

$$\omega) \sqrt{x} - \sqrt{r} = 0$$

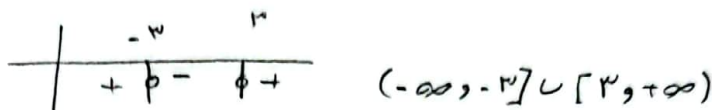
$$\frac{\sqrt{x} - \sqrt{r}}{2} = \frac{\sqrt{x} - \sqrt{r}}{2} \rightarrow \sqrt{x} = \sqrt{r}$$



6

$$\omega) \sqrt{|x|} - 9 = 0$$

$$\sqrt{|x|} = 9 \rightarrow |x| = 81 \rightarrow \begin{cases} 9 \\ -9 \end{cases}$$

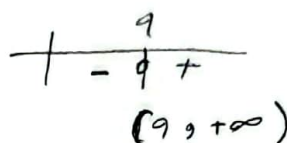


7

$$\omega) |x| - 3 \neq 0 \rightarrow |x| \neq 3 \rightarrow \begin{cases} 3 \\ -3 \end{cases}$$



$$\omega) \sqrt{x} - 9 \neq 0 \rightarrow (\sqrt{x} - 9)^2 \rightarrow x = 81$$



$$\omega) \sqrt{\cos x} - 1 \neq 0 \rightarrow \sqrt{\cos x} \neq 1 \rightarrow \cos x \neq \frac{1}{4} \quad D_f = \mathbb{R} - \left\{ 2k\pi \pm \frac{\pi}{4} \right\}$$

$$\omega) \sqrt{\sin x} + 1 \neq 0 \rightarrow \sqrt{\sin x} \neq -1 \rightarrow D_f = \mathbb{R} - \left\{ \frac{5\pi}{2} + 2k\pi, \frac{11\pi}{2} + 2k\pi \right\}$$

$$\omega) \cos x \neq 0, \sin x \neq 0, \cot x - 1 \neq 0 \rightarrow \cot x \neq 1 \quad D_f = \mathbb{R} - \left\{ k\pi, k\pi + \frac{\pi}{4}, k\pi + \frac{5\pi}{4} \right\}$$

8

$$\omega) \sqrt{\sin^2 x} - \frac{1}{\sqrt{e}} \neq 0 \rightarrow \sqrt{\sin^2 x} \neq \frac{1}{\sqrt{e}} \rightarrow \sin x \neq \pm \frac{1}{\sqrt{e}} \quad D_f = \mathbb{R} - \left\{ k\pi + \frac{\pi}{4}, k\pi + \frac{5\pi}{4} \right\}$$

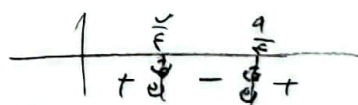
$$\sqrt{|x-2|} - \frac{1}{\sqrt{e}} \neq 0$$

$$\frac{\sqrt{|x-2|}}{2} \neq \frac{1}{\sqrt{e}}$$

$$|x-2| \neq \frac{4}{e}$$

$$x-2 < -\frac{1}{\sqrt{e}} \rightarrow x < \frac{2}{\sqrt{e}}$$

$$x-2 > -\frac{1}{\sqrt{e}} \rightarrow x > \frac{2}{\sqrt{e}}$$

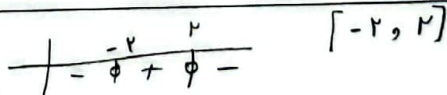


$$D_f = (-\infty, \frac{2}{\sqrt{e}}) \cup (\frac{2}{\sqrt{e}}, +\infty)$$

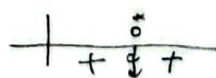
9

$$\omega) \sqrt{x-2} \geq 0$$

$$\sqrt{x-2} = 0 \rightarrow x = 2$$



$$\omega) |x| \neq 0 \rightarrow x \neq 0$$



$$D_f = (-\infty, 0) \cup (0, +\infty)$$

10