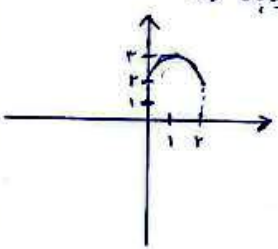
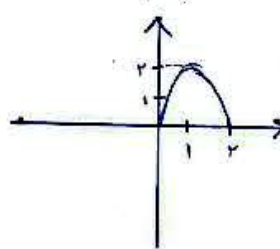
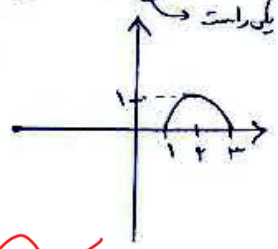
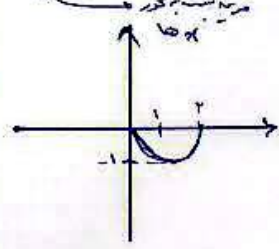
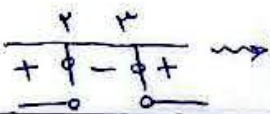
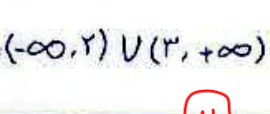
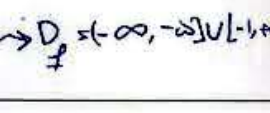
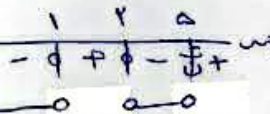
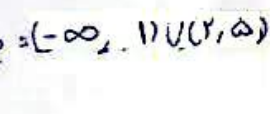
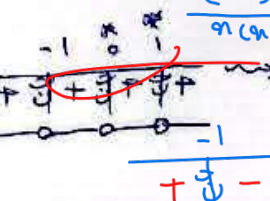
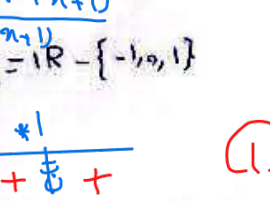
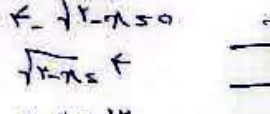


نام و نام خانوادگی پاسخنامه تشریحی تکلیف شماره ۵... کلاس A

الف) $f(x) + 2$ 	ب) $2f(x)$ 	ج) $f(x-1)$ 	د) $f(x)$ 	۱
الف) $x^2 - 5x + 6 > 0 \rightarrow (x-2)(x-3) > 0$  $D_f = (-\infty, 2) \cup (3, +\infty)$	ب) $x^2 - 4x + 5 < 0 \rightarrow (x-1)(x-5) < 0$  $D_f = (1, 5)$	۲		
ج) $x^2 + 9x + 5 \geq 0 \rightarrow (x+5)(x+1) \geq 0$  $D_f = (-\infty, -5] \cup [-1, +\infty)$	د) $x^2 - 7x + 4 \leq 0 \rightarrow (x-1)(x-4) \leq 0$  $D_f = [1, 4]$	۲		
الف) $\frac{x^2 - 3x + 2}{x - 5} < 0 \rightarrow \frac{(x-1)(x-2)}{(x-5)} < 0$  $D_f = (-\infty, 1) \cup (2, 5)$	ب) $\frac{x^2 - 1}{x^2 - 9x + 5} \geq 0 \rightarrow \frac{(x-1)(x+1)}{(x-1)(x-5)} \geq 0$  $D_f = (-\infty, -1] \cup (5, +\infty)$	۳		
الف) $y = \sqrt{\frac{x^2 - 1}{x^2 - 5x + 6}} \rightarrow \frac{x^2 - 1}{x(x+1)(x-2)} \geq 0$  $D_f = \mathbb{R} - \{-1, 0, 1\}$	ب) $y = \sqrt{\frac{x^2 - 14}{x^2 - 5x + 6}} \rightarrow \frac{(x+4)(x-4)}{(x-2)(x-1)} \geq 0$  $D_f = (-\infty, -4] \cup (1, +\infty) - \{1\}$	۴		
الف) $y = \sqrt{x - \sqrt{x-2}} \rightarrow \begin{cases} x - \sqrt{x-2} \geq 0 \\ x - 2 \geq 0 \end{cases} \rightarrow \begin{cases} x \geq \sqrt{x-2} \\ x \geq 2 \end{cases}$ $x - \sqrt{x-2} \geq 0 \rightarrow \sqrt{x-2} \leq x$ $x - 2 \geq 0 \rightarrow x \geq 2$  $D_f = [-1, 2]$	ب) $y = \sqrt{x - \sqrt{x-2}} \rightarrow \begin{cases} x - \sqrt{x-2} \geq 0 \\ x - 2 \geq 0 \end{cases} \rightarrow \begin{cases} x \geq \sqrt{x-2} \\ x \geq 2 \end{cases}$ $x - \sqrt{x-2} \geq 0 \rightarrow \sqrt{x-2} \leq x$ $x - 2 \geq 0 \rightarrow x \geq 2$  $D_f = [2, 11]$	۵		

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