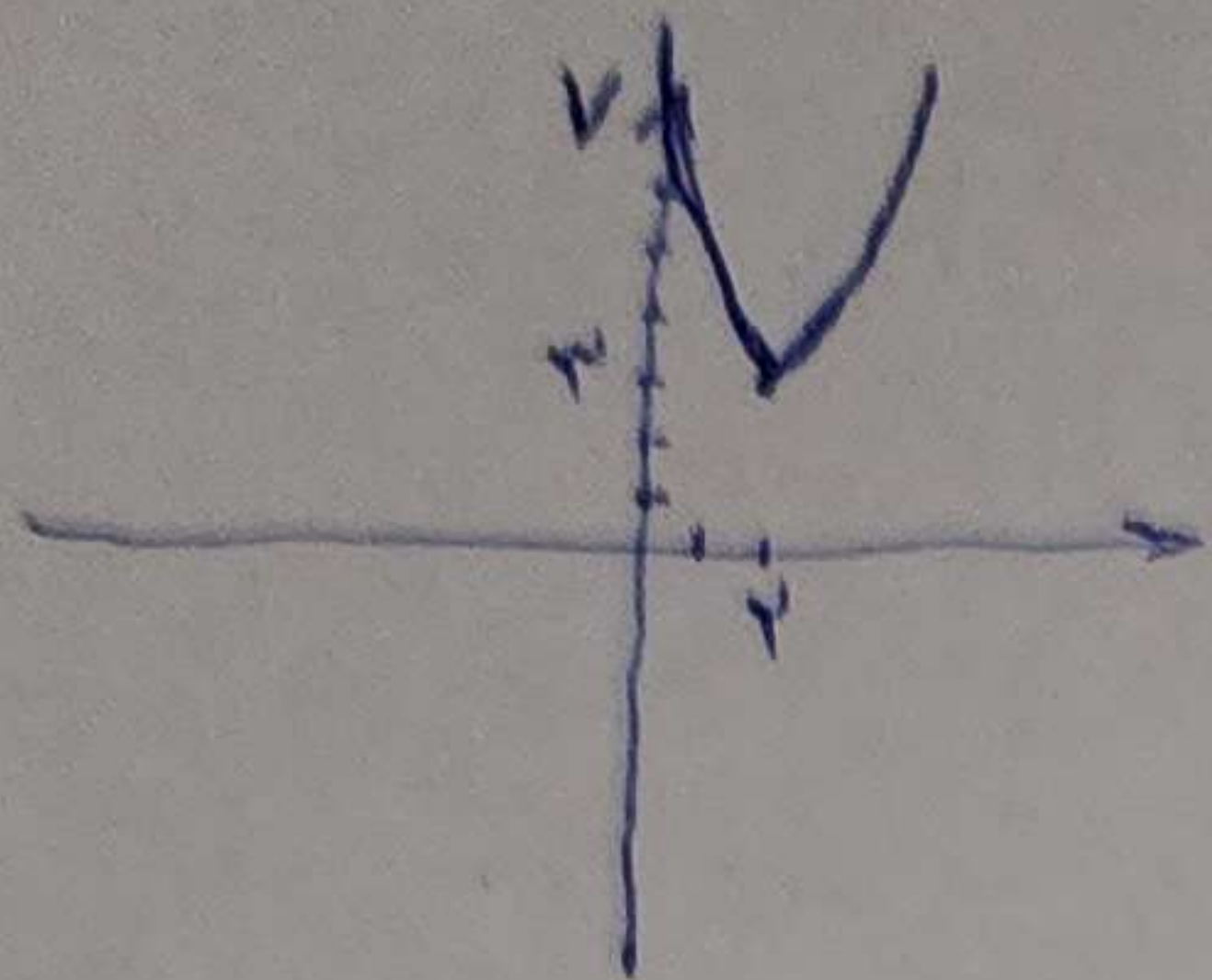


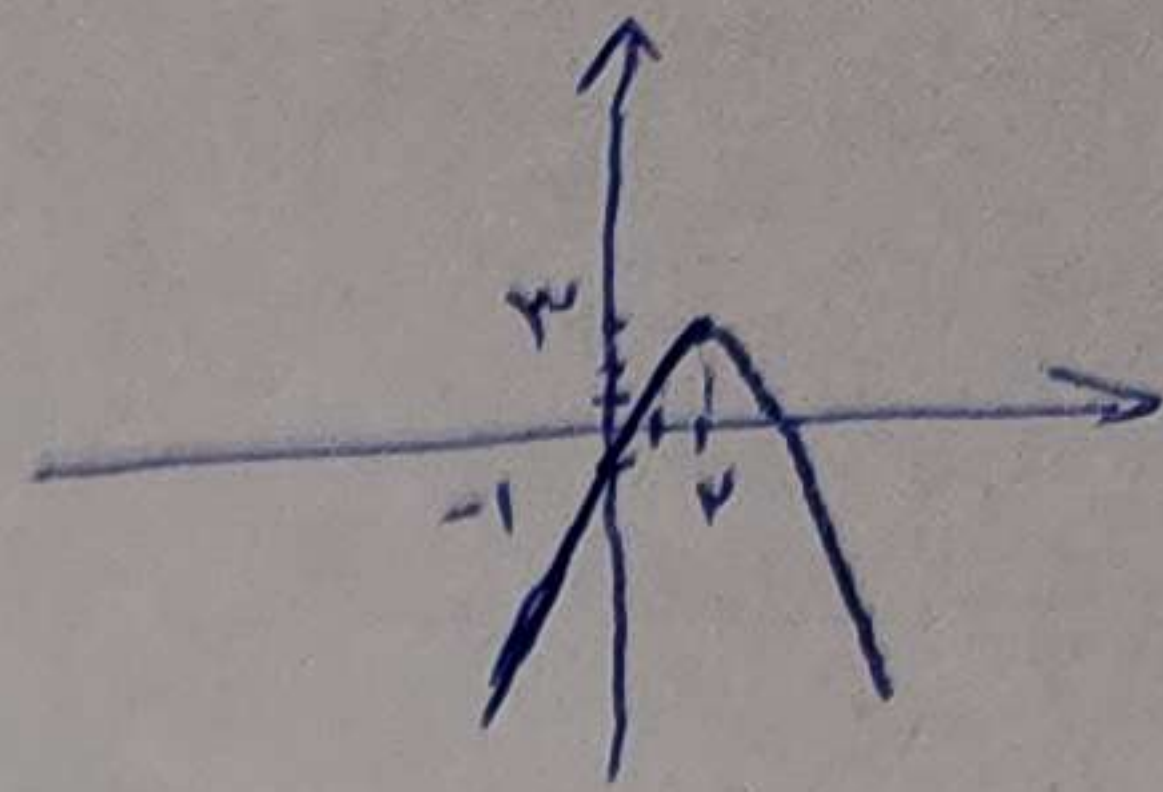
الف) min

$$x_5 = \frac{4}{4} = 1 \rightarrow y_5 = 3$$



ب) max

$$x_5 = \frac{-4}{4} = -1 \rightarrow y_5 = 3$$



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الف) $\Delta \geq 0 \Rightarrow m^2 + 2m + 1 - 4m - 14 = m^2 - 2m - 13$

$(m+3)(m-5) \Delta \geq 0 \Rightarrow \frac{-3}{-3} \frac{5}{5} \quad |R = [-3, 5]$

ب) $\Delta = 0 \Rightarrow \{-3, 5\}$

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ج) $\Delta < 0 \quad (-3, 5)$

$\Delta \geq 0 \Rightarrow |R = (-3, 5)$
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الف) $\Delta = 4(m^2 + 2m + 1 - 10m + 20) = 4(m^2 - 8m + 21)$

$\Delta > 0 \checkmark$

$P > 0 \rightarrow \frac{10}{m-2} > 0 \Rightarrow m > 2$

$S < 0 \rightarrow \frac{2(m+1)}{m-2} < 0 \Rightarrow \frac{-1}{-1} \frac{2}{2} \quad \emptyset$

$\Delta > 0 \checkmark$

$S < 0 \rightarrow \frac{2(m+1)}{m-2} < 0 \Rightarrow \frac{-1}{-1} \frac{2}{2}$

$P < 0 \rightarrow \frac{10}{m-2} < 0 \Rightarrow m < 2$

$(-1, 2)$

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الف) $\frac{10}{m-2} < 0 \Rightarrow m-2 < 0 \rightarrow m < 2$

زیرا $\frac{c}{a}$ منفی Δ مثبت می‌باشد

ب) $\frac{-b}{2a} = \frac{2(m+1)}{2(m-2)} = -2$

$m+1 = -2m+4 \Rightarrow m = 1$

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$\Delta \geq 0 \quad f(\sin^2 \alpha) \geq f\left(\frac{1}{4}\right)\left(\frac{3}{4}\right) \Rightarrow \sin^2 \alpha \geq 1 \Rightarrow \sin^2 \alpha = 1 \rightarrow \sin \alpha = \pm 1$
 برتر از ۱ ندارد

$\sin \alpha = 1 \Rightarrow \frac{2x^2}{3} - 2x + \frac{3}{2} = 0 \xrightarrow{\times 6} 4x^2 - 12x + 9 = 0 \Rightarrow (2x-3)^2 = 0 \Rightarrow x = \frac{3}{2}$

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$$\frac{(x-1)(x+1)(x+1)(x-\omega)}{(x+1)(1-x)} \rightarrow -(4x^2 - 12x - \omega) \rightarrow -4x^2 + 12x + \omega \rightarrow \frac{-12}{-12} = \frac{12}{12}$$

$$x \notin \{\pm 1\} \quad \frac{(x+1)(1-x)}{(x+1)(1-x)} \rightarrow \frac{-12 - 12\omega}{-12} = \frac{12}{12}$$

$$V_S - V = \omega P$$

$$\frac{-10}{m} = \frac{r(m+1) - Vm}{m} \Rightarrow r(m+1) - Vm + 10 \rightarrow 14 = 8m \Rightarrow m = \frac{7}{4}$$

$$S = \frac{7}{4}$$

$$P = -\frac{1}{4}$$

$$\alpha^2 + \beta^2 = S - 2P = \frac{7}{4} + 1 = \frac{11}{4}$$

$$\frac{f\alpha}{\omega\beta^2} + \frac{\beta^2}{\omega} = \frac{\beta^2}{\omega} + \frac{f\alpha}{\omega \times \frac{f}{\alpha^2}} = \frac{\alpha^2 + \beta^2}{\omega} = \frac{S - 2SP}{\omega} = \frac{12\omega - 30}{\omega} = 19$$

$$S = \omega = \alpha + \beta$$

$$P = \gamma = \alpha\beta \Rightarrow \beta = \frac{\gamma}{\alpha}, \beta^2 = \frac{\gamma^2}{\alpha^2}$$

$$f = \text{نقاط با هم}$$

$$r(r) + 10 = 14 \rightarrow 14 = 8a + 4b + 10 \rightarrow 8a + 4b = 4 \rightarrow a = 1, b = 3$$

$$r(-3) + 10 = 14 \rightarrow 14 = 8a - 12b + 10 \rightarrow 8a - 12b = 4 \rightarrow b = 3a$$

$$k_s = \frac{-b}{r_a} = \frac{-3}{1} = -3$$

$$rx^2 + (m+1)x + m+9 = x \rightarrow rx^2 + mx + m+9 = 0 \rightarrow \Delta = 0$$

$$x^2 - 12x - 81 = 0 \rightarrow m = 12 \Rightarrow x^2 + 9x + 9 = 0 \Rightarrow \alpha$$

$$m = -8 \Rightarrow x^2 - 2x + 1 = 0 \checkmark$$

$x = 1$
نام اول