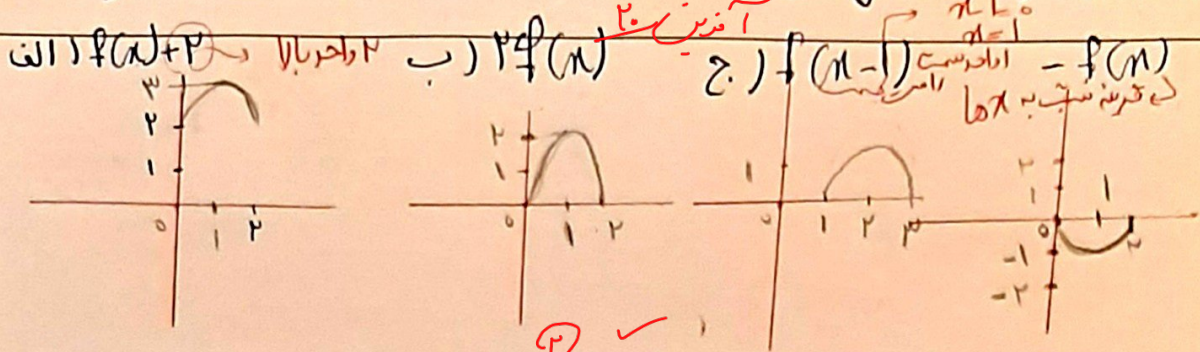


نام و نام خانوادگی: زهرا ایبارا... پاسخنمه تشریحی تکلیف شماره ۱۱۰... کلاس: دهم دختره



الف) $x^2 - 4x + 6 > 0 \Rightarrow (x-2)(x-3) > 0$
 $\rightarrow x-2=0 \rightarrow x=2 \rightarrow x^2=0 \rightarrow x=2$
 $\rightarrow x-3=0 \rightarrow x=3 \rightarrow x^2=0 \rightarrow x=3$
 ب) $x^2 - 6x + 4 < 0 \Rightarrow (x-1)(x-4) < 0$
 $\rightarrow x-1=0 \rightarrow x=1 \rightarrow x-4=0 \rightarrow x=4$
 ج) $x^2 - 7x + 6 > 0$
 $\rightarrow x-1=0 \rightarrow x=1 \rightarrow x-6=0 \rightarrow x=6$

د) $x^2 - 9x + 14 \leq 0 \Rightarrow (x-2)(x-7) \leq 0$
 $\rightarrow x-2=0 \rightarrow x=2 \rightarrow x-7=0 \rightarrow x=7$
 $\rightarrow x-1=0 \rightarrow x=1 \rightarrow x-6=0 \rightarrow x=6$
 $\rightarrow x-4=0 \rightarrow x=4 \rightarrow x-1=0 \rightarrow x=1$

الف) $x^2 - 3x + 2 < 0 \Rightarrow (x-1)(x-2) < 0$
 $\rightarrow x-1=0 \rightarrow x=1 \rightarrow x-2=0 \rightarrow x=2$
 ب) $x^2 - 1 > 0 \Rightarrow (x-1)(x+1) > 0$
 $\rightarrow x-1=0 \rightarrow x=1 \rightarrow x+1=0 \rightarrow x=-1$
 ج) $x^2 - 6x + 4 > 0 \Rightarrow (x-1)(x-4) > 0$
 $\rightarrow x-1=0 \rightarrow x=1 \rightarrow x-4=0 \rightarrow x=4$

الف) $y = \sqrt{\frac{x^3-1}{x^3-x}} \geq 0$
 $\rightarrow x^3-1 \geq 0 \rightarrow x^3 \geq 1 \rightarrow x \geq 1$
 $\rightarrow x^3-x \geq 0 \rightarrow x(x^2-1) \geq 0 \rightarrow x(x-1)(x+1) \geq 0$
 $\rightarrow x=1 \rightarrow x=-1$
 ب) $y = \sqrt{\frac{x^2-4}{x^2-5x+6}} \geq 0$
 $\rightarrow x^2-4 \geq 0 \rightarrow (x-2)(x+2) \geq 0 \rightarrow x=2 \rightarrow x=-2$
 $\rightarrow x^2-5x+6 \geq 0 \rightarrow (x-2)(x-3) \geq 0 \rightarrow x=2 \rightarrow x=3$

الف) $y = \sqrt{4-\sqrt{2-x}} \geq 0$
 $\rightarrow 4-\sqrt{2-x} \geq 0 \Rightarrow \sqrt{2-x} \leq 4 \Rightarrow 2-x \leq 16 \Rightarrow x \geq -14$
 $\rightarrow 2-x \geq 0 \Rightarrow x \leq 2$
 $\rightarrow x \in [-14, 2]$
 ب) $y = \sqrt{3-\sqrt{x+1}} \geq 0$
 $\rightarrow 3-\sqrt{x+1} \geq 0 \Rightarrow \sqrt{x+1} \leq 3 \Rightarrow x+1 \leq 9 \Rightarrow x \leq 8$
 $\rightarrow x+1 \geq 0 \Rightarrow x \geq -1$
 $\rightarrow x \in [-1, 8]$

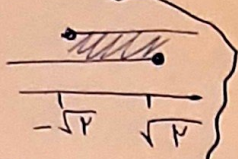


زهراسادات عمل آسانی

الف) $y = \sqrt{4 - 2x^2} \geq 0$ (ب) $y = \sqrt{3|x| - 9} \geq 0$

$4 - 2x^2 \geq 0$
 $2x^2 \leq 4$
 $x^2 \leq 2$
 $-\sqrt{2} \leq x \leq \sqrt{2}$
 $D_f = [-\sqrt{2}, \sqrt{2}]$

$3|x| - 9 \geq 0 \rightarrow 3|x| \geq 9 \rightarrow |x| \geq 3$
 $x \geq 3$
 $x \leq -3$
 $D_f = (-\infty, -3] \cup [3, +\infty)$




(ب) ✓

الف) $y = \frac{3}{\frac{|x|+1}{|x|-3}} \neq 0$ (ب) $y = \frac{3}{\sqrt{x+1} - \frac{3}{x}}$

$\frac{|x|+1}{|x|-3} \neq 0$
 $|x| \neq 3$
 $x \neq \pm 3$
 $D_f = \mathbb{R} - \{\pm 3\}$

$\sqrt{x+1} - \frac{3}{x} \neq 0$
 $\sqrt{x+1} \neq \frac{3}{x}$
 $x \neq 9$
 $x \geq 0$
 $D_f = [0, +\infty) - \{9\}$

نیز 3 محدودیت ندارد و فقط محدوج بنایید مساوی صفر باشد.

ب) ✓

بالای قسمت ۷
 سوال ۱۱
 سمت چپ
 بالایی
 سوال ۹ نوشته شده

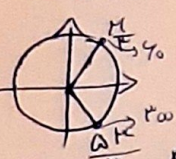
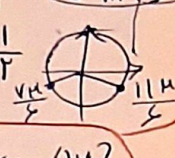
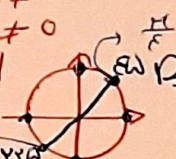
الف) $y = \frac{\sin x}{2\cos x - 1} \neq 0$ (ب) $y = \frac{\cos x + 1}{2\sin x + 1} \neq 0$

$2\cos x \neq 1 \rightarrow \cos x \neq \frac{1}{2}$
 $D_f = \mathbb{R} - \{2k\pi + \frac{\pi}{3}, 2k\pi + \frac{5\pi}{3}\}$

$2\sin x + 1 \neq 0$
 $\sin x \neq -\frac{1}{2}$
 $D_f = \mathbb{R} - \{2k\pi + \frac{7\pi}{6}, 2k\pi + \frac{11\pi}{6}\}$

$\cos x \neq \frac{1}{2}$
 $\sin x \neq -\frac{1}{2}$
 $\cot x \neq 1$

$y = \frac{\tan x + 2}{\cot x - 1} \neq 0 \rightarrow y = \frac{\sin x}{\cos x - 1} \neq 0$
 $\cos x \neq 1$
 $D_f = \mathbb{R} - \{k\pi, k\pi + \frac{\pi}{2}\}$

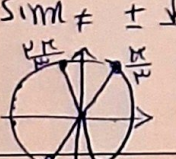
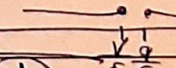




(ب) ✓

الف) $y = \frac{\sin x + 1}{\sqrt{\sin x^2 - 3}} \neq 0$ (ب) $y = \frac{1}{\sqrt{3|x| - 1} - \frac{1}{x}}$

$\sqrt{\sin x^2 - 3} \neq 0$
 $\sin x^2 \neq 3$
 $\sin x \neq \pm \sqrt{3}$
 $D_f = \mathbb{R} - \{k\pi + \frac{\pi}{2}, k\pi + \frac{3\pi}{2}\}$

$\sqrt{3|x| - 1} - \frac{1}{x} \neq 0$
 $\sqrt{3|x| - 1} \neq \frac{1}{x}$
 $|x| \geq \frac{1}{3}$
 $|x - 2| > \frac{1}{3}$
 $|x + 2| > \frac{1}{3}$
 $x - 2 < -\frac{1}{3}, x - 2 > \frac{1}{3}$
 $x < \frac{5}{3}, x > \frac{7}{3}$
 $D_f = (-\infty, \frac{5}{3}) \cup (\frac{7}{3}, +\infty)$

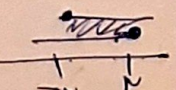
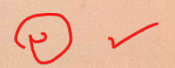



(ب) ✓

الف) $y = \sqrt{(x-2)|x|} \geq 0$ (ب) $y = \frac{|x|}{|x|} \geq 0$

$(x-2)|x| \geq 0$
 $2|x| \leq x$
 $|x| \leq 2$
 $-2 \leq x \leq 2$
 $D_f = [-2, 2]$

$\frac{|x|}{|x|} \geq 0$
 $|x| \neq 0$
 $x \neq 0$
 $D_f = \mathbb{R} - \{0\}$

(ب) ✓