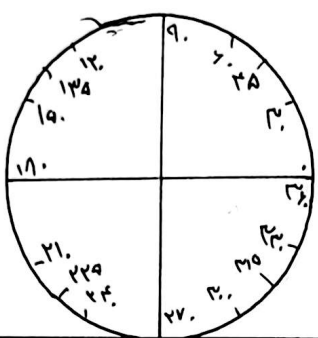
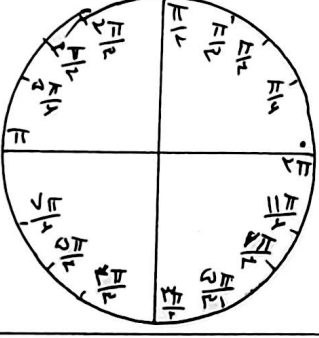


$الف) y = \frac{x+3}{x^2-2x}$ $\sqrt{x(x-2)}$ $\Rightarrow x=0, 2$ $D_f = \mathbb{R} - \{0, 2\}$	$ب) y = \frac{x+3}{x^2-\sqrt{x+1}}$ $+ \sqrt{x+1} = 0 \Rightarrow x = -1$ $D_f = \mathbb{R}$	$ج) y = \frac{x+3}{x^2+x+4}$ $\frac{-1 \pm \sqrt{1-14}}{2} = \frac{-1 \pm \sqrt{-13}}{2}$ $D_f = \mathbb{R}$	$د) y = \frac{x+3}{x^2-2x}$ $\sqrt{x(x-2)}$ $D_f = \mathbb{R} - \{-2, 0\}$	6
$الف) \sqrt{x-1} + \sqrt{x-2}$ $x \leq 1 \quad x \geq 2$ $2 \leq x \leq 1$ $\rightarrow D_f = [2, 1]$	$ب) y = \frac{x+1}{x^2+1}$ صفر نمی شود $D_f = \mathbb{R}$	$ج) y = \frac{\sqrt{x-2}}{x-2}$ $\sqrt{x-2} \neq 0 \Rightarrow x \neq 2$ $D_f = [2, +\infty) - \{2\}$	$د) y = \frac{x+3}{\sqrt{x+1}}$ $\oplus \oplus$ $D_f = \mathbb{R} - \{0\}$	7
	$0^\circ = 1$ $30^\circ = \frac{\sqrt{3}}{2}$ $45^\circ = \frac{\sqrt{2}}{2}$ $60^\circ = \frac{1}{2}$ $90^\circ = 0$	$120^\circ = \frac{1}{2}$ $135^\circ = \frac{\sqrt{2}}{2}$ $150^\circ = \frac{\sqrt{3}}{2}$ $180^\circ = -1$ $210^\circ = -\frac{\sqrt{3}}{2}$	$225^\circ = -\frac{\sqrt{2}}{2}$ $240^\circ = -\frac{1}{2}$ $270^\circ = 0$ $300^\circ = \frac{1}{2}$ $315^\circ = \frac{\sqrt{2}}{2}$	8
	$0 \text{ و } 2\pi = 0$ $\frac{\pi}{6} = \frac{1}{2}$ $\frac{\pi}{4} = \frac{\sqrt{2}}{2}$ $\frac{\pi}{3} = \frac{\sqrt{3}}{2}$	$\frac{\pi}{2} = 1$ $\frac{2\pi}{3} = \frac{1}{2}$ $\frac{3\pi}{4} = \frac{\sqrt{2}}{2}$ $\frac{5\pi}{6} = \frac{\sqrt{3}}{2}$	$\pi = 0$ $\frac{7\pi}{6} = -\frac{1}{2}$ $\frac{5\pi}{4} = -\frac{\sqrt{2}}{2}$ $\frac{3\pi}{2} = -1$ $\frac{11\pi}{6} = -\frac{\sqrt{3}}{2}$	9
$الف) \cos \frac{2\pi}{6}$ $\cos \frac{2\pi}{6} = \frac{1}{2} \Rightarrow \frac{1}{2} = \sin \frac{\pi}{6}$ $\Rightarrow \frac{\pi}{6} = \frac{5\pi}{6}, \frac{7\pi}{6}, \frac{11\pi}{6}$ $2k\pi + \frac{\pi}{6} \text{ و } 2k\pi + \pi - \frac{\pi}{6}$	$ب) \cos \frac{11\pi}{6}$ $\cos \frac{11\pi}{6} = \frac{\sqrt{3}}{2} \Rightarrow \frac{\sqrt{3}}{2} = \sin \frac{\pi}{6}$ $\Rightarrow \frac{\pi}{6} = \frac{5\pi}{6}, \frac{7\pi}{6}, \frac{11\pi}{6}$ $\Rightarrow 2k\pi + \frac{\pi}{6} \text{ و } 2k\pi + \pi - \frac{\pi}{6}$	10		