

نام و نام خانوادگی شماره کلاس دهم دفتر پاسخنامه تشریحی تکلیف شماره ۱۴۷۸

الف $y = \sqrt{4 - \sqrt{2-x}}$

$2-x \geq 0$
 $2 \geq x$

$4 - \sqrt{2-x} \geq 0$
 $4 \geq \sqrt{2-x}$
 $16 \geq 2-x \rightarrow x \geq -14$

$D_f = [-14, 2]$

ب $y = \sqrt{3 - \sqrt{x-2}}$

$x-2 \geq 0$
 $x \geq 2$

$3 - \sqrt{x-2} \geq 0$
 $3 \geq \sqrt{x-2}$
 $9 \geq x-2$

$11 \geq x$

$D_f = [2, 11]$

الف $y = \sqrt{4-2x^2}$

$4-2x^2 \geq 0$
 $4 \geq 2x^2$
 $2 \geq x^2$

$\sqrt{2} \geq x$

$D_f = (-\infty, \sqrt{2}]$

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

ب $y = \sqrt{3|x|-9}$

$3|x|-9 \geq 0$
 $3|x| \geq 9$
 $|x| \geq 3$

$-3 \leq x \leq 3$

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

الف $y = \sqrt{\frac{|x|+1}{|x|-3}}$

$|x|-3 \neq 0$
 $|x| \neq 3 \rightarrow x \neq \pm 3$

$D_f = \mathbb{R} - \{\pm 3\}$

ب $y = \sqrt{\frac{\sqrt{x+1}}{\sqrt{x-3}}}$

$\begin{cases} x \geq 0 \\ \sqrt{x-3} \neq 0 \rightarrow \sqrt{x} \neq 3 \\ x \neq 9 \end{cases}$

$D_f = [0, +\infty) - \{9\}$

الف $y = \frac{\sqrt{3-|x|}}{|x|+2}$

$3-|x| \geq 0$
 $3 \geq |x|$
 $3 \geq x \geq -3$

$|x|+2 \neq 0$
 $|x| \neq -2$
بسیار

$D_f = [-3, 3]$

ب $y = \frac{\sqrt{4-x^2}}{|x|-1}$

$4-x^2 \geq 0$
 $4 \geq x^2$

$|x|-1 \neq 0$
 $|x| \neq 1$
 $x \neq \pm 1$

$D_f = (-2, 2) - \{\pm 1\}$
 $(-2, 2)$

الف $y = \frac{x+1}{\sqrt{x+|x|}}$

$x+|x| > 0$
نقطه مثبت ما برابر صفر
 $\begin{matrix} + \\ 0 \\ x \\ - \\ x \end{matrix}$

$D_f = [1, +\infty)$
 $(0, +\infty)$

$(1, +\infty)$

ب $y = \frac{1}{\sqrt{x|x|}}$

$x|x| > 0$
نقطه مثبت ما برابر صفر
 $\begin{matrix} + \\ 0 \\ x \\ - \\ x \end{matrix}$

$D_f = [1, +\infty)$
 $(0, +\infty)$

الف $y = \sqrt{2 - [x]}$

$2 - [x] \geq 0$
 $2 > [x]$

$D_f = (-\infty, 3)$

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ب $y = \frac{1}{\sqrt{2 - [x]}}$

$2 - [x] > 0$
 $2 > [x]$

$D_f = (-\infty, 2)$

صحيح ✓

الف $y = \frac{1}{x[x]}$

$x[x] \neq 0$

$D_f = \mathbb{R} - \{0\}$
 (ادس)

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ب $y = \frac{1}{\sqrt{-x[x]}}$

$-x[x] > 0$
 $x[x] < 0$

(ل.ب)

صحيح عددي صحيح مني ل.ب

الف $y = \sqrt{\left[x - \frac{1}{x}\right] + \left[x + \frac{1}{x}\right]} = \left[x - \frac{1}{x}\right] + \left[x + \frac{1}{x}\right] \geq 0$ $\left[x - \frac{1}{x}\right] + \left[x + \frac{1}{x} - 1\right] \geq 0$

$2\left[x - \frac{1}{x}\right] \geq 1$ $\left[x - \frac{1}{x}\right] \geq \frac{1}{2}$ $x - \frac{1}{x} \geq \frac{1}{2}$ $x \geq \frac{1}{x}$ $D_f = \left[\frac{1}{x}, +\infty\right)$

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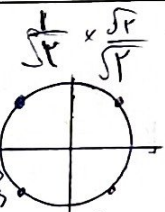
ب $y = \sqrt{\left[x - \frac{1}{x}\right] + \left[-x + \frac{1}{x}\right]}$ $\sqrt{\left[x - \frac{1}{x}\right] + \left[-\left(x - \frac{1}{x}\right)\right]} = 0$ $D_f = \{x \mid x = k + \frac{1}{x}, k \in \mathbb{Z}\}$

(ل.ب)

الف $y = \frac{1}{x \sin^2 x - 1}$

$x \sin^2 x - 1 \neq 0$
 $x \sin^2 x \neq 1$
 $\sin^2 x \neq \frac{1}{x}$

$\sin x \neq \sqrt{\frac{1}{x}}$
 $\sin x \neq \frac{\sqrt{x}}{x}$



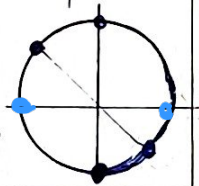
$D_f = \mathbb{R} - \left\{k\frac{\pi}{x} + \frac{\pi}{x}\right\}$

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ب $y = \frac{\cot x + 1}{\tan x + 1}$

$\frac{\sin x}{\cos x} + 1 \neq 0$
 $\frac{\sin x}{\cos x} \neq -1$

$D_f = \mathbb{R} - \left\{k\pi - \frac{\pi}{2}, k\pi + \frac{\pi}{2}\right\}$

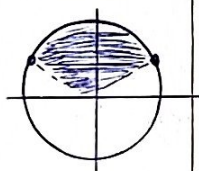


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الف $y = \sqrt{2 \sin x - 1}$

$2 \sin x - 1 \geq 0$
 $2 \sin x \geq 1$
 $\sin x \geq \frac{1}{2}$

$D_f = \left[2k\pi + \frac{\pi}{6}, 2k\pi + \frac{5\pi}{6}\right]$

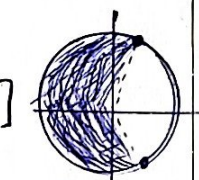


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ب $y = \sqrt{1 - 2 \cos x}$

$1 - 2 \cos x \geq 0$
 $1 \geq 2 \cos x$
 $\frac{1}{2} \geq \cos x$

$D_f = \left[2k\pi + \frac{\pi}{3}, 2k\pi + \frac{5\pi}{3}\right]$



صحيح ✓