

کلاس و جمع ما

نام و نام خانوادگی: هستی نادانی تکلیف شماره ۳

$$\left. \begin{aligned} y_1^3 - x_1 &= 2x_1^2 \\ y_2^3 - x_2 &= 2x_2^2 \end{aligned} \right\} \xrightarrow{x_1=x_2} y_1^3 = y_2^3 \rightarrow y_1 = y_2 \quad \checkmark$$

ب) $x=1$
 $|y|+1=4 \quad \times$
 $|y|=3 \rightarrow y=\pm 3$

ج) $\sqrt{x-4} + |y-2| = 0$
 $x=4$
 $y=2 \quad \checkmark$

د) $x=0 \quad \times$
 $y = \frac{\pi}{2}, \frac{3\pi}{2}$

الف) $y=1$

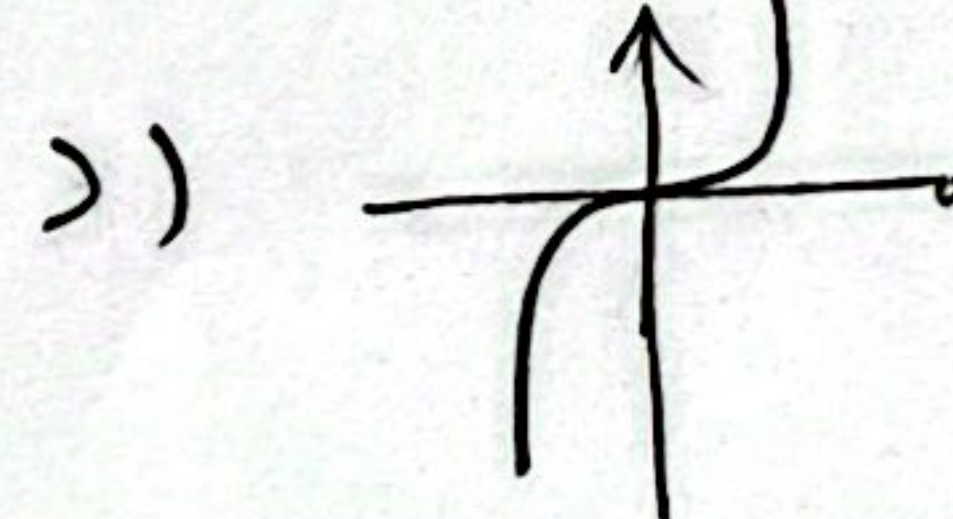
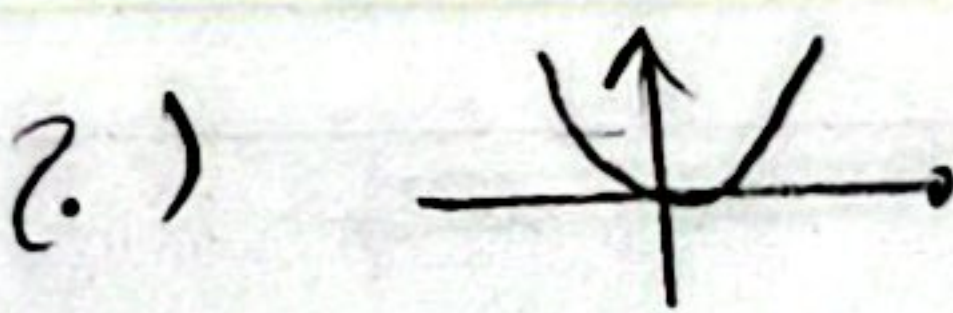
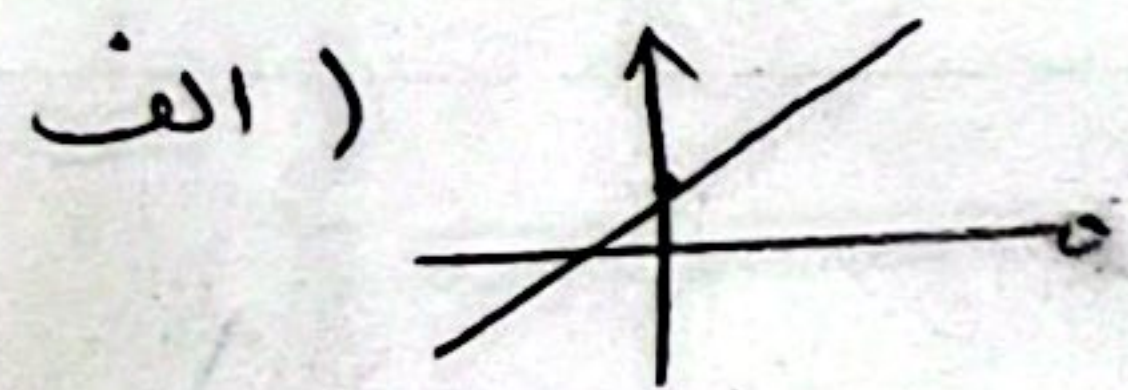
ب) $y=2x+1$

الف) $y=2x+1 \rightarrow y=2x+1$ $y=ax+b \rightarrow a=1, b=0 \rightarrow 1+0=1$

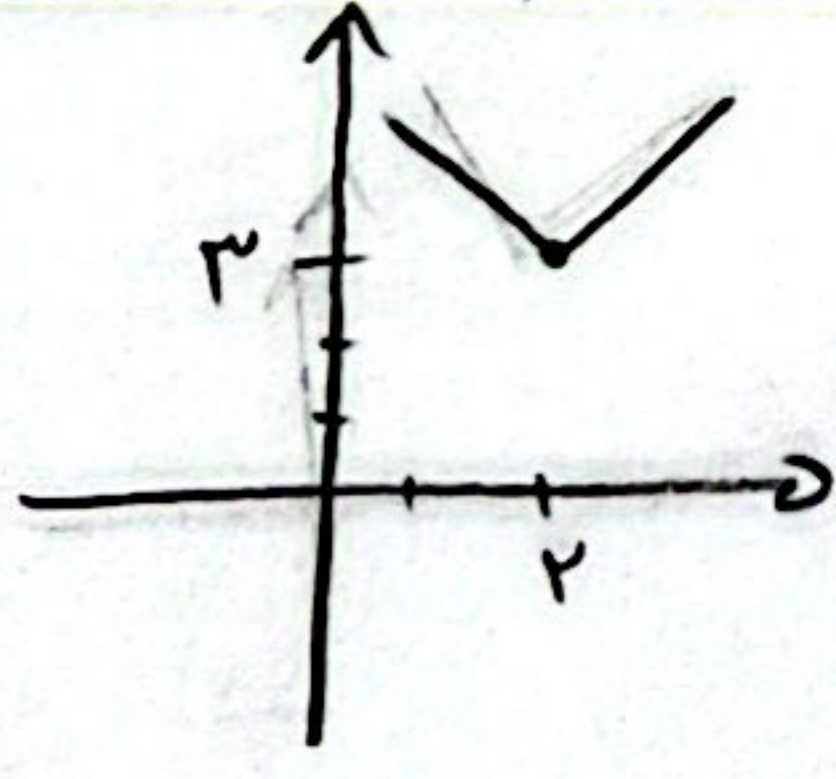
ب) $y=x^2+ax+b$

$x = \frac{-b}{2a} = \frac{-a}{2} = 2 \rightarrow -a=4 \rightarrow a=-4$

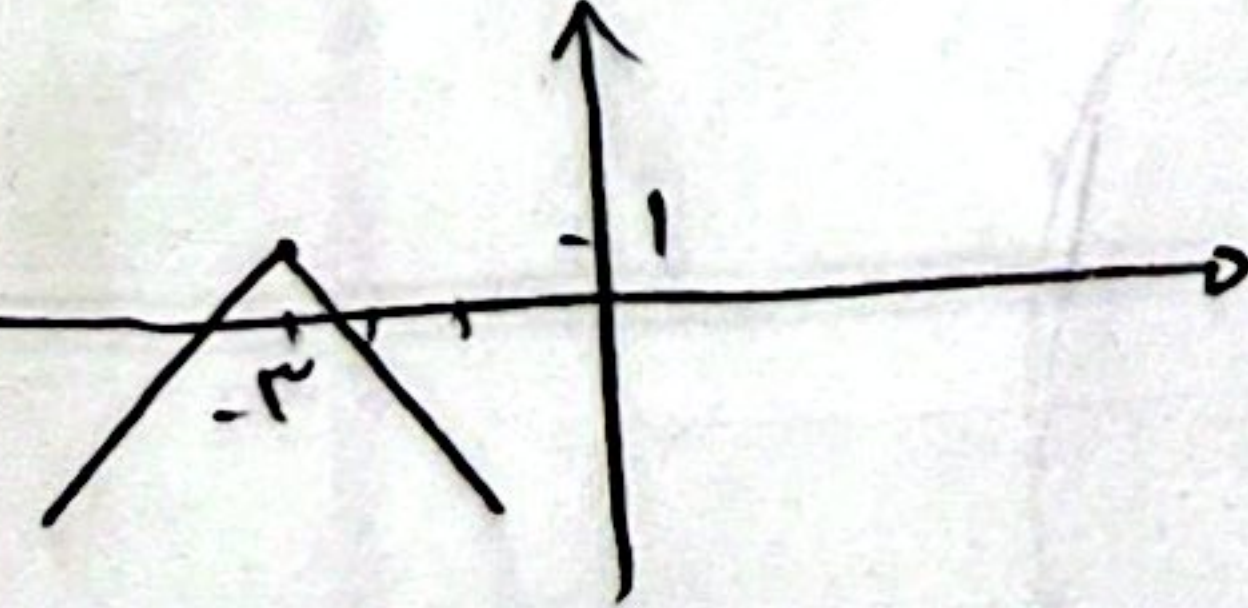
$y = \frac{-\Delta}{2a} = \frac{-b^2+4ac}{2a} = \frac{-a^2+4b}{2} = 1 \rightarrow -14+4b=4$
 $4b=18 \rightarrow b=4.5$ $\left. \begin{aligned} -4+2(0) &= 4 \end{aligned} \right\}$



الف) $y=|x-2|+3$



ب) $y=-|x+3|+1$



الف) $y = \frac{x+4}{x^2-4x} \rightarrow \begin{cases} x=-4 \\ x=4 \\ x=0 \end{cases} \quad D_f = (4, +\infty) \cup (-4, 0)$

ب) $y = \frac{x+4}{x^2-7x+14} \rightarrow \begin{cases} x=-4 \\ x=0 \end{cases} \quad IR = D_f$

ج) $y = \frac{x+4}{x^2+x+4} \quad IR = D_f$

د) $y = \frac{x+4}{x^2-4x^2} \rightarrow \begin{cases} x=-4 \\ x=0 \\ x=2 \end{cases} \quad D_f = (-4, -2) \cup (2, +\infty)$

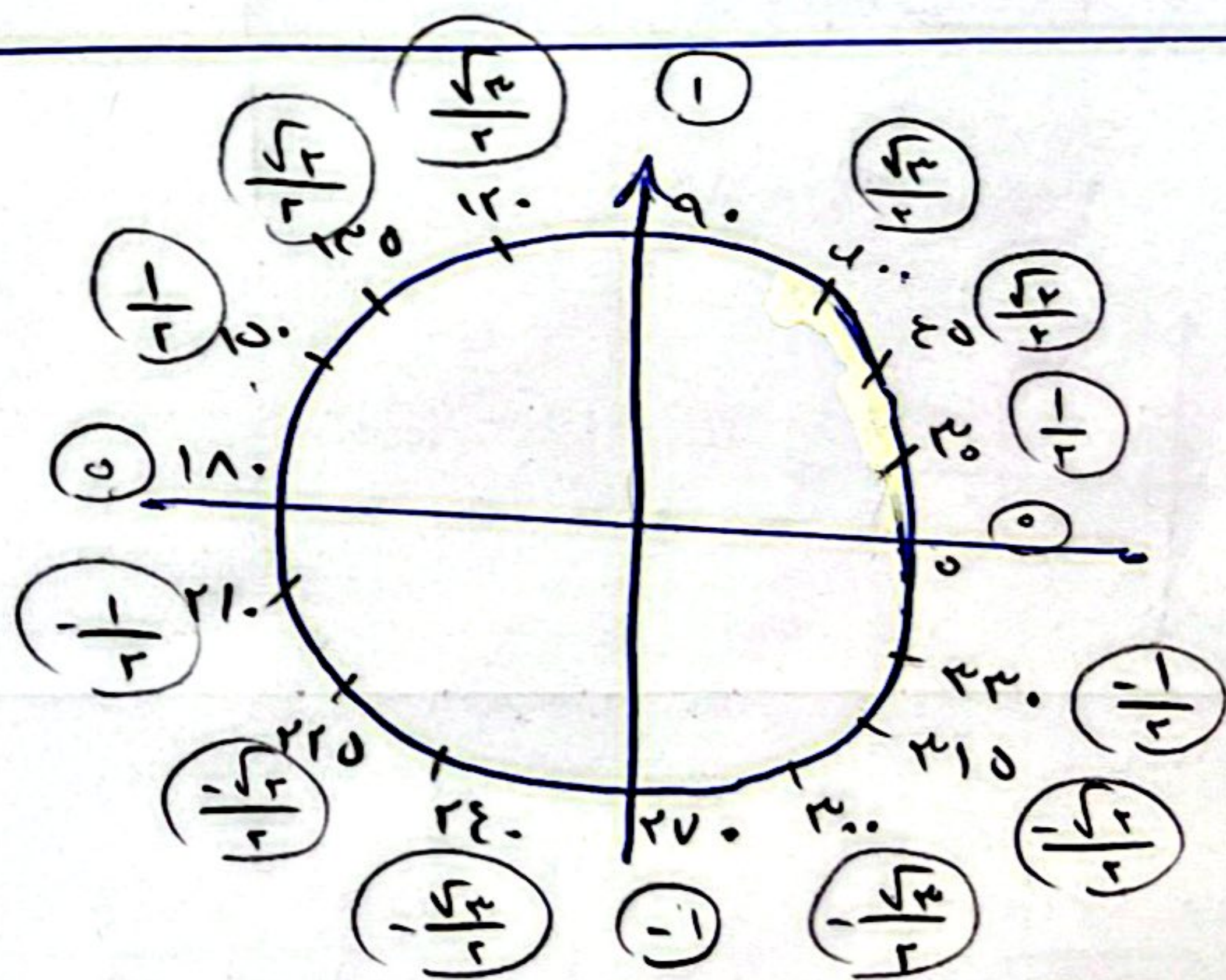
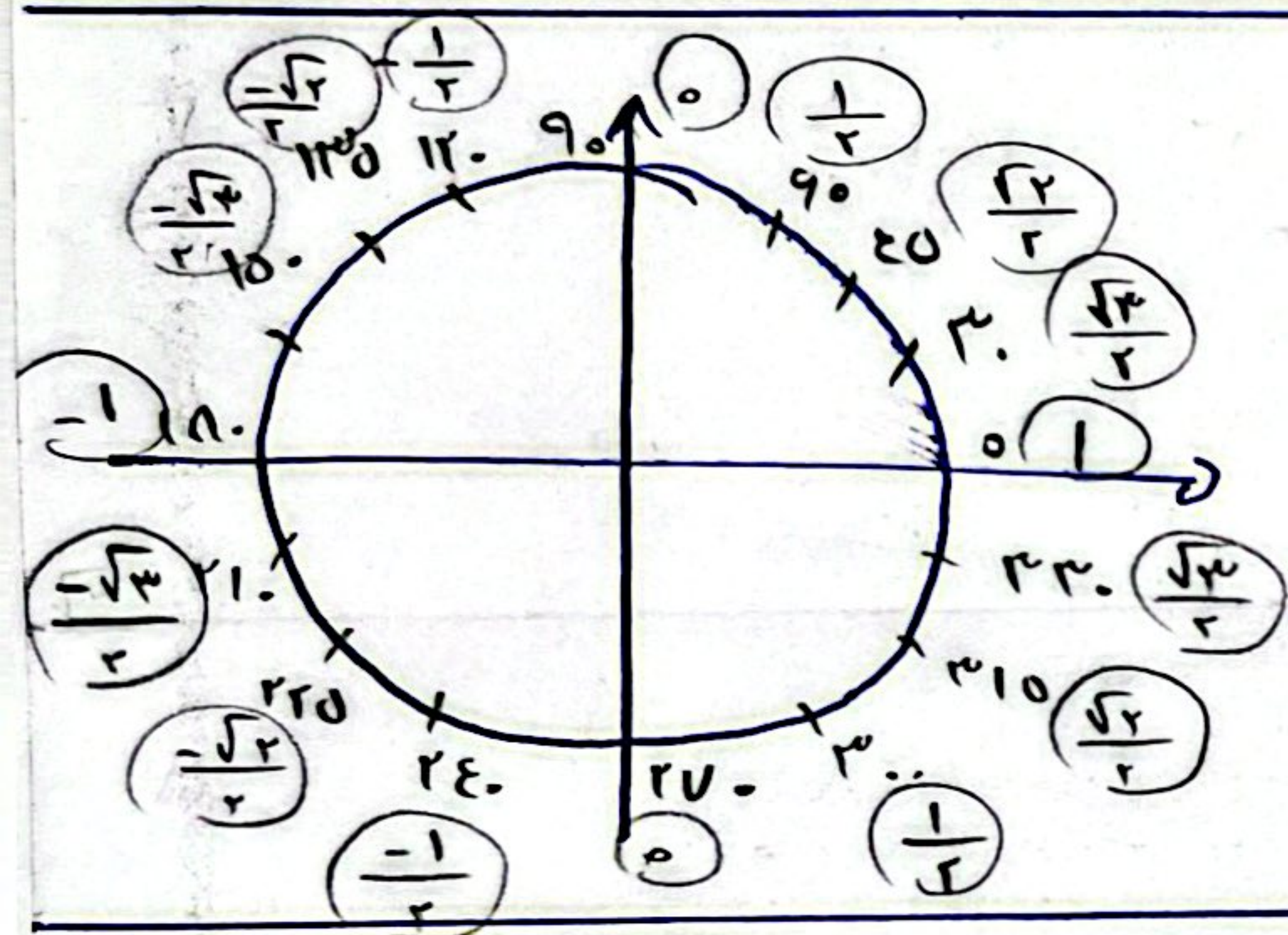
الف) $y = \sqrt{4-x} + \sqrt{x-2} \rightarrow \begin{cases} 4-x \geq 0 \\ 4 \geq x \end{cases} \quad \begin{matrix} x-2 \geq 0 \\ x \geq 2 \end{matrix}$

$D_f = [2, 4]$

ب) $y = \frac{x^2+1}{x^2+1} \quad R - \{1, -1\} = D_f$

ج) $y = \frac{\sqrt{x-2}}{x-2} \rightarrow \begin{cases} x=2 \\ x=2 \end{cases} \quad \frac{2}{1-1} + \frac{2}{1-1} \quad D_f = (2, +\infty)$

د) $y = \frac{x^2+3}{|x|+x^2} \rightarrow \begin{cases} x \neq 0 \end{cases} \quad D_f = R - \{0\}$



الف) $\frac{2\pi}{3} = 120^\circ \rightarrow -\cos 120^\circ = -\frac{1}{2}$

ب) $\frac{11\pi}{4} = 330^\circ \rightarrow -\cos 330^\circ = -\frac{\sqrt{3}}{2}$