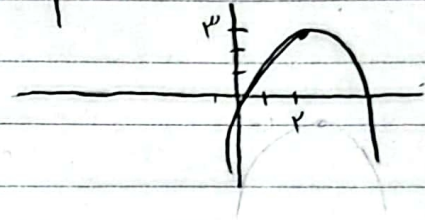
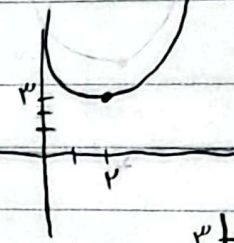


الف) $\alpha_5 = 2$ $y_5 = x - 1 + 1 = 3$

ب) $\alpha_5 = 2$ $y_5 = -x + 1 - 1 = 3$



الف) $\Delta > 0 \rightarrow (m+1)^2 - 4(1)(\frac{1}{4}m+2) > 0 \rightarrow m^2 - 2m - 1 > 0 \rightarrow (m-1)(m+3) > 0$ (P)

$\frac{x}{P} \mid \begin{array}{cc} -3 & 1 \\ + & - & - & + \end{array} \quad (-\infty, -3) \cup (1, +\infty)$

ب) $\Delta = 0 \rightarrow (m-1)(m+3) = 0 \quad m = \{-3, 1\}$

ج) $\Delta < 0 \rightarrow (m-1)(m+3) < 0 \quad \frac{x}{P} \mid \begin{array}{cc} -3 & 1 \\ + & - & - & + \end{array} \rightarrow (-3, 1)$

د) $\Delta > 0 \rightarrow (m-1)(m+3) > 0 \quad \frac{x}{P} \mid \begin{array}{cc} -3 & 1 \\ + & - & - & + \end{array} \quad (-\infty, -3) \cup (1, +\infty)$

الف) $\Delta > 0 \rightarrow (2m+2)^2 - 4(m-2)(10) > 0 \rightarrow 4m^2 - 24m + 16 > 0 \rightarrow m^2 - 6m + 4 > 0$ چون عبارت درجه دوم است.

$\Delta < 0 \rightarrow \frac{2(m+1)}{m-2} < 0 \quad \frac{x}{P} \mid \begin{array}{cc} -1 & 2 \\ + & - & - & + \end{array} \rightarrow (-1, 2)$

$\Delta > 0 \rightarrow \frac{10}{m-2} > 0 \quad \frac{x}{P} \mid \begin{array}{cc} 2 \\ - & + \end{array} \rightarrow (2, +\infty)$

$m \rightarrow \emptyset$

ب) $\Delta > 0 \rightarrow 4m^2 - 24m + 16 > 0 \rightarrow$ جواب ندارد

$\Delta < 0 \rightarrow \frac{2(m+1)}{m-2} < 0 \quad \frac{x}{P} \mid \begin{array}{cc} -1 & 2 \\ + & - & - & + \end{array} \rightarrow (-1, 2)$

$\Delta < 0 \rightarrow \frac{10}{m-2} < 0 \quad \frac{x}{P} \mid \begin{array}{cc} 2 \\ - & + \end{array} \rightarrow (-\infty, 2)$

$m \rightarrow (-1, 2)$

سوال ۴ در صفحه بعد

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

$\sin \alpha = 1 \rightarrow 4x^2 - 12x + 9 = 0 \rightarrow (2x-3)^2 = 0 \rightarrow x = \frac{3}{2}$

$\sin \alpha = -1 \rightarrow 4x^2 + 12x + 9 = 0 \rightarrow (2x+3)^2 = 0 \rightarrow x = -\frac{3}{2}$

$$\text{الف) } \Delta > 0 \rightarrow (2m+2)^2 - 4(m-2)(10) > 0 \rightarrow \text{مستقيم حقيقي} \quad (4)$$

$$P < 0 \rightarrow \frac{10}{m-2} < 0 \rightarrow \frac{2}{-2} < 0 \rightarrow (-\infty, -2) \quad m \in (-\infty, -2)$$

$$\text{ب) } \frac{b}{a} = -2 \rightarrow \frac{b}{a} = -2 \rightarrow \frac{m+1}{m-2} = -2 \rightarrow m+1 = -2m+4 \rightarrow 3m=3 \rightarrow m=1$$

$$\frac{(x-1)(2x+1)(2x-5)(x+1)}{(1-x)(1+x)} = -4x^2 + 13x + 5 \rightarrow y_5 = \frac{-((13)^2 - 4(-4)(5))}{4(-4)} = \frac{219}{-16} \quad (5)$$

$$y_5 = \omega P + V \rightarrow 2\left(\frac{m+2}{m}\right) = \omega\left(-\frac{2}{m}\right) + V \rightarrow \frac{2m+4+10}{m} = V \rightarrow m=2$$

$$4x^2 - 4x - 2 = 0$$

$$x^2 + 3x = 5 - 2P = \left(\frac{4}{2}\right)^2 - 2\left(-\frac{1}{2}\right) = \frac{13}{2}$$

سوال ۸۱ پايين صفحه

$$x = -2 \rightarrow y_1 = 2a + 2b + 4 \quad y_2 = 12 \quad y_1 = y_2 \rightarrow 2a + b = 5 \rightarrow 5a = 5 \rightarrow a = 1 \rightarrow b = 3 \quad (9)$$

$$x = -3 \rightarrow y_1 = 9a - 3b + 4 \quad y_2 = 4 \quad y_1 = y_2 \rightarrow 9a - 3b = 0 \rightarrow 3a = b$$

$$y_1 = x^2 + 3x + 4 \rightarrow -\frac{b}{2a} = -\frac{3}{1}$$

$$2x^2 + (m+1)x + m + 4 = x \rightarrow 2x^2 + mx + m + 4 = 0 \rightarrow m^2 - 4(m+4)(2) = 0 \quad (10)$$

$$(m-12)(m+4) = 0 \Rightarrow m = -4 \Rightarrow (x-1)^2 = 0 \rightarrow x = 1 \rightarrow \text{نقطه واحد} \rightarrow \text{قوة 1} \rightarrow m = -4$$

$$\rightarrow 12 \Rightarrow (x+3)^2 = 0 \rightarrow x = -3 \rightarrow \text{نقطه واحد} \rightarrow \text{قوة 3}$$

$$\frac{2a + 3}{\omega B^2} = \frac{1}{\omega} \left(\frac{2a + 3}{B^2} \right) = \frac{1}{\omega} \left(\frac{2a}{\frac{4}{a^2}} + B^2 \right) = \frac{1}{\omega} \left(\frac{2a^3}{4} + B^2 \right) = \frac{1}{\omega} \left(\frac{a^3}{2} + B^2 \right) \quad (11)$$

$$\frac{12\omega - 30}{\omega} = \sqrt{19}$$