

الاستاذ

سؤال ١

الف) $2\cos x + 1 \neq 0$ $\cos x \neq -\frac{1}{2}$ $D_f = \mathbb{R} - \{2K\pi \pm \frac{2\pi}{3}\}$

ب) $\cos x - 1 \neq 0$ $\cos x \neq 1$ $D_f = \mathbb{R} - \{2K\pi\}$

سؤال ٢

الف) $\tan x + 1 \neq 0$ $\tan x \neq -1$

$\tan x = \frac{\sin}{\cos} \neq 0$

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

ب) $\cot x - 1 \neq 0$ $\cot x \neq 1$

$\cot x = \frac{\cos}{\sin} \neq 0$

$D_f = \mathbb{R} - \{K\pi, 2K\pi \pm \frac{\pi}{4}\}$

سؤال ٣

الف) $-1 \leq x^2 - 2 \leq 1$

$1 \leq x^2 \leq 3$

$\sqrt{1} \leq |x| \leq \sqrt{3}$

$D_f = [-\sqrt{3}, -1] \cup [1, \sqrt{3}]$

$$1 - \sqrt{x} \leq 1$$

$$2 \leq \sqrt{x} \leq 4$$

$$4 \leq x \leq 16$$

$$D_f = [4, 16]$$

سوال ١٤

$$1 - |x| \leq 1$$

$$2 \leq |x| \leq 4$$

$$D_f = [-4, -2] \cup [2, 4]$$

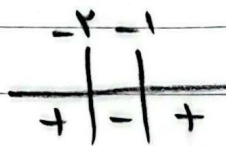
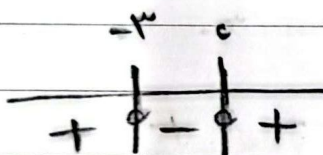
ب)

$$-1 \leq x^2 + 3x + 1 \leq 1$$

سوال ١٥

$$x^2 + 3x + 1 \leq 1 \quad x^2 + 3x \leq 0 \quad x(x+3) \leq 0$$

$$x^2 + 3x + 1 \geq -1 \quad x^2 + 3x + 2 \geq 0 \quad (x+1)(x+2) \geq 0$$



$$[0, -3]$$

$$(-\infty, -2] \cup [-1, +\infty)$$

$$D_f = [-3, -2] \cup [-1, 0]$$

$$x^2 - 4 > 0 \quad x^2 > 4 \quad D_f = \mathbb{R} - [-2, 2]$$

سوال ١٦

$$2 - |x| > 0$$

$$|x| < 2$$

$$D_f = (-2, 2)$$

$$5 - x > 0$$

سوال ١٧

$$5 > x \quad x < 5$$

$$x - 3 > 0 \quad x > 3$$

$$D_f = (3, 5)$$

$$x - 3 \neq 1 \quad x \neq 4$$



$$1 \quad 1$$

$$b) \quad x^2 - 1 > 0 \quad x^2 > 1$$

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

$$x + 3 > 0 \quad x > -3$$

$$x + 3 \neq 0 \quad x \neq -3$$

الف) $\frac{(x-1)(x-3)}{x-3}$

$$\begin{array}{c} x \\ 1 \quad 3 \\ | \quad | \\ - \quad + \\ + \quad - \end{array}$$

سوال ٢

معرّف نشود

$$D_f = (1, 3) \cup (3, +\infty)$$

ب) $\frac{x+3}{x-3} > 0$

$$\begin{array}{c} -3 \quad 3 \\ | \quad | \\ + \quad - \\ + \quad - \end{array}$$

$$x + 3 > 0 \quad x > -3 \quad D_f = (-3, -3) \cup (3, +\infty)$$

$$x + 3 \neq 0 \quad x \neq -3$$

سوال ٨

الف) $x - 2 > 0 \quad x > 2 \quad 2 - \log_r^{x-2} \geq 0$

$$\log_r^{x-2} \leq 2 \quad x - 2 \leq 1 \quad x \leq 1 + 2 \quad x \leq 3$$

$$D_f = (2, 3]$$

ب) $x > 0 \quad 2 \log_r^x > 1$

$$\log_r^x > \frac{1}{2} \quad x > \sqrt{r}$$

● dotnote

$$D_f = (\sqrt{r}, +\infty)$$

الف) $\epsilon^n + 1 \neq 0$ $\epsilon^n \neq -1$ $D_f = \mathbb{R}$ سوال ٩

ب) $\epsilon^n - 1 \neq 0$ $\epsilon^n \neq 1$ $D_f = \mathbb{R} - \{0\}$

ج) $\epsilon^n \neq 2$ $D_f = \mathbb{R} - \{\frac{1}{2}\}$

د) $\epsilon^n \neq 3$ $D_f = \mathbb{R} - \{\log_{\epsilon} 3\}$

الف) $\epsilon n + 1 = w$ $\epsilon n = w - 1$ سوال ١٠

$$n = \frac{w-1}{\epsilon}$$

$$D_f = \left\{ n \mid n = \frac{K-1}{\epsilon}, K \in w \right\}$$

ب) $D_f = \left\{ \frac{wK-1}{\epsilon K-1}, K \in w \right\}$ جواب