

$$\hookrightarrow \alpha_{\gamma\gamma} \rightarrow \alpha_{\gamma}$$

1

$$f_{-1} + f_m \leq 0$$

۲) ۱-۱-۱ امتلا ف

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$$\begin{aligned} & \exists x^1 \geq 0 \\ & x^1 \leq r \\ & -1 \leq x \leq 1 \end{aligned}$$

$$R = \{x | x \neq 2\}$$

3

$$b) \frac{(x-1)(x+1)x^2(x-3)}{(x-1)(x^2x+1)} \geq 0$$

$$\begin{array}{ccccccc} & -1 & * & * & \mu \\ + & d & - & b & - & f & - & c & + \end{array}$$

$$D_f = (-\infty, -1] \cup \{0\} \cup [3, +\infty)$$

C

$$|x-y| \geq \epsilon$$

$$\left\{ \begin{array}{l} x \cdot y \geq z \rightarrow x \geq \omega \\ x \cdot y \leq -z \rightarrow x \leq -1 \end{array} \right.$$

ii) $\exists |x - x_0| \geq \delta$

$$r \geq |r - x|$$

$$-r \leq x_1 \leq r$$

$$-4 \leq x \leq 2$$

$$-1,5 \leq x$$

$$df = [-4, 5]$$

2

ا) $1 - x x \geq 0$ $ x \geq x$ $x \leq 1$ $D_f = (-\infty, 1]$	ب) $\sqrt{3- x-2 } \geq 0$ $\sqrt{3} \geq x-2 $ $- \sqrt{3} \leq x-2 \leq \sqrt{3}$ $2 - \sqrt{3} \leq x \leq 2 + \sqrt{3}$ $\sqrt{3- x-2 } \neq 1$ $\sqrt{3- x-2 } \neq -1$ $- x-2 \neq -2, -1$ $ x-2 \neq 1, 2$ $x-2 \neq -1, -2, 1, 2$ $x \neq 1, 3, 4, 6$ $D_f = [2-\sqrt{3}, 2+\sqrt{3}] - \{1, 3, 4, 6\}$	6
ا) $\cos x \neq 0$ $x \neq \frac{\pi}{2}, \frac{3\pi}{2}$ $D_f = \mathbb{R} - \{k\pi + \frac{\pi}{2}\}$ $D_f = \mathbb{R} - \{k\pi + \frac{\pi}{2}\}$	ب) $\cos x - 1 \neq 0$ $\cos x \neq 1$ $x \neq \frac{0}{2}, \frac{2\pi}{2}$ $D_f = \mathbb{R} - \{k\pi\}$ $D_f = \mathbb{R} - \{2k\pi, 2k\pi + 2\pi\}$	7
ا) $ x_2 \neq x_1 $ $ x_2 \neq x_1$ $x \neq 1$ $D_f = \mathbb{R} - \{1\}$	ب) $ x_2 - x_1 \geq 0$ $ x_2 \geq x_1 $ $ x_2 \geq x_1$ $x \geq 1$ $D_f = [1, +\infty)$	8
$\sqrt{x-1} > 0$ $\sqrt{x} > 1$ $x > \frac{1}{4}$ $D_f = (1, 3]$	$\log_{\sqrt{x-1}} \sqrt{x-1} > 0$ $\sqrt{x-1} > 1$ $\sqrt{x} > 2$ $x > 4$ $\log_{\sqrt{x-1}} \sqrt{x-1} \geq 0$ $\log_{\sqrt{x-1}} \sqrt{x-1} \leq 1$ $\sqrt{x-1} \leq \sqrt{x-1}$ $\sqrt{x} \leq 4$ $x \leq 16$	9
ا) $\cos x + 1 > 0$ $\cos x > -1$ $D_f = \mathbb{R} - \{2k\pi - \frac{\pi}{2}, 2k\pi + \frac{\pi}{2}\}$	ب) $\frac{x-1}{x+1} > 0$ $\frac{-1}{x+1} > 0$ $\log \frac{x-1}{x+1} \geq 0 \rightarrow \frac{x-1}{x+1} \geq 1$ $\frac{-1}{x+1} \geq 0$ $\frac{-1}{x+1} \geq 0$	10

$$D_f = (-\infty, -1)$$