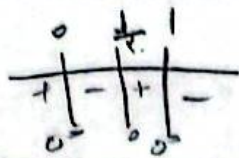
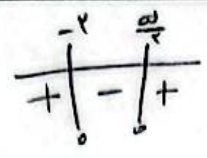


$\sqrt{\frac{-2x+1}{x(x-1)}} \rightarrow \frac{1}{x}$  $D_f = (-\infty, 0) \cup [\frac{1}{2}, 1) \quad \checkmark$	(۲)
$x \notin \{1, -2, 0, -1\} \cup \{-\frac{\infty}{2}\} \Rightarrow D_f = \mathbb{R} - \{\pm 1, 0, -\frac{\infty}{2}\} \quad \checkmark$ $\frac{x}{x-1} \neq \frac{-1}{x+2} \Rightarrow x(x+2) \neq -x+1 \Rightarrow (x \neq -2) \quad x \neq -\frac{1}{2}$	۱
$((\frac{1}{x})^2 - 9)(x^2 - \frac{9}{x}) \geq 0$  $\Rightarrow \mathbb{R} - (-2, \frac{3}{2}) \quad \checkmark$	(۲)
$\sqrt{x-1} \quad (I)$ $\sqrt{x-1} \leq 2 \quad 0 \leq x-1 \leq 4 \Rightarrow 1 \leq x \leq 5$ $D_f = [1, 5] \quad \checkmark$	۲
$(I) \quad x^2 \geq 1 \Rightarrow x \geq 1 \vee x \leq -1$ $(I) \cap (II) = \mathbb{R} - [-1, 2] \quad \checkmark$ $(II) \quad (x+1)(x-2) > 0$ 	(۲)
خب سعی میکنیم دارکی نامتنه که بین ۲ ریشه $\Leftarrow$ سعی به اذای ۲ باید صورت بگیرد $-f + 2 - 2a \leq 0$ $a = -\frac{1}{2}$ $\sqrt{-x^2 - \frac{1}{2}x + 3}$ $\frac{x}{2} - \frac{1}{2} \leq 1 \quad \checkmark$ $p = -2 = -2 \times \frac{x}{2} \Rightarrow b = \frac{x}{2}$	(۲)
$x \geq 1 \rightarrow g(x) = \sqrt{x(x-1)} \rightarrow D_g = [1, +\infty)$ $(I) \quad (II) \quad \Rightarrow D_g = [-2, +\infty)$ $x < 1 \rightarrow g(x) = \sqrt{x+3} \rightarrow D_g = [-3, 1)$	(۲)

$$f(a+1)(v) = 3a - f + a$$

$$1(a+1) = f a - f \quad \text{دقة}$$

$$1 \cdot a = -1a \Rightarrow a = -1a \quad \checkmark$$

$$f(x) = \sqrt{x} + \frac{1}{\sqrt{x}} + 2 \Rightarrow (\sqrt{2+\sqrt{2}} + \sqrt{2-\sqrt{2}} + 2) \times 2 = (2 + 2\sqrt{2}) \quad \checkmark$$

$$\alpha = 2 + \sqrt{2}$$

$$\frac{1}{\alpha} = 2 - \sqrt{2}$$

$$\sqrt{2+\sqrt{2}} + \sqrt{2-\sqrt{2}} = \sqrt{2+\sqrt{2}+2-\sqrt{2}+2} = \sqrt{6}$$

$$f(x) - f(-x) = 4x^2 - x$$

$$f(-x) - f(x) = 4x^2 + x \xrightarrow{\times \frac{x}{x}} f(x) - \frac{9}{x} f(x) = 4x^2 + 10x$$

$$f(x) - \frac{9}{10} f(x) = 10x^2 + \frac{1}{x} x = -\frac{9}{x} f(x) \Rightarrow f(x) = -4x^2 - \frac{1}{10} x \quad \checkmark$$

$$f(0) = 3m - 1 \Rightarrow f(0) = 9m - 2 \Rightarrow f(0) = \frac{2m-1}{2} = \frac{2m}{2} \quad \checkmark$$

$$f(0) = 14 + 2m + 3m - 1 = 4m + 13 = 9m - 2$$

$$13 = 5m \quad m = \frac{13}{5} \quad \checkmark$$

$$f(-1) = \frac{3+12+3}{-1} = -18 \Rightarrow f(-1) = -9 \quad \checkmark$$