

$$\text{الف) } y = \frac{x+f}{x^2-fx} \rightarrow x^2 \in \mathbb{R} - \{0\} \text{ if } x=f, x^2 \in \mathbb{R} - \{f^2\}$$

$$\text{ب) } y = \frac{x+f}{x^2 - \sqrt{x+1}} \rightarrow \frac{x+f}{x^2 - \sqrt{x+1} \neq 0} \rightarrow x^2 - \sqrt{x+1} \neq -1 \rightarrow x \in \mathbb{R}$$

$$\text{ج) } y = \frac{x+f}{x^2 - x + f} \rightarrow x^2 - x + f \neq 0 \rightarrow x^2 - x \neq -f \rightarrow x^2 + x \rightarrow \frac{0}{1} \rightarrow x \in \mathbb{R}$$

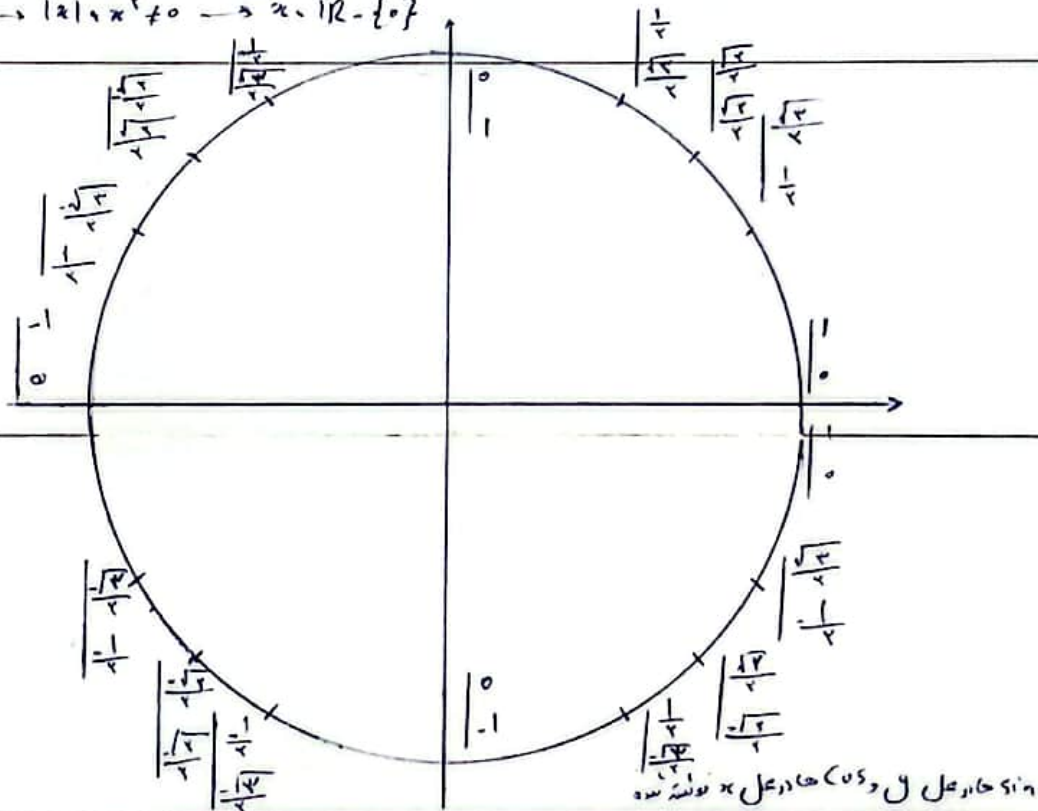
$$\text{د) } y = \frac{x+f}{x^2 - f^2} \rightarrow x^2 - f^2 \neq 0 \rightarrow x^2 \neq f^2 \rightarrow x^2 (x^2 - f^2) \rightarrow x \in \mathbb{R} - \{f, -f\}$$

$$\text{هـ) } y = \sqrt{x-2} + \sqrt{x-2} \rightarrow x \leq 2, x \geq 2 \rightarrow x = [2, 4]$$

$$\text{و) } y = \frac{x+1}{x^2+1} \rightarrow x^2 \neq -1 \rightarrow x \in \mathbb{R}$$

$$\text{ز) } y = \frac{\sqrt{x-2}}{x-f} \rightarrow x \geq 2, x \neq f \rightarrow x \in [2, \infty) - \{f\}$$

$$\text{ح) } \frac{x+2}{|x|+x^2} \rightarrow |x|+x^2 \neq 0 \rightarrow x \in \mathbb{R} - \{0\}$$



$$\text{الف) } \cos \frac{3\pi}{4} = \cos 135^\circ = -\frac{1}{\sqrt{2}} \times -\frac{1}{\sqrt{2}} = \frac{1}{2} \rightarrow \sin 45^\circ, 135^\circ \rightarrow \frac{1}{\sqrt{2}}, \frac{\sqrt{2}}{2}$$

$$\text{ب) } \cos \frac{11\pi}{4} = \cos 330^\circ = \frac{\sqrt{3}}{2} \times 1 = \frac{\sqrt{3}}{2} \rightarrow \sin 30^\circ, 330^\circ \rightarrow \frac{1}{2}, \frac{\sqrt{3}}{2}$$