

باتوجه به بازه‌ی تعریف داحنه، نتیجه‌ی گیرم تابع خطی است؛ پس:

$$a-2=0 \Rightarrow a=2$$

$$2x+b \xrightarrow{x=3} 6+b=0 \Rightarrow \boxed{b=-6}$$

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$$x^2+2x+2-m^2$$

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

بیشترین کمترین

$$\rightarrow 1-(-1) = \boxed{2}$$

$$4-x^2 \geq 0 \Rightarrow x^2 \leq 4 \Rightarrow -2 \leq x \leq 2 \Rightarrow x = \{-2, -1, 0, 1, 2\} \rightarrow \boxed{5}$$

$$[x] + [-x] + 1 = \begin{cases} \rightarrow x \in \mathbb{Z} \rightarrow 1 \\ \rightarrow x \notin \mathbb{Z} \rightarrow 0 \rightarrow 0 \end{cases}$$

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الف) $x^3+3x^2 \geq 0 \Rightarrow x^2(x+3) \geq 0$

$$\rightarrow \frac{-3}{-1+1} \Rightarrow \boxed{D_f = [-3, +\infty)}$$

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

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

الف) $|x-2|-3 \geq 0 \Rightarrow |x-2| \geq 3 \Rightarrow 3 \leq x-2 \leq -3 \Rightarrow 5 \leq x \leq -1$

$$\Rightarrow \boxed{D_f = (-\infty, -1] \cup [5, +\infty)}$$

ب) $|2-x| \leq 4 \Rightarrow -4 \leq 2-x \leq 4 \Rightarrow -6 \leq -x \leq 2 \Rightarrow -2 \leq x \leq 6$

$$\Rightarrow \boxed{D_f = [-2, 6]}$$

$$\text{الف) } |x| \geq 0 \Rightarrow x \geq 0 \Rightarrow x \leq 1 \Rightarrow x \leq 1 \quad \text{و} \quad x < 0 \Rightarrow -x \leq 1 \Rightarrow x \geq -1 \Rightarrow x \in \mathbb{R}$$

$$\Rightarrow D_f = (-\infty, 1]$$

1, 2, 5

$$\text{ب) } 2 - |x-1| > 0 \Rightarrow |x-1| < 2 \Rightarrow -2 < x-1 < 2 \Rightarrow -1 < x < 3$$

$$\Rightarrow D_f = (-1, 3)$$

$$\sqrt{3-1n-1} - 1$$

$$3-1n-1 \geq 0$$

صورت سوال را اینجابه نوشتی!

$$\sqrt{3-1n-1} - 1 \neq$$

$$\text{ج) } \cos x \neq 0 \Rightarrow x \neq \frac{\pi}{2}, \frac{3\pi}{2} \Rightarrow D_f = \mathbb{R} - \left\{ \frac{\pi}{2}, \frac{3\pi}{2} \right\}$$

$$\text{د) } |\cos x| \neq 1 \Rightarrow \cos x \neq \pm 1 \Rightarrow x \neq \frac{\pi}{2}, \frac{3\pi}{2}$$

$$\Rightarrow D_f = \mathbb{R} - \left\{ \frac{\pi}{2}, \frac{3\pi}{2} \right\}$$

$$\text{ه) } |x+1| - |x+3| \neq 0 \Rightarrow |x+1| \neq |x+3| \Rightarrow x+1 \neq x+3 \Rightarrow x \neq 2$$

$$\text{و) } |x+1| - |x+3| \geq 0$$

ادامه؟

$$\begin{aligned} & \rightarrow x+1 \neq -x-3 \Rightarrow x \neq -2 \\ & \rightarrow -x-1 \neq -x-3 \Rightarrow x \neq 2 \\ & \rightarrow -x-1 \neq x+3 \Rightarrow x \neq -2 \end{aligned}$$

$$\Rightarrow D_f = \mathbb{R} - \left\{ -2, 2 \right\}$$

$$2x-1 > 0 \Rightarrow 2x > 1 \Rightarrow x > \frac{1}{2} \text{ (I)}$$

$$\log_2^{2x-1} > 0 \Rightarrow 2x-1 > 1 \Rightarrow 2x > 2 \Rightarrow x > 1 \text{ (II)}$$

$$\log_{\log_2^{2x-1}} > 0 \Rightarrow \log_2^{2x-1} \leq 1 \Rightarrow 2x-1 \leq 2 \Rightarrow 2x \leq 3 \Rightarrow x \leq \frac{3}{2} \text{ (III)}$$

$$\text{(I)} \cap \text{(II)} \cap \text{(III)} \Rightarrow D_f = \left(\frac{1}{2}, \frac{3}{2} \right]$$

$$\text{و) } 2\cos x + 1 > 0 \Rightarrow 2\cos x > -1 \Rightarrow \cos x > -\frac{1}{2} \Rightarrow D_f = \left(2k\pi - \frac{2\pi}{3}, 2k\pi + \frac{2\pi}{3} \right)$$

$$\text{ب) } \frac{x-1}{x+1} > 0 \Rightarrow \frac{-1}{x+1} > 0 \Rightarrow x = (-\infty, -1) \cup (1, +\infty) \text{ (I)}$$

$$\log_{\frac{x-1}{x+1}} > 0 \Rightarrow \frac{x-1}{x+1} > 1 \Rightarrow \frac{x-1-x-1}{x+1} > 0 \Rightarrow \frac{-2}{x+1} > 0 \Rightarrow x = (-\infty, -1) \text{ (II)}$$

$$\text{(I)} \cap \text{(II)} \Rightarrow D_f = (-\infty, -1)$$

$$4- \text{ب) } 3 - |n-5| \geq 0 \rightarrow |n-5| \leq 3 \rightarrow -3 \leq n-5 \leq 3 \rightarrow 2 \leq n \leq 8$$

$$\sqrt{3 - |n-5|} - 1 \neq 0 \rightarrow \sqrt{3 - |n-5|} \neq 1 \rightarrow 3 - |n-5| \neq 1 \rightarrow |n-5| \neq 2 \rightarrow n \neq 7, 3$$

$$Df = [2, 8] - \{3, 7\} = [2, 3) \cup (3, 7) \cup (7, 8]$$

$$8- \text{ب) } |2n+1| - |n+3| \geq 0 \rightarrow |2n+1| \geq |n+3| \xrightarrow{\text{نقل}} \leq n^2 + 2n + 1 \geq n^2 + 4n + 9 \rightarrow n^2 - 2n - 8 \geq 0$$

$$\frac{-\frac{1}{2} \pm \sqrt{\frac{1}{4} + 8}}{2} \rightarrow Df = (-\infty, -\frac{1}{2}] \cup [\frac{5}{2}, +\infty)$$
