

۱۹۱۷۵ آفرین خوب‌نور

$$a-2=0 \Rightarrow a=2 \rightarrow \sqrt{2x+b} \rightarrow 2+b=0 \Rightarrow b=-2$$

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$$\Delta \leq 0 \rightarrow 4-1+4m^2 \leq 0 \rightarrow 4m^2-4 \leq 0 \rightarrow m^2-1 \leq 0$$

$$-1 \leq m \leq 1 \rightarrow 1-(-1)=2$$

سخت‌ترین به‌ترین

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$$4-x^2 \geq 0 \rightarrow x \geq -2$$

$$[x] + [x] + 1 \rightarrow x \in \mathbb{Z} \rightarrow 1 \rightarrow \checkmark$$

$$x \in \mathbb{R} - \mathbb{Z} \rightarrow 0 = [x] + [x] + 1 = 0$$

تعریف نشده

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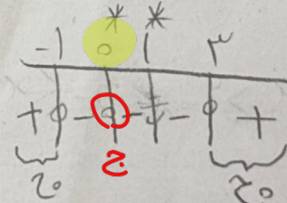
$$x^2(x+3) \geq 0 \rightarrow \frac{-3}{-} \frac{0}{+} \frac{+}{+} \quad D_f: [-3, +\infty)$$

الف)

$$x^2-1=0 \rightarrow x=1 \text{ و } -1$$

$$x^3-1=0 \rightarrow x=1$$

$$x^3-2x^2=0 \rightarrow x^2(x-2)=0 \rightarrow x=0, 2$$



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$$|x-2| \geq 3 \rightarrow \begin{cases} x-2 \geq 3 \rightarrow x \geq 5 \\ x-2 \leq -3 \rightarrow x \leq -1 \end{cases} \quad D_f: (-\infty, -1] \cup [5, +\infty)$$

الف)

$$4 \geq |x-2| \rightarrow 4 \geq 2-x \geq -4 \rightarrow -2 \leq x \leq 6 \quad D_f: [-2, 6]$$

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$1 > x \xrightarrow{x \geq 0} 1 > x^2 \rightarrow 1 \geq x \geq -1$ $\xrightarrow{x \leq 0} 1 > -x^2 \rightarrow -1 \leq x^2 \checkmark \quad D_f: (-\infty, 1]$	(الف)	٦
$\rightarrow 3 \geq x-5 \rightarrow 8 \geq x \geq 2$ $\rightarrow \sqrt{5 x-5 } \neq 1 \rightarrow 3 - x-5 \neq 1 \rightarrow x-5=2 \rightarrow x=7$ $\rightarrow x-5=-2 \rightarrow x=3$ $D_f: [2, 8] - \{3, 7\}$	(ب)	٧
$\cos x \neq 0 \rightarrow D_f: \mathbb{R} - \{k\pi + \frac{\pi}{2}\}$	(الف)	٧
$\cos x \neq \frac{1}{2} \rightarrow D_f: \mathbb{R} - \{2k\pi + \frac{\pi}{3}, 2k\pi - \frac{\pi}{3}\}$	(ب)	٧
$ 2x+1 = x+3 \xrightarrow{\text{مربع}} 4x^2 + 4x + 1 = x^2 + 9 + 6x \rightarrow 3x^2 - 2x - 8 = 0$ $x = \frac{2 \pm 10}{6} \rightarrow x = 2 \text{ و } -\frac{4}{3} \rightarrow D_f: \mathbb{R} - \{-\frac{4}{3}, 2\}$	(الف)	٨
$ 2x+1 \geq x+3 \xrightarrow{\text{مربع}} 3x^2 - 2x - 8 \geq 0 \rightarrow \frac{-2 \pm \sqrt{4 + 96}}{6}$ $D_f: (-\infty, -\frac{4}{3}] \cup [2, +\infty)$	(ب)	٨
$2x-1 > 0 \rightarrow x > \frac{1}{2} \quad \log_2^{2x-1} > 0 \rightarrow 2x-1 > 1 \rightarrow x > 1$ $\log_{\frac{1}{2}}^{\log_2^{2x-1}} > 0 \rightarrow \log_2^{2x-1} \leq 1 \rightarrow 2x \leq 4 \rightarrow x \leq 2$ $D_f: (1, 2]$	(ب)	٩
$2(\cos x + 1) > 0 \rightarrow \cos x > -\frac{1}{2}$ $D_f: \mathbb{R} - [2k\pi + \frac{2\pi}{3}, 2k\pi + \frac{4\pi}{3}]$	(الف)	١٠
$\rightarrow \frac{x-1}{x+1} > 0 \rightarrow \frac{-1}{-1+1} \rightarrow (-\infty, -1) \cup (1, +\infty)$ $\rightarrow \log \frac{x-1}{x+1} \geq 0 \rightarrow \frac{x-1}{x+1} \geq 1 \rightarrow \frac{-2}{x+1} \geq 0 \rightarrow D_f: (-\infty, -1)$	(ب)	١٠

$$4- \text{جـ}) \frac{(n^2-1)(n^2-n^2)}{(n^2-1)} \geq 0 \rightarrow \frac{(n-1)(n+1)(n^2)(n-1)}{(n-1)(n^2+n+1)} \geq 0$$

$$\begin{array}{ccccccc} & -1 & * & 0 & * & 1 & 3 \\ + & | & - & | & - & | & + \end{array}$$

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

منه $n=0$ و $n=1$ و $n=3$