\sqrt{13}$

۴- $x=2$, $x^2 - ax + a \Rightarrow \Delta < 0$

$\Rightarrow a^2 - 4 < 0 \Rightarrow (a-2)(a+2) < 0 \Rightarrow$  $\Rightarrow (-2,2)$

۵- $\alpha^2 + \beta^2 + \alpha^2 - 4a = 7 \Rightarrow 5^2 - 2\beta + \alpha(\alpha - 4) = 7$

$\Rightarrow 16 + (5 \times \frac{a}{5}) = 7 \Rightarrow a = 9 \Rightarrow \begin{matrix} \alpha = 1 \\ \beta = 5 \end{matrix}$ $\frac{\alpha}{\beta} = -\frac{1}{5}$

سوالات ۶ و ۸ را جابجا نوشتم.

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۶- $\frac{-\Delta}{\varepsilon a} = -\frac{1}{c} \Rightarrow \frac{b^2 - \varepsilon ac}{-\varepsilon a} = -\frac{1}{c}$ ، $c\Delta a + \Delta b = a+b$

$\Rightarrow c\varepsilon a - qb = 0 \Rightarrow c\varepsilon a = qb \Rightarrow c^2 a = qb^2 - (\varepsilon a \times \frac{q}{c}) \Rightarrow \frac{q}{b}a = cb^2 - \frac{\varepsilon q}{q b}a$

$\Rightarrow cb^2 - \varepsilon b = 0 \Rightarrow cb(b-c) = 0 < \begin{matrix} b=0 & \times \\ b=c & \surd \end{matrix}$ $\Rightarrow a = \frac{1}{c} \Rightarrow \frac{1}{c}x^2 + cx + \frac{q}{c} = 0$

$\Rightarrow \frac{1}{c} + c + \frac{q}{c} = \frac{q}{c}$

۷- $c0(s^2 - cp) + ci(\beta^2 - \beta) = 1V \Rightarrow c0 + \varepsilon0\frac{b}{a} + c0\frac{b}{a} = 1V$

$\Rightarrow q0\frac{b}{a} = -q \Rightarrow \frac{b}{a} = -\frac{1}{10} \longrightarrow -c0x^2 + cx + 1 = 0$

تفاضل $= \frac{\sqrt{\Delta}}{|a|} = \frac{\sqrt{c+0}}{c0} = \frac{\sqrt{c0}}{\Delta}$

$a(\beta^2 - \beta) = b \Rightarrow \beta^2 - \beta = \frac{b}{a}$

۸- مختصات کانونی $\rightarrow b = \frac{c\Delta a + c + 1V - c\Delta}{c} = \Delta \Rightarrow S(\Delta, c)$

$\Rightarrow a(x-\Delta)^2 + c = y \Rightarrow a(19) + c = 1 \Rightarrow a = \frac{1}{19}$ عدد اسفر کاردهم $\Rightarrow$

$\Rightarrow \frac{c\Delta}{19} + c$

۹-

۱۰- $\frac{1}{\sqrt{a}} + \frac{1}{\sqrt{\beta}} = \Delta \Rightarrow \frac{\sqrt{a} + \sqrt{\beta}}{\sqrt{a\beta}} = \Delta \Rightarrow \Delta\sqrt{a\beta} = \sqrt{a} + \sqrt{\beta}$

$\Rightarrow a + \beta + c\sqrt{a\beta} \Rightarrow \frac{c\Delta}{c\varepsilon} = \frac{m+1\varepsilon}{m\varepsilon} + \frac{q}{\varepsilon} \Rightarrow m = -1$

$\Rightarrow -x^2 + cx + c = 0 \Rightarrow a.\beta = \frac{c}{a} = -c$