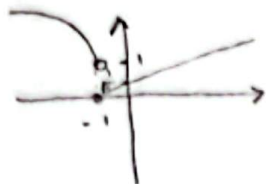


نام و نام خانوادگی: پاسخنامه تشریحی تکلیف شماره ۲... کلاس دهم / دبیر:
 تاریخ: / /

$$x = \begin{cases} y-1 & y \geq 0 \\ -y^2 & y > 1 \end{cases} \quad \begin{cases} y-1=x & y \geq 0 \\ -y^2=x & y > 1 \end{cases} \quad \begin{cases} y = \frac{x+1}{y} & y \geq 0 \\ y = \pm \sqrt{-x} & y > 1 \end{cases} \quad \begin{cases} x \geq -1 \\ x < -1 \end{cases}$$



هیچ خطی عمودی ندارد، اما دو بار قطع نمی‌کند. تابع است.

$$f(x) = 0 \quad x = -1, 0, 1 \quad f(x-2) = 0 \quad x = -2, 0, 2$$

$$D_g = (-1, -2] \cup [0, 1) \cup [2, +\infty)$$

الف) $x^3 - 4x = 0 \quad x(x-2)(x+2) = 0 \quad x = -2, 0, 2 \quad D_f = \mathbb{R} - \{-2, 0, 2\}$

ب) $\frac{2x^2 - 4x + 2}{x^3 - 4x} > 0 \rightarrow \frac{2x^2 - 4x + 2}{x(x-2)(x+2)} > 0 \rightarrow \frac{-1}{-1} + \frac{0}{0} + \frac{1}{1} > 0$

$$D_{\frac{1}{f}} = (-2, 0) \cup (2, +\infty)$$

الف) $y = \sqrt{\frac{x-2}{x^2-2x^2-1}} \geq 0 \quad \frac{x-2}{x^2-2x^2-1} \geq 0 \quad \frac{x-2}{(x^2-1)(x^2+1)} \geq 0$

$$\frac{x-2}{(x-1)(x+1)(x^2+1)} \geq 0 \rightarrow \frac{-1}{-1} + \frac{0}{0} + \frac{1}{1} \geq 0 \quad D_f = (-2, 1) \cup (1, +\infty)$$

ب) $t = 2[-x] = 0 \quad [-x] = 2 \quad x = (-2, 2] \quad D_f = \mathbb{R} - (-2, 2]$

الف) $|x| - 1 > 0 \quad |x| > 1 \quad x > 1 \quad x < -1$
 $x(x-1)(x+1) > 0 \quad \frac{-1}{-1} + \frac{0}{0} + \frac{1}{1} > 0 \rightarrow D_f = [1, +\infty) \cup (-\infty, -1]$

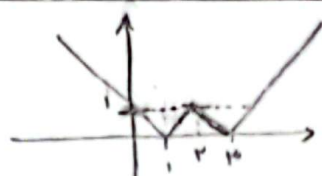
ب) $|x| - 1 = 0 \quad |x| = 1 \quad x = \pm 1 \quad |x-2| \leq x^2 \quad x^2 \leq |x-2|$

$x \geq 2 \rightarrow x^2 \leq x-2 \quad x^2 - x + 2 \leq 0 \quad \Delta < 0$
 $x < 2 \rightarrow x^2 \leq -x+2 \quad x^2 + x - 2 \leq 0 \quad (x+2)(x-1) \leq 0 \rightarrow \frac{-2}{-1} + \frac{1}{1} \leq 0 \quad D_f = (-2, -1) \cup (1, 2)$

الف) $y = \sqrt{x-2} [x-2]$ $\frac{x}{y} + \frac{1}{x} = \frac{1}{x-2}$ $D = \mathbb{R}$

ب) $y = \sqrt{|x-1|} [x-1]$ $\frac{x}{y} + \frac{1}{x} = \frac{1}{x-1}$ $D = [1, +\infty) \cup \{1\}$

$||x-2|-1-k|=0$ $k = ||x-2|-1|$



محدودار تنها $y=1$ است، قطع می کند $\leftarrow k=1$

$x^2 - 4x + 2 = 0$ $(x-2)(x+1) = 0$ $x = -2$ $x = -1$

$x-1 = 0$ $x = 1$ $\frac{x+1}{x-1} = 0$ $x = -1$

$D_f' = \{-2, -1, 1\}$ $n(D_f') = 0 \Rightarrow n = \infty$ $x^2 - 4x + 2 = 0$

$x^2 - 4x + 2 = 0$ $(x-2)^2 = 0$ $x = 2 \rightarrow \frac{1}{x-2}$

$y = \log \log \frac{1}{x}$ $\log \frac{1}{x} > 0$ $-\log x > 0$ $\log x < 0$

$D_f = (1, +\infty)$

$-\omega \leq x \leq \omega$ $D_{f(n,1)} = (-\infty, \sqrt{t}]$

$x \leq \sqrt{\omega}$

$\sqrt{x} \leq \sqrt{\omega}$

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