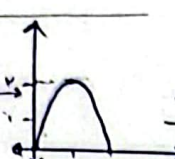
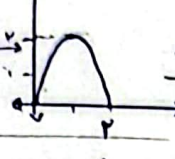
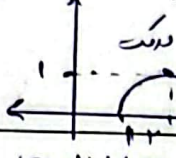
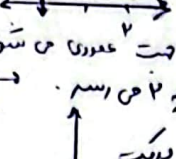
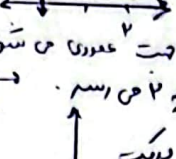
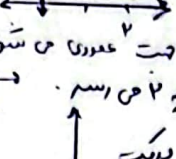
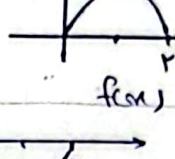


الف) $f(x) + 2 \rightarrow$  ب) $f(x) \rightarrow$  ج) $f(x-1) \rightarrow$ 	د) $f(x) \rightarrow$  ه) $f(x) \rightarrow$  و) $f(x) \rightarrow$ 	ز) $f(x) \rightarrow$ 
الف) $x^2 - 5x + 4 > 0 \rightarrow (x-4)(x-1) > 0$ ب) $x^2 - 4x + 3 < 0 \rightarrow (x-3)(x-1) < 0$ ج) $x^2 + 4x + 5 \geq 0 \rightarrow (x+2)(x+1) \geq 0$ د) $x^2 - 5x + 4 \leq 0 \rightarrow (x-4)(x-1) \leq 0$	ه) $x^2 - 5x + 4 > 0 \rightarrow (x-4)(x-1) > 0$ و) $x^2 - 4x + 3 < 0 \rightarrow (x-3)(x-1) < 0$ ز) $x^2 + 4x + 5 \geq 0 \rightarrow (x+2)(x+1) \geq 0$ ح) $x^2 - 5x + 4 \leq 0 \rightarrow (x-4)(x-1) \leq 0$	ط) $x^2 - 5x + 4 > 0 \rightarrow (x-4)(x-1) > 0$ ث) $x^2 - 4x + 3 < 0 \rightarrow (x-3)(x-1) < 0$ ج) $x^2 + 4x + 5 \geq 0 \rightarrow (x+2)(x+1) \geq 0$ د) $x^2 - 5x + 4 \leq 0 \rightarrow (x-4)(x-1) \leq 0$
الف) $\frac{x^2 - 3x + 2}{x - 5} < 0 \rightarrow \frac{(x-2)(x-1)}{x-5} < 0$ ب) $\frac{x^2 - 1}{x^2 - 4x + 5} \geq 0 \rightarrow \frac{(x-1)(x+1)}{(x-2)(x-5)} \geq 0$	ج) $\frac{x^2 - 3x + 2}{x - 5} < 0 \rightarrow \frac{(x-2)(x-1)}{x-5} < 0$ د) $\frac{x^2 - 1}{x^2 - 4x + 5} \geq 0 \rightarrow \frac{(x-1)(x+1)}{(x-2)(x-5)} \geq 0$	ه) $\frac{x^2 - 3x + 2}{x - 5} < 0 \rightarrow \frac{(x-2)(x-1)}{x-5} < 0$ و) $\frac{x^2 - 1}{x^2 - 4x + 5} \geq 0 \rightarrow \frac{(x-1)(x+1)}{(x-2)(x-5)} \geq 0$
الف) $y = \sqrt{\frac{x^2 - 1}{x^2 - x}} \rightarrow \frac{x^2 - 1}{x^2 - x} \geq 0 \Rightarrow \frac{(x-1)(x+1)}{x(x-1)} \geq 0$ ب) $y = \sqrt{\frac{x^2 - 14}{x^2 - 5x + 4}} \rightarrow \frac{x^2 - 14}{x^2 - 5x + 4} \geq 0 \Rightarrow \frac{(x-4)(x+2)}{(x-1)(x-4)} \geq 0$	ج) $y = \sqrt{\frac{x^2 - 1}{x^2 - x}} \rightarrow \frac{x^2 - 1}{x^2 - x} \geq 0 \Rightarrow \frac{(x-1)(x+1)}{x(x-1)} \geq 0$ د) $y = \sqrt{\frac{x^2 - 14}{x^2 - 5x + 4}} \rightarrow \frac{x^2 - 14}{x^2 - 5x + 4} \geq 0 \Rightarrow \frac{(x-4)(x+2)}{(x-1)(x-4)} \geq 0$	ه) $y = \sqrt{\frac{x^2 - 1}{x^2 - x}} \rightarrow \frac{x^2 - 1}{x^2 - x} \geq 0 \Rightarrow \frac{(x-1)(x+1)}{x(x-1)} \geq 0$ و) $y = \sqrt{\frac{x^2 - 14}{x^2 - 5x + 4}} \rightarrow \frac{x^2 - 14}{x^2 - 5x + 4} \geq 0 \Rightarrow \frac{(x-4)(x+2)}{(x-1)(x-4)} \geq 0$
الف) $y = \sqrt{4 - \sqrt{2 - x}} \rightarrow 4 - \sqrt{2 - x} \geq 0 \Rightarrow \sqrt{2 - x} \leq 4 \Rightarrow 2 - x \leq 16 \Rightarrow x \geq -14$ ب) $y = \sqrt{3 - \sqrt{x - 2}} \rightarrow 3 - \sqrt{x - 2} \geq 0 \Rightarrow \sqrt{x - 2} \leq 3 \Rightarrow x - 2 \leq 9 \Rightarrow x \leq 11$	ج) $y = \sqrt{4 - \sqrt{2 - x}} \rightarrow 4 - \sqrt{2 - x} \geq 0 \Rightarrow \sqrt{2 - x} \leq 4 \Rightarrow 2 - x \leq 16 \Rightarrow x \geq -14$ د) $y = \sqrt{3 - \sqrt{x - 2}} \rightarrow 3 - \sqrt{x - 2} \geq 0 \Rightarrow \sqrt{x - 2} \leq 3 \Rightarrow x - 2 \leq 9 \Rightarrow x \leq 11$	ه) $y = \sqrt{4 - \sqrt{2 - x}} \rightarrow 4 - \sqrt{2 - x} \geq 0 \Rightarrow \sqrt{2 - x} \leq 4 \Rightarrow 2 - x \leq 16 \Rightarrow x \geq -14$ و) $y = \sqrt{3 - \sqrt{x - 2}} \rightarrow 3 - \sqrt{x - 2} \geq 0 \Rightarrow \sqrt{x - 2} \leq 3 \Rightarrow x - 2 \leq 9 \Rightarrow x \leq 11$

$$y = \sqrt{4 - 2m^2} \rightarrow 4 - 2m^2 \geq 0 \rightarrow 2m^2 \leq 4 \Rightarrow m^2 \leq 2 \Rightarrow -\sqrt{2} \leq m \leq \sqrt{2}$$

$$\star Df = [-\sqrt{2}, \sqrt{2}]$$

$$ب) \sqrt{3|m| - 9} \rightarrow 3|m| - 9 \geq 0 \Rightarrow 3(|m| - 3) \geq 0$$

$$|m| - 3 \geq 0 \rightarrow |m| \geq 3 \rightarrow \begin{cases} m \geq 3 \\ m \leq -3 \end{cases}$$

$$\star Df = (-\infty, -3] \cup [3, +\infty)$$

چون فرجه را نباید فراموش کرد و باید به هم پیوسته بود

$$الف) y = \sqrt{\frac{|m|+1}{|m|-3}} \rightarrow |m|-3 \neq 0$$

$$Df = \mathbb{R} - \{\pm 3\}$$

چون زیر را نباید فراموش کرد و باید به هم پیوسته بود

$$ب) y = \sqrt{\frac{\sqrt{m}+1}{\sqrt{m}-3}} \rightarrow m \geq 0, \sqrt{m}-3 \neq 0$$

$$Df = [0, +\infty) - \{9\}$$

مخرج نباید صفر باشد

$$الف) y = \frac{\sin m}{\cos m - 1} \rightarrow \cos m - 1 \neq 0 \rightarrow \cos m \neq 1$$

$$\star Df = \mathbb{R} - \{2k\pi, 2k\pi + 2\pi\}$$

ب) $y = \frac{\cos m + 1}{\sin m + 1} \rightarrow \sin m + 1 \neq 0 \rightarrow \sin m \neq -1$

$$\star Df = \mathbb{R} - \{2k\pi + \frac{3\pi}{2}, 2k\pi + \frac{7\pi}{2}\}$$

ج) $y = \frac{\tan m + 2}{\cot m - 1} \rightarrow \tan m = \frac{\sin}{\cos} \Rightarrow \cos m \neq 0$

$$\star Df = \mathbb{R} - \{k\pi + \frac{\pi}{2}, k\pi + \frac{3\pi}{2}\}$$

د) $y = \frac{\sin m + 1}{\sin^2 m - 3} \rightarrow \sin^2 m - 3 \neq 0 \rightarrow \sin^2 m \neq 3$

زیر را نباید فراموش کرد و باید به هم پیوسته بود

$$y = \frac{1}{\sqrt{2|m-2| - \frac{1}{4}}}$$

$$2|m-2| - \frac{1}{4} > 0 \Rightarrow 2|m-2| > \frac{1}{4}$$

$$|m-2| > \frac{1}{8} \rightarrow \begin{cases} m > \frac{9}{8} \\ m < -\frac{7}{8} \end{cases}$$

$$\star Df = (-\infty, -\frac{7}{8}) \cup (\frac{9}{8}, +\infty)$$

الف) $y = \sqrt{4 - 2|m|} \rightarrow 4 - 2|m| \geq 0 \rightarrow |m| \leq 2$

$$\star Df = [-2, 2]$$

و فاصله را نباید فراموش کرد و باید به هم پیوسته بود

ب) $y = \sqrt{\frac{|m|}{|m|}}$

$$Df = (-\infty, 0) \cup (0, +\infty) \cup Df = \mathbb{R} - \{0\}$$