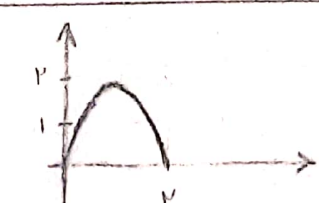
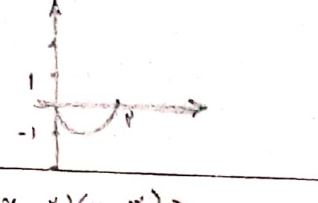
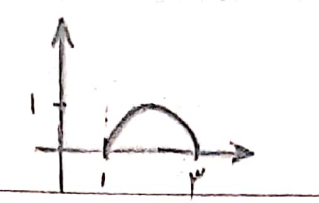
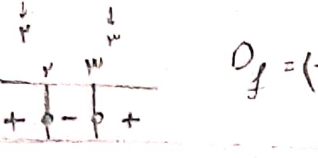
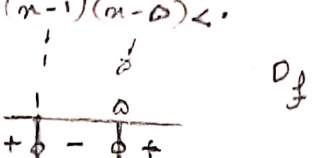
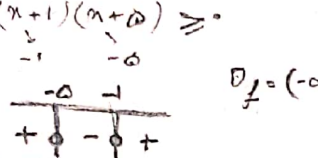
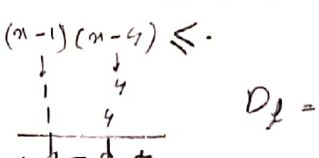
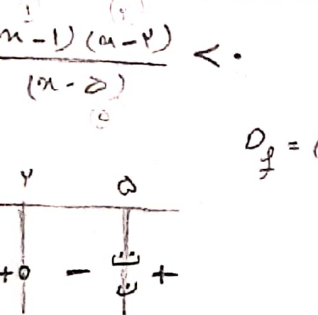
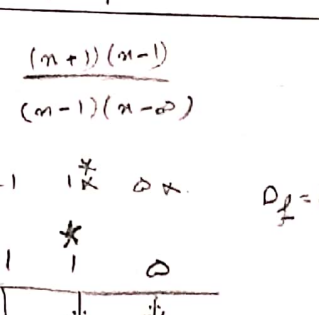
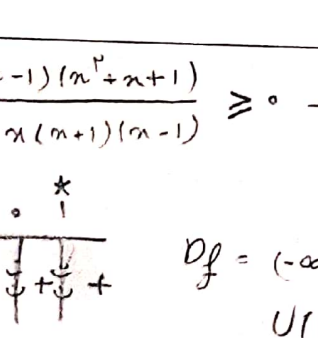
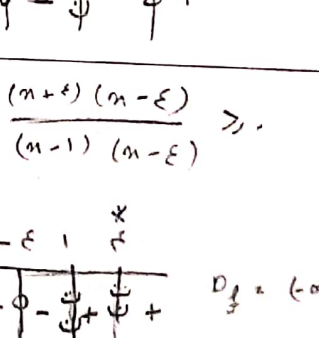


الف) 	ب) 	1
ج) 	د) 	2
الف) $(x-2)(x-3) > 0$  $D_f = (-\infty, 2) \cup (3, +\infty)$	ب) $(x-1)(x-5) < 0$  $D_f = (1, 5)$	3
ج) $(x+1)(x+5) \geq 0$  $D_f = (-\infty, -5] \cup [-1, +\infty)$	د) $(x-1)(x-4) \leq 0$  $D_f = [1, 4]$	4
الف) $\frac{(x-1)(x-2)}{(x-5)} < 0$  $D_f = (-\infty, 1) \cup (2, 5)$	ب) $\frac{(x+1)(x-1)}{(x-1)(x-5)}$  $D_f = (-\infty, -1] \cup (5, +\infty)$	5
الف) $\frac{(x-1)(x^2+x+1)}{x(x+1)(x-1)} \geq 0 \rightarrow$  $D_f = (-\infty, -1) \cup (0, +1) \cup (1, +\infty)$	ب) $\frac{(x+4)(x-4)}{(x-1)(x-4)} \geq 0$ *  $D_f = (-\infty, -4] \cup (1, 4) \cup (4, +\infty)$	6
الف) $2-x \geq 0 \Rightarrow x \leq 2$ $4-\sqrt{2-x} \geq 0 \Rightarrow \sqrt{2-x} \leq 4$ $2-x \leq 16$ $x \geq -14$ $D_f = [-14, 2]$	ب) $x-2 \geq 0 \Rightarrow x \geq 2$ $2-\sqrt{x-2} \geq 0 \Rightarrow \sqrt{x-2} \leq 2$ $x-2 \leq 4 \Rightarrow x \leq 6$ $D_f = [2, 6]$	7

$$1) \quad r - r|x|^2 \neq 0$$

$$r|x|^2 \leq r$$

$$|x|^2 \leq 1 \rightarrow -\sqrt{r} \leq x \leq \sqrt{r}$$

$$D_f = [-\sqrt{r}, \sqrt{r}]$$

$$2) \quad r|x| - r \geq 0$$

$$r|x| \geq r$$

$$|x| \geq 1$$

$$D_f = (-\infty, -1] \cup [1, +\infty)$$

6

$$3) \quad |x| - r \neq 0$$

$$|x| \neq r \quad x \neq r, -r$$

$$D_f = \mathbb{R} - \{-r, r\}$$

$$4) \quad x \geq 0$$

$$\sqrt{x} - r \neq 0 \Rightarrow x \neq r$$

$$D_f = [0, +\infty) - \{r\}$$

7

$$5) \quad r \cos x - 1 \neq 0$$

$$r \cos x \neq 1$$

$$\cos x \neq \frac{1}{r} \quad \oplus$$

$$D_f = \mathbb{R} - \{k\pi \pm \frac{\pi}{r}\}$$

$$6) \quad r \sin x + 1 \neq 0$$

$$r \sin x \neq -1$$

$$\sin x \neq -\frac{1}{r} \quad \oplus$$

$$D_f = \mathbb{R} - \{k\pi + \frac{11\pi}{2}, k\pi + \frac{3\pi}{2}\}$$

8

$$7) \quad \cot x - 1 \neq 0$$

$$\cot x \neq 1 \rightarrow x \neq k\pi + \frac{\pi}{4}$$

$$\cos x \neq 0 \quad \sin x \neq 0 \quad \oplus$$

$$D_f = \mathbb{R} - \{k\pi + \frac{\pi}{4}, k\pi + \frac{5\pi}{4}\}$$

$$8) \quad r \sin^2 x - r \neq 0$$

$$r \sin^2 x \neq r$$

$$\sin^2 x \neq 1 \quad \sin x \neq \pm 1$$

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

$$r|x - r| - \frac{1}{r} > 0$$

$$r|x - r| > \frac{1}{r}$$

$$|x - r| > \frac{1}{r^2}$$

$$x - r > \frac{1}{r^2} \Rightarrow x > r + \frac{1}{r^2}$$

$$r - x > \frac{1}{r^2} \Rightarrow x < r - \frac{1}{r^2}$$

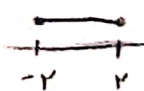
$$\Rightarrow D_f = (-\infty, r - \frac{1}{r^2}) \cup (r + \frac{1}{r^2}, +\infty)$$

9

$$9) \quad r - r|x| \geq 0$$

$$r \geq r|x|$$

$$1 \geq |x|$$



$$D_f = [-1, 1]$$

$$10) \quad \frac{|x|}{|x|} \rightarrow |x| \geq 0 \quad x \neq 0 \Rightarrow x \neq 0$$

$$\Rightarrow D_f = \mathbb{R} - \{0\}$$

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