

المجال
معرفة

$$[-14, 2] \left[\begin{array}{l} 2-x \geq 0 \rightarrow x \leq 2 \\ 2-\sqrt{x} \geq 0 \rightarrow x \geq -14 \end{array} \right. \text{ (الف)}$$

$$(-\infty, 11] \left[\begin{array}{l} x-2 \geq 0 \rightarrow x \geq 2 \\ 2-\sqrt{x-2} \geq 0 \end{array} \right. \text{ (ب)}$$

$$\text{الف) } 2-x^2 \geq 0 \rightarrow \sqrt{x} \geq 0 \quad D_F = [\sqrt{x}, -\infty)$$

$$\text{ب) } 2-|x-9| \geq 0 \rightarrow |x| \geq 9 \Rightarrow \left. \begin{array}{l} x \leq -9 \\ x \geq 9 \end{array} \right\} \Rightarrow D_F = [-9, 9]$$

(ج)

$$\text{الف) } D_F = \mathbb{R} - \{-3, 3\}$$

$$\text{ب) } \left\{ \begin{array}{l} x \geq 0 \\ x \neq 9 \end{array} \right\} \Rightarrow D_F = [0, 9) \cup (9, +\infty)$$

$$\text{الف) } \left\{ \begin{array}{l} 2-|x| \geq 0 \rightarrow 2 \geq |x| \rightarrow |x| \leq 2 \\ x \neq 2, -2 \end{array} \right\} \Rightarrow [-2, -2) \cup (-2, 2) \cup (2, 2] \text{ (د)}$$

$$\text{ب) } \left\{ \begin{array}{l} 2-x^2 \geq 0 \rightarrow 2 \geq x \\ x \neq 1, -1 \end{array} \right\} \Rightarrow D_F = [2, 1) \cup (1, -1) \cup (-1, -\infty) \text{ (هـ)}$$

$$\text{الف) } x+|x| > 0 \rightarrow x > -|x| \quad D_F = \mathbb{R}^+$$

$$\text{ب) } x|x| > 0 \Rightarrow D_F = \mathbb{R}^+ \text{ (و)}$$

$$\text{الف) } 2-[x] \geq 0 \Rightarrow [x] \leq 2 \quad D_F = (-\infty, -2]$$

$$\text{ب) } 2-[x] > 0 \rightarrow 2 > [x] \quad D_F = (2, +\infty) \text{ (ز)}$$

$$\text{الف) } \cancel{x[x]} \neq 0 \Rightarrow x[x] \neq 0 \Rightarrow D_F = (-\infty, 0) \cup [1, +\infty)$$

$$\text{ب) } -x[x] > 0 \Rightarrow D_F = \mathbb{R}^+ [1, +\infty)$$

$$\text{الف) } \left[n - \frac{1}{\sqrt{e}} \right] + \left[n + \frac{1}{\sqrt{e}} \right] \geq 0 \quad \left[n + \frac{1}{\sqrt{e}} \right] + \left[n + \frac{1}{\sqrt{e}} \right] \geq -1$$

①

$$\left[n + \frac{1}{\sqrt{e}} \right] \geq -\frac{1}{\sqrt{e}} \rightarrow n + \frac{1}{\sqrt{e}} \geq -1$$

$$\hookrightarrow n \geq -\frac{e}{\sqrt{e}}$$

$$\text{ب) } \left[n - \frac{1}{\sqrt{e}} \right] + \left[-n + \frac{1}{\sqrt{e}} \right] \geq 0$$

$$\hookrightarrow \left[n - \frac{1}{\sqrt{e}} \right] + \left[n - \frac{1}{\sqrt{e}} \right] \leq 0$$

$$\hookrightarrow 2 \left[n - \frac{1}{\sqrt{e}} \right] \leq 0$$

$$D_F \subseteq \left(-\infty, \frac{1}{\sqrt{e}} \right]$$

②

$$\text{الف) } \cos n - 1 \neq 0 \rightarrow \sin n \neq \sqrt{\frac{1}{e}} \quad D_F \subseteq \mathbb{R} - \left\{ \frac{k\pi}{\sqrt{e}} + \frac{\pi}{\sqrt{e}} \right\}$$

$$\text{ب) } \begin{cases} \tan n \neq -1 \\ \cos n > 0 \end{cases}$$

$$D_F \subseteq \left(\frac{k\pi}{\sqrt{e}}, \frac{(k+1)\pi}{\sqrt{e}} \right) \cap \left(\frac{k\pi}{\sqrt{e}}, \frac{k\pi}{\sqrt{e}} + \frac{\pi}{\sqrt{e}} \right)$$

③

$$\text{الف) } \sin n \geq \frac{1}{\sqrt{e}} \quad (2k\pi, 2k\pi + \pi)$$

$$\cos n \leq 0 \quad \left(2k\pi + \frac{\pi}{\sqrt{e}}, 2k\pi + \pi \right)$$

