به دلیل ننوشتن نام و نام خانوادگی نمره شما منفی ۰٫۵ خواهد شد.

Year: Month: Date: ( ) Subject:

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$y=\sqrt{4-\sqrt{2-x}}$ $\begin{cases} 2-x\geq 0 \to x\leq 2 \\ 4-\sqrt{2-x}\geq 0 \to \end{cases}$ $\cap$ $D_f=[\cancel{-2,4}]$ $[-14,2]$

$\cancel{4-2-x\geq \to 4-x\leq 2}$ $2-x\leq 16$

$\cancel{x\geq 4}$ $x\geq -14$

$\cancel{5}$

$y=\sqrt{3-\sqrt{x-2}}$ $\begin{cases} x-2\geq 0 \to x\geq 2 \\ 3-\sqrt{x-2}\geq 0 \end{cases}$

$3-x-2\geq 0$ $D_f=[\cancel{2,5}]$ $[2,11]$

$x-2\leq 9$ $\cancel{x-2\leq 3}$

$x\leq 11$ $x\leq 5$

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$y=\sqrt{4-2x^2} \to 4-2x^2\geq 0$

$2x^2\leq 4$

$\sqrt{x^2}\leq 2$ $D_f=(\cancel{-\infty,}\sqrt{2}]$

$x\leq\sqrt{2}$ $[-\sqrt{2},\sqrt{2}]$

$1/25$

$y=\sqrt{3|x|-9} \to 3|x|-9\geq 0$

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

$|x|\geq 3$ $\begin{cases} x>3 \\ x<-3 \end{cases}$

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

$|x|\neq 3$

$1/5$

$y=\sqrt[3]{\frac{\sqrt{x}+1}{\sqrt{x}-3}}$ $\sqrt{x}-3\neq 0$ $D_f=\cancel{\mathbb{R}}-\{9\}$

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

(۴

$y=\frac{\sqrt{3-|x|}}{|x|+2}$ $\begin{cases} 3-|x|\geq 0 \to |x|\leq 3 \{-3\leq x\leq 3 \\ |x|+2\neq 0 \end{cases}$ $\cap$ $D_f=[-3,3]$

$1/25$ $|x|\neq -2$

$-2\leq x\leq 2$ $D_f=(-\infty,2]$

$y=\frac{\sqrt{4-x^2}}{|x|-1}$ $\begin{cases} 4-x^2\geq 0 \to x^2\leq 4 \to \cancel{x}\leq 2 \\ |x|-1\neq 0 \quad |x|\neq 1 \end{cases}$ $\cap$ $D_f=\cancel{(-\infty,2]}$ $[-2,2]-\{\pm 1\}$

$x\neq\pm 1$

$D_f=\mathbb{R}-\{\pm 1\}$

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$y=\frac{x+1}{\sqrt{x+|x|}}$ $\quad x+|x|>0 \quad |x|>-x \quad D_f=\mathbb{R}^+$ -5

$+$ ✓ $\quad 0$ ✗ $\quad -$ ✗

1/5

$y=\frac{1}{\sqrt{x|x|}}$ $\quad x|x|>0 \quad D_f=\mathbb{R}^+$

-6

$y=\sqrt{2-[x]}$ $\quad 2-[x]\geq 0$

$[x]\leq 2 \longrightarrow x<3 \longrightarrow D_f=(-\infty,3)$

$y=\frac{1}{\sqrt{2-[x]}}$ $\quad 2-[x]>0$ $\quad$ 2 ✓

$[x]<2 \rightarrow x<2 \rightarrow D_f=(-\infty,2)$

$y=\frac{1}{x[x]}$ $\quad x[x]\neq 0 \quad D_f=\mathbb{R}-\cancel{\{0\}}$ -7

$\mathbb{R}-[0,1)$

1/5

$y=\frac{1}{\sqrt{-x[x]}}$ $\quad -x[x]>0 \longrightarrow x[x]<0 \quad D_f=\emptyset$

$y=\sqrt{[x-\frac{1}{4}]+[x+\frac{3}{4}]}$ $\quad [x-\frac{1}{4}]+[x+\frac{3}{4}]\geq 0 \longrightarrow$ -8

$1+[x-\frac{1}{4}]+[x+\frac{3}{4}]\geq 1$

$[x-\frac{1}{4}+1]+[x+\frac{3}{4}]\geq 1$

$[x+\frac{3}{4}]+[x+\frac{3}{4}]\geq 1$

$2[x+\frac{3}{4}]\geq 1$

$[x+\frac{3}{4}]\geq \frac{1}{2}$

$x+\frac{3}{4}\geq 1$

$x\geq -\frac{3}{4}+1$

$x\geq +\frac{1}{4} \quad D_f=[+\frac{1}{4},+\infty)$

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$y = \sqrt{\underbrace{[x - \frac{1}{2}]}_{a} + \underbrace{[-x + \frac{1}{2}]}_{-a}}$ $\quad a \in Z \quad [a] + [-a] = 0$

$a \notin Z \quad [a] + [-a] = -1$ $\quad \Rightarrow \quad x - \frac{1}{2} \in Z$

$D_f = \{x \mid x = k + \frac{1}{2}, k \in Z\}$

-9

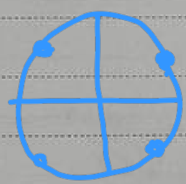
$y = \frac{1}{2\sin^2 x - 1}$ $\quad 2\sin^2 x - 1 \neq 0$

$2\sin^2 x \neq 1$

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

$\sin x \neq \pm\sqrt{\frac{1}{2}}$

$D_f = \cancel{R}$



$R - \{k\pi \pm \frac{\pi}{4}\}$

$y = \frac{\cot x + 1}{\tan x + 1} \rightarrow \tan x + 1 \neq 0$

$\tan \neq 1$

$\frac{\sin}{\cos}$

$\begin{cases} \tan \neq 1 & D_f = R - \{k\pi \pm \frac{\pi}{4}\} \\ \cos \neq 0 & \rightarrow D_f = R - \{k\pi + \frac{\pi}{2}\} \end{cases}$

$\sin x \neq 0 \quad k\pi$

0

-10

$y = \sqrt{2\sin - 1}$ $\quad 2\sin - 1 \geq 0$

$2\sin \geq 1$

$\sin \geq \frac{1}{2}$

$D_f = R - \{2k\pi + \frac{\pi}{6}, 2k\pi + \frac{5\pi}{6}\}$

1.5

$y = \sqrt{1 - 2\cos x}$ $\quad 1 - 2\cos x \geq 0$

$2\cos \leq 1$

$\cos \leq \frac{1}{2}$

$D_f = R - \{k\pi + \frac{\pi}{3}\}$

$R - \{k\pi + \frac{\pi}{3}, k\pi + \frac{2\pi}{3}\}$