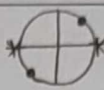


نام و نام خانوادگی: پاسخنامه تشریحی تکلیف شماره: کلاس دهم دفتر:		
$2\cos x \neq -1 \rightarrow \cos x \neq -\frac{1}{2}$  $D_f = \mathbb{R} - \{2k\pi + \frac{2\pi}{3}, 2k\pi + \frac{4\pi}{3}\}$	$\cos x \neq 1$  $D_f = \mathbb{R} - \{2k\pi\}$	۱
(الف) ب)		
$\tan x \neq -1$  $D_f = \mathbb{R} - \{k\pi - \frac{\pi}{4}, k\pi + \frac{3\pi}{4}\}$	$\cot x \neq 1$  $D_f = \mathbb{R} - \{k\pi + \frac{\pi}{4}, k\pi\}$	۲
(الف) ب)		
$-1 \leq x^2 - 2 < 1 \rightarrow 1 \leq x^2 \leq 3$ $\rightarrow \sqrt{3} \leq x \leq 1$ $D_f = [\sqrt{3} - 1] \cup [1 \sqrt{3}]$	$-1 \leq \sqrt{x} - 3 \leq 1 \rightarrow 2 \leq \sqrt{x} \leq 4 \rightarrow 4 \leq x \leq 16$ $D_f = [4 \ 16]$	۳
(الف) ب)		
$-1 \leq x - 3 \leq 1 \rightarrow 2 \leq x \leq 4$ $\rightarrow -4 \leq x \leq -2$ $D_f = [-4 -2] \cup [2 \ 4]$	$x^2 + 3x + 1 \leq 1 \rightarrow x^2 + 3x \leq 0 \rightarrow x(x+3) \leq 0$ $\cap \left(\begin{array}{l} \frac{-3}{-} \frac{0}{+} \\ \frac{-3}{+} \frac{0}{-} \end{array} \right)$ $x^2 + 3x + 1 > -1 \rightarrow x^2 + 3x + 2 > 0 \rightarrow (x+1)(x+2) > 0$ $\frac{-2}{+} \frac{-1}{-} \frac{0}{+} \Rightarrow D_f = [-3 -2] \cup [-1 \ 0]$	۴
(الف) ب)		
$x^2 - 4 > 0 \rightarrow x^2 > 4 \rightarrow x > 2$ $\rightarrow x < -2$ $D_f = (-\infty -2) \cup (2 +\infty)$	$2 - x > 0 \rightarrow x < 2$ $D_f = (-2 \ 2)$	۵
(الف) ب)		

$\omega \cdot x > 0 \Rightarrow x < \omega$ $x \cdot 3 > 0 \Rightarrow x > 3$ $x \cdot 3 \neq 0 \Rightarrow x \neq 3$ $Df = (3 \ \omega) - \{3\}$	$x^2 - 1 > 0 \Rightarrow x^2 > 1 \Rightarrow x > 1$ $\searrow$ $x < -1$ $x + 3 > 0 \Rightarrow x > -3$ $x + 3 \neq 0 \Rightarrow x \neq -3$ $Df = (-3 \ -1) \cup (1 \ +\infty) - \{-3\}$	6
$\frac{(x-1)(x-3)}{(x-3)}$ $\frac{1}{-1} + \frac{3}{0} +$ $Df = (1 \ +\infty) - \{3\}$	$\frac{x+3}{x-2}$ $\frac{-3}{+1} + \frac{2}{-1} +$ $x + \omega \neq 1 \Rightarrow x \neq -\omega$ $Df = (-\infty \ -3) \cup (2 \ +\infty) - \{-\omega\}$ $x + \omega > 0 \Rightarrow x > -\omega$ $(-\omega, -3) \cup (2, +\infty) - \{-\omega\}$	7
$3 > \log_3(x-2)$ $x - 2 > 0$ $x > 2$ $x - 2 < 1 \Rightarrow x < 3$ $Df = (-\infty \ 1] \quad (2, 3]$ $0, \omega$	$2 \log_3 x - 1 > 0 \Rightarrow \log_3 x > \frac{1}{2}$ $\log_3 x > \frac{1}{2} \Rightarrow x > \sqrt{3}$ $x < -\sqrt{3}$ $Df = (\sqrt{3} \ +\infty) \cup (-\infty \ -\sqrt{3})$ x فرض جلیبی $لوگاریتم است$	8
$f^x \neq -1 \checkmark$ $Df = \mathbb{R}$	$f^x \neq 1$ $f^x \neq f^0$ $x \neq 0$ $Df = \mathbb{R} - \{0\}$	9
$f^x \neq 2$ $x \neq \log_2 f$ $Df = \mathbb{R} - \{\log_2 f\}$	$f^x \neq 3$ $x \neq \log_3 f$ $Df = \mathbb{R} - \{\log_3 f\}$	10
$f^{x+1} \in \mathbb{W} \Rightarrow f^x \in \mathbb{W} - 1 \Rightarrow x \in \frac{\mathbb{W}-1}{f}$ $Df = \{x \mid x = \frac{k-1}{f}, k \in \mathbb{W}\}$	$\frac{3^x x - 2}{2^x x - \omega} \in \mathbb{W} \Rightarrow 3^x x - 2 = 2^x x - \omega \Rightarrow$ $3^x x - 2^x x = 2 - \omega \Rightarrow x = \frac{2 - \omega}{3^x - 2^x}$ $Df = \{x \mid x = \frac{\omega k - 2}{3^k - 2^k}, k \in \mathbb{W}\}$	11