

$\tan x + 1 \neq 0 \rightarrow \tan x \neq -1 \rightarrow x \neq k\pi - \frac{\pi}{4}$
 $D_f: \mathbb{R} - \left\{ k\pi - \frac{\pi}{4} \right\}$

$1 - \sqrt{\sin x} \geq 0 \rightarrow \sqrt{\sin x} \leq 1 \rightarrow \sin x \leq 1$
 $D_f: [k\pi - \frac{\pi}{2}, k\pi + \frac{\pi}{2}]$

$\sqrt{\sin x} \geq 1 \rightarrow \sin x \geq 1 \rightarrow D_f: [2k\pi + \frac{\pi}{2}, 2k\pi + \frac{5\pi}{2}]$

$1 - \sqrt{\cos x} \geq 0 \rightarrow \sqrt{\cos x} \leq 1 \rightarrow \cos x \leq 1$

$D_f: \mathbb{R} - (2k\pi - \frac{\pi}{2}, 2k\pi + \frac{\pi}{2})$

$-1 \leq x^2 + 2x + 1 \leq 1 \rightarrow \frac{1}{4} \leq (x + \frac{1}{2})^2 \leq \frac{9}{4} \rightarrow \frac{1}{2} \leq x + \frac{1}{2} \leq \frac{3}{2}$

$-1 \leq x \leq 0 \rightarrow -\frac{1}{2} \geq x + \frac{1}{2} \geq -\frac{3}{2} \rightarrow -2 \geq x \geq -1$
 $D_f: [-1, 0] \cup [-2, -1]$

$\sqrt{5-2x} \leq 1 \rightarrow 5-2x \leq 1 \rightarrow 4 \leq 2x \rightarrow 2 \leq x$

$\sqrt{5-2x} \geq 0 \rightarrow 5-2x \geq 0 \rightarrow \frac{5}{2} \geq x$
 $D_f: [2, \frac{5}{2}]$

$x > 0$
 $1 - \log_3 x > 0 \rightarrow 1 > \log_3 x \rightarrow 3 > x$
 $D_f: (0, 3)$

$x > 0$
 $1 - \log_{\frac{1}{3}} x > 0 \rightarrow 1 > \log_{\frac{1}{3}} x \rightarrow \frac{1}{3} < x$
 $D_f: (\frac{1}{3}, +\infty)$

$2^{x-x^2} - 8 > 0 \rightarrow 2^{x-x^2} > 8 \rightarrow x-x^2 > 3 \rightarrow x^2 - x + 3 < 0$
 $D_f: [1, 3]$

$\frac{3x+5}{2x+2} \in W \rightarrow x \in \frac{5W-5}{2-2W} \rightarrow D_f: \left\{ x \mid x = \frac{5k-5}{2-2k}, k \in W \right\}$

$$\text{ب-٤)} \quad [n]^2 - 2[n] - 3 = 0 \quad \xrightarrow{[n]=t} \quad t^2 - 2t - 3 = 0 \quad \rightarrow (t-3)(t+1) = 0$$

$$t=3 \rightarrow [n]=3 \rightarrow n \in [3, 4)$$

$$t=-1 \rightarrow [n]=-1 \rightarrow n \in [-1, 0) \quad \rightarrow \bigcap_{\mathbb{Z}} (-\infty, -1) \cup [3, 4) \cup [4, +\infty)$$

$$\mathbb{R} - \bigcup_{\mathbb{Z}} \{ [3, 4) \cup [-1, 0) \}$$