

$y = \sqrt{\frac{2-x}{x+5}}$	$\frac{2-x}{x+5} \geq 0 \Rightarrow \text{sig}\left(\frac{2-x}{x+5}\right)$ $x=3 \neq$ $D_f = (-5, 2]$
$y = \frac{3x+9}{x^3-25x}$	$x^3-25x=0 \Rightarrow x(x^2-25)=0 \Rightarrow x=0; x=\pm 5$ $D_f = \mathbb{R} - \{ -5, 0, 5 \}$
$y = \sqrt{x^3+2x^2+x}$	$x^3+2x^2+x=0 \Rightarrow x(x^2+2x+1)=0 \Rightarrow x(x+1)^2=0$ $\text{sig } x(x+1)^2$ $D_f = [0, \infty)$
$y = \sqrt{\frac{25-x^2}{x+1}}$	$\frac{25-x^2}{x+1} \geq 0 \Rightarrow \text{sig}\left(\frac{(5-x)(5+x)}{x+1}\right)$ $x=6 \neq$ $D_f = (-\infty, -5] \cup [-1, 5]$
$y = \frac{2\sqrt{x+1}}{x^2-1}$	$\begin{cases} x+1 \geq 0 \Rightarrow x \geq -1 \Rightarrow D_1 = [-1, \infty) \\ x^2-1=0 \Rightarrow x=\pm 1 \text{ quitamos} \end{cases} \Rightarrow D_f = (-1, 1) \cup (1, \infty)$
$y = L(x^2-1)$	$x^2-1 > 0 \Rightarrow \text{sig}[(x-1)(x+1)]$ $D_f = (-\infty, -1) \cup (1, +\infty)$
$y = \frac{2x-3}{\sqrt{-x^2+3x-2}}$	$-x^2+3x-2 \geq 0 \Rightarrow \Delta$ Cálculo signo $x^2-3x+2 \leq 0$ $\text{sig}[(x-2)(x-1)]$ $D_f = (1, 2)$
$y = \frac{\sqrt{2-x^2}}{\sqrt{1-x}}$	$D_1: 2-x^2 \geq 0 \Rightarrow (\sqrt{2}-x)(\sqrt{2}+x) \geq 0 \Rightarrow D_1 = [-\sqrt{2}, \sqrt{2}]$ $D_2: 1-x \geq 0 \Rightarrow D_2 = (-\infty, 1]$ $D_f = D_1 \cap D_2 = [-\sqrt{2}, 1]$
$f(x) = \frac{\sqrt{x-1}}{x+2}$	$\begin{cases} x-1 \geq 0 \Rightarrow x \geq 1 \Rightarrow D_1 = [1, \infty) \\ x+2=0 \Rightarrow x=-2 \text{ quitamos (ya está filtrado)} \end{cases} \Rightarrow D_f = [1, \infty)$
$f(x) = \frac{\sqrt{x-2}}{16-x^2}$	$\begin{cases} x \geq 0 \Rightarrow D_1 = [0, \infty) \\ 16-x^2=0 \Rightarrow x=\pm 4 \text{ quitar} \end{cases} \Rightarrow D_f = [0, 4) \cup (4, \infty)$
$f(x) = \frac{3-\sqrt{x-2}}{x^2-25}$	$\begin{cases} x-2 \geq 0 \Rightarrow x \geq 2 \Rightarrow D_1 = [2, \infty) \\ x^2-25=0 \Rightarrow x=\pm 5 \text{ quitar} \end{cases} \Rightarrow D_f = [2, 5) \cup (5, \infty)$

$y = \sqrt{x^2 - x} \cdot \sqrt{2 - x}$	$\nearrow Df_1 \Rightarrow x(x-1) \geq 0$ ± 1 0 $\pm$ $Df_1 = (-\infty, 0] \cup [1, \infty)$ $\searrow Df_2 \Rightarrow 2-x \geq 0 \Rightarrow 2 \geq x \Rightarrow Df_2 = (-\infty, 2]$ $\searrow Df = Df_1 \cap Df_2 = (-\infty, 0] \cup [1, 2]$
$y = \frac{x+3}{\sqrt{x}-3}$	$\nearrow x \geq 0 \Rightarrow Df = [0, +\infty)$ $\searrow \sqrt{x}-3=0 \Rightarrow \sqrt{x}=3 \Rightarrow x=9$ quitar $\left. \vphantom{\begin{matrix} \nearrow \\ \searrow \end{matrix}} \right\} Df = [0, 9) \cup (9, +\infty)$
$y = e^{\frac{1}{x-1}}$	$Df = \mathbb{R} - 1$
$y = \frac{L(2-x)}{x+1}$	$\nearrow 2-x > 0 \Rightarrow 2 > x \Rightarrow DL = (-\infty, 2)$ $\searrow x+1=0 \Rightarrow x=-1$ quitarlo $\uparrow \left. \vphantom{\begin{matrix} \nearrow \\ \searrow \end{matrix}} \right\} Df = (-\infty, -1) \cup (-1, 2)$
$y = \frac{3\sqrt{x^2-4}}{x^2+9}$	$\nearrow x^2-4 \geq 0$ $\left[\text{sig } \frac{(x-2)(x+2)}{x^2-4} \right]$ $\pm$ $-$ $\pm$ $Df = (-\infty, -2] \cup [2, \infty)$ $\searrow x^2+9=0 \Rightarrow x^2=-9$ no sol.
$y = L\left(\frac{x+1}{3-x}\right)$	$\frac{x+1}{3-x} > 0 \Rightarrow \left[\text{sig } \frac{x+1}{3-x} \right]$ $-$ $+$ $-$ $Df = (-1, 3)$
$y = \frac{2x}{2\sqrt{x^2-16}}$	$\Rightarrow x^2-16 > 0 \Rightarrow (x-4)(x+4)$ $+$ $-$ $+$ $Df = (-\infty, -4) \cup (4, \infty)$
$y = \sqrt{\frac{x^3+5x^2}{x-1}}$	$\frac{x^3+5x^2}{x-1} \geq 0 \Rightarrow \left[\text{sig } \frac{x^2(x+5)}{x-1} \right]$ $+$ $-$ $+$ $+$ $+$ $Df = (-\infty, -5] \cup (-1, +\infty)$
$f(x) = \sqrt{x^2-5x} + \sqrt{x}$	$\nearrow Df_1 \Rightarrow x^2-5x \geq 0 \Rightarrow x(x-5) \geq 0$ $\pm$ 0 $\pm$ $Df_1 = [0, 5] \cup [5, +\infty)$ $\searrow Df_2 \Rightarrow x \geq 0 \Rightarrow Df_2 = [0, \infty)$ $\searrow Df = Df_1 \cap Df_2 = [0, \infty)$
$f(x) = \frac{3\sqrt{x+5}-2}{5-x}$	$\nearrow x+5 \geq 0 \Rightarrow x \geq -5$ $Df = [-5, +\infty)$ $\searrow 5-x > 0 \Rightarrow x < 5$ quitarlo $\uparrow \left. \vphantom{\begin{matrix} \nearrow \\ \searrow \end{matrix}} \right\} Df = [-5, 5) \cup (5, +\infty)$
$f(x) = \frac{3-\sqrt{x}}{x^2-2x}$	$\nearrow x \geq 0 \Rightarrow Df = [0, +\infty)$ $\searrow x^2-2x=0 \Rightarrow x(x-2)=0 \Rightarrow x=0, x=2$ $\left. \vphantom{\begin{matrix} \nearrow \\ \searrow \end{matrix}} \right\} Df(x) = (0, 2) \cup (2, +\infty)$