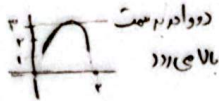
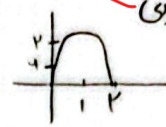


نام و نام خانوادگی آذین، علیرضا پاسخنامه تشریحی تکلیف شماره ... ۵ ... کلاس ... دبیر ... ۱۳۹۷

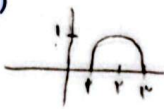
الف) $f(x) + 2$



ب) $2f(x)$

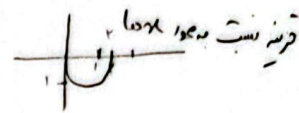


ج) $f(x-1)$



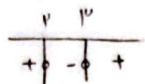
تلف وادار است ✓

د) $-f(x)$



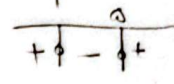
۱

الف) $x^2 - 5x + 4 \leq 0$
 $(x-2)(x-3) \leq 0$
 سانی شماره



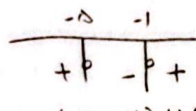
$D_f = (-\infty, 2) \cup (3, +\infty)$

ب) $x^2 - 4x + 5 \leq 0$
 $(x-1)(x-5) \leq 0$
 مساوی ندارد
 $D_f = [1, 5]$



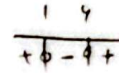
۲

ج) $x^2 + 2x + 5 > 0$
 $(x+1)(x+5) > 0$
 -1 -5



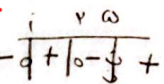
$D_f = (-\infty, -1) \cup (-5, +\infty)$

د) $x^2 - 5x + 4 \leq 0$
 $(x-1)(x-4) \leq 0$
 1 4
 $D_f = [1, 4]$



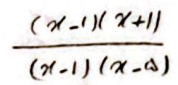
۳

الف) $\frac{x^2 - 3x + 2}{x - 5} < 0$
 $(x-1)(x-2) < 0$
 سانی شماره
 $D_f = (-\infty, 1) \cup (2, 5)$



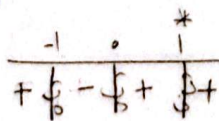
$D_f = (-\infty, 1) \cup (2, 5)$

ب) $\frac{x^2 - 1}{x^2 - 2x + 5} > 0$
 $\frac{(x-1)(x+1)}{(x-1)(x-5)} > 0$
 $\frac{-1}{1} \frac{5}{5}$
 $D_f = (-\infty, -1] \cup (5, +\infty)$

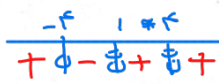


۴

الف) $\sqrt{\frac{x^3 - 1}{x^3 - x}} > 0$
 $\frac{(x-1)(x^2 + x + 1)}{x(x-1)(x+1)} > 0$
 $x \neq 1, x \neq -1, x \neq 0$
 $D_f = (-\infty, -1) \cup (0, 1) \cup (1, +\infty)$



ب) $\sqrt{\frac{x^2 - 4}{x^2 - 5x + 6}} > 0$
 $\frac{(x-2)(x+2)}{(x-2)(x-3)} > 0$
 $\frac{x+2}{x-3} > 0$
 $D_f = (-\infty, -2] \cup (3, +\infty)$



۵

الف) $\sqrt{4\sqrt{2-x}}$

$2-x \geq 0$

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

$2-x \leq 16$

$\Rightarrow D_f = -14 \leq x \leq 2$

$2-x \leq 16 \Rightarrow x \geq -14$

✓

ب) $y = \sqrt{3\sqrt{x-2}}$

$x-2 \geq 0$

$x \geq 2$

$3 - \sqrt{x-2} \geq 0$

$\sqrt{x-2} \geq 3$

$x-2 \geq 9 \Rightarrow x \geq 11$

$\Rightarrow D_f = x \leq 11$

الف) $y = \sqrt{4-2x^2}$ $4-2x^2 \geq 0$ $2x^2 \leq 4$ $x^2 \leq 2$ $D_f = -\sqrt{2} \leq x \leq \sqrt{2}$	$y = \sqrt{3 x -9}$ $3 x -9 \geq 0$ $3 x \geq 9$ $x \geq 3$ $x \leq -3$ $x \geq 3$ $D_f = x \leq -3 \cup x \geq 3$	6
الف) $y = \sqrt[3]{\frac{ x +1}{ x -3}}$ $x -3 \neq 0$ $x \neq 3$ $x \neq \pm 3$ $D_f = (-\infty, -3) \cup (-3, 3) \cup (3, +\infty)$	ب) $y = \sqrt{\frac{\sqrt{x}+1}{\sqrt{x}-3}}$ $\sqrt{x} \geq 0$ $x \geq 0$ $\sqrt{x}-3 \neq 0$ $\sqrt{x} \neq 3$ $x \neq 9$ $D_f = [0, 9) \cup (9, +\infty)$	7
الف) $y = \frac{\sin x}{2\cos x - 1} \neq 0$ $\cos x \neq \frac{1}{2}$ $D_f = R - \{x x = \pm \frac{\pi}{3}\}$ ب) $y = \frac{\tan x + 2}{\cot x - 1} \neq 0$ $\cot x \neq 1$ $D_f = R - \{x x = \pm \frac{\pi}{4}\}$ 	ب) $y = \frac{\cos x + 1}{2\sin x + 1} \neq 0$ $\sin x \neq -\frac{1}{2}$ $D_f = R - \{x x = \frac{7\pi}{6}, \frac{11\pi}{6}\}$ د) $y = \frac{\sin x + 1}{2\sin^2 x + 1} \neq 0$ $\sin^2 x \neq -\frac{1}{2}$ $\sin x = \pm \sqrt{\frac{1}{2}}$ $D_f = R - \{x x = \frac{\pi}{4}, \frac{3\pi}{4}, \frac{5\pi}{4}, \frac{7\pi}{4}\}$	8
$\frac{1}{\sqrt{ x -1} - \frac{1}{x}} > 0$ $x -1 > \frac{1}{x}$ $x-1 > \frac{1}{x}$ $x+1 > \frac{1}{x} \Rightarrow x > \frac{1}{x}$ $x-1 > \frac{1}{x} \Rightarrow x < \frac{1}{x}$ $D_f = (-\infty, \frac{1}{e}) \cup (\frac{1}{e}, +\infty)$	$x-1 > \frac{1}{x}$ $x-1 > \frac{1}{x}$ $x+1 > \frac{1}{x} \Rightarrow x > \frac{1}{x}$ $x-1 > \frac{1}{x} \Rightarrow x < \frac{1}{x}$ $D_f = (-\infty, \frac{1}{e}) \cup (\frac{1}{e}, +\infty)$	9
$y = \sqrt{4-2 x } \geq 0$ $4-2 x \geq 0$ $2 x \leq 4$ $x \leq 2$ $x \leq 2$ $x \geq -2$ $D_f = -2 \leq x \leq 2$	$y = \sqrt{\frac{ x }{ x }}$ $\frac{ x }{ x } = 1$ $y = \sqrt{1} = 1$ $D_f = R - \{0\}$	10