

الف) $\frac{2}{3} < \frac{2}{3}$

ب) $\frac{2}{3} < \frac{2}{3}$

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الف) $\Delta > 0 \rightarrow (m+1)^2 - 4(2)(\frac{1}{3}m+2) > 0 \rightarrow (m-5)(m+3) > 0 \rightarrow \frac{-3}{+} \frac{5}{+}$ جواب $(-\infty, -3) \cup (5, +\infty)$

ب) $\Delta = 0 \rightarrow (m+3)(m-5) = 0 \rightarrow \begin{cases} m = 5 \\ m = -3 \end{cases}$

ب) $\Delta < 0 \rightarrow (m+3)(m-5) < 0 \rightarrow \frac{-3}{+} \frac{5}{+} \rightarrow \text{جواب} = (-3, 5)$

د) $\Delta \geq 0 \rightarrow (m+3)(m-5) \geq 0 \rightarrow (-\infty, -3] \cup [5, +\infty)$

الف) ① $\Delta > 0 \rightarrow 4m^2 + 11m + 2 - 4(0)m + 10 > 0 \rightarrow (m^2 - 11m + 21) > 0 \rightarrow \Delta > 0$

② $-\frac{b}{a} < 0 \rightarrow \frac{2m+2}{m-1} < 0 \rightarrow \frac{-2}{+} \frac{2}{-} \rightarrow (-1, 2)$

③ $\frac{c}{a} > 0 \rightarrow \frac{10}{m-1} > 0 \rightarrow \frac{-2}{+} \frac{2}{-} \rightarrow (2, +\infty)$

جواب نهایی: $(-1, 2) \cup (2, +\infty)$

ب) ① $\frac{c}{a} < 0 \rightarrow \frac{10}{m-1} < 0 \rightarrow (-\infty, 2)$

② $-\frac{b}{a} < 0 \rightarrow \frac{2m+2}{m-1} < 0 \rightarrow (-1, 2)$

جواب نهایی: $(-1, 2)$

الف) ① $\Delta > 0 \rightarrow (m^2 - 11m + 21) > 0 \checkmark \Rightarrow \text{جواب } m \in (-\infty, 2)$

② $\frac{c}{a} < 0 \rightarrow \boxed{m < 1}$

ب) $-\frac{b}{2a} = -1 = \frac{2m+2}{2m-1} \Rightarrow -2m+1 = 2m+2 \rightarrow 4m = -1 \rightarrow \boxed{m = -\frac{1}{4}}$

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

$\sin \alpha = 1 \rightarrow \frac{2}{3}x^2 - 2x + \frac{2}{3} \rightarrow \Delta = 0 \rightarrow x = \frac{\frac{2}{3}}{\frac{4}{3}} = \frac{1}{2}$ جواب $(\frac{1}{2}, 1)$

$\sin \alpha = -1 \rightarrow \frac{2}{3}x^2 + 2x + \frac{2}{3} \rightarrow \Delta = 0 \rightarrow x = \frac{-\frac{2}{3}}{\frac{4}{3}} = -\frac{1}{2}$ جواب $(-\frac{1}{2}, -1)$

$C = \varepsilon$ $x = 2 \rightarrow 2(2) + 10 = \varepsilon a + 2b + \varepsilon \Rightarrow 12a + b = \omega$ $x = -3 \rightarrow 2(-3) + 10 = 9a - 2b + \varepsilon \Rightarrow 0 = 2a - b$ $\begin{cases} \omega a = \omega \\ a = 1 \\ b = 3 \end{cases}$ $y_1 = x^2 + 3x + \varepsilon$ صورتان = $x = -\frac{b}{2a} = \frac{-3}{2} = x$ جواب (۵)	این سوال ۹ هست؟ جواب جانوسم ۹
$3S = \omega p + v \rightarrow \frac{3m+4}{m} = \frac{-10+v}{m} \Rightarrow 3m+4 = -10+v \Rightarrow m = \varepsilon$ $\alpha^2 + \beta^2 = 5^2 - 2p = \left(\frac{3}{2}\right)^2 - 2\left(-\frac{1}{2}\right) = \frac{9}{4} + \frac{\varepsilon}{2} = \frac{13}{2}$ جواب * (۵)	۷
$\alpha\beta = 2 \rightarrow \beta = \frac{2}{\alpha} \Rightarrow \frac{\varepsilon}{\omega} \left(\frac{\alpha}{\beta^2}\right) + \frac{\beta^2}{\omega} = \frac{\varepsilon}{\omega} \left(\frac{\alpha}{\frac{4}{\alpha^2}}\right) + \frac{\beta^2}{\omega} = \frac{\alpha^3}{\omega} + \frac{\beta^2}{\omega} =$ $\frac{5^3 - 3Sp}{\omega} = \frac{12\omega - 3(\omega)(2)}{\omega} = \frac{12\omega - 6\omega}{\omega} = \frac{6\omega}{\omega} = 6$ جواب (۵)	۸
$\frac{(x-1)(3x+1)(x+1)(2x-\omega)}{-(x^2-1)} = -(4x^2 - 12x - \omega) = -4x^2 + 12x + \omega$ $\begin{matrix} 13 \\ 12 \\ \hline 219 \\ 22 \end{matrix} \rightarrow \frac{219}{22} = \text{جواب}$ (۵)	این سوال ۹ است؟ ۹
$y = x \Rightarrow x = 2x^2 + (m+1)x + m + 4 \Rightarrow 0 = 2x^2 + mx + m + 4$ $\Delta = m^2 - 4(m+4) = 0 \rightarrow (m-12)(m+8) = 0$ $m = -8 \rightarrow 2x^2 - 2x + 2 \rightarrow \Delta < 0$ $m = 12 \rightarrow 2x^2 + 12x + 16 \rightarrow \Delta > 0$ جواب $m = -8$ $\Delta < 0$ * (۵)	۱۰