

الف) $n=0 \rightarrow y=0 \rightarrow y=0$ $n=1 \rightarrow y=3 \rightarrow y=3$ تابع	۱
ب) $n=0 \rightarrow y =3 \rightarrow y=1, 3$ تابع نیست	
ج) $\sqrt{n-4} = - y-1 \rightarrow \sqrt{n-4} = -y+1 \rightarrow n=4 \Rightarrow y=2$ $\sqrt{n-4} = y-1 \rightarrow \sqrt{n-4} = y+1 \rightarrow n=4 \Rightarrow y=-2$ } تابع نیست	
د) $n=0 \rightarrow \cos y = 0 \rightarrow y = 90^\circ \text{ و } 270^\circ$ تابع نیست	

الف) تابع ثابت $y=k \leftarrow y=1$	۲
ب) $y=an+b$ خطی $y=2x+1$ $y=(2 \times 1)+b$	

الف) $y=an+b$ خطی $f(n)=n$ یعنی $y=a \cdot n+b$	۳
$a+2b \rightarrow 1+(2 \times 0) = 1$	
$a+2b = \frac{w}{p} + 2x - \frac{1p}{p} = \frac{w-2p}{p} = \frac{-21}{2}$	
$\frac{-b}{p_a} = p$ $fa = -b$	
$y = 2x + 1$	
$y = -3x + 1$	

$y = x^2$	۴
$y = x^3$	

الف) $ n-2 +3$	۵
ب) $- n+3 +1$	

$$a) x^2 - 5x \neq 0 \rightarrow x(x-5) \neq 0 \Rightarrow x \neq 5 \quad x \neq 0 \Rightarrow \mathbb{R} - \{0, 5\}$$

$$b) \Delta \rightarrow \infty \Rightarrow \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \rightarrow \infty \Rightarrow (-\infty, +\infty)$$

$$c) \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \rightarrow \frac{-1 \pm \sqrt{1-14}}{2} \rightarrow \infty \Rightarrow (-\infty, +\infty)$$

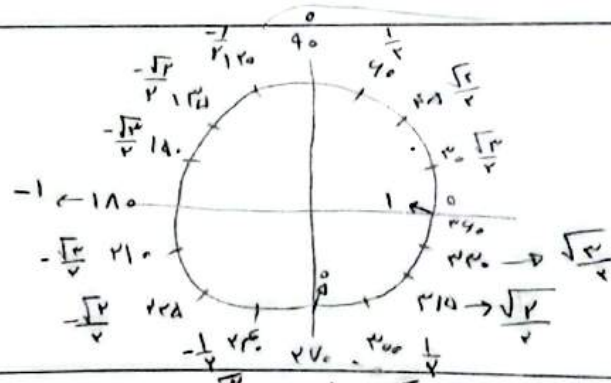
$$d) x^2 - 5x^2 \neq 0 \rightarrow x^2(x^2 - 5) \neq 0 \rightarrow x^2 \neq 5 \Rightarrow x \neq \pm\sqrt{5}, \quad x^2 = 0 \rightarrow x = 0 \Rightarrow \mathbb{R} - \{0, \pm\sqrt{5}\}$$

$$ii) 4 - x \geq 0 \rightarrow x \leq 4, \quad x - 2 \geq 0 \rightarrow x \geq 2 \quad 2 \leq x \leq 4$$

$$b) x^2 + 1 \neq 0 \rightarrow (-\infty, +\infty)$$

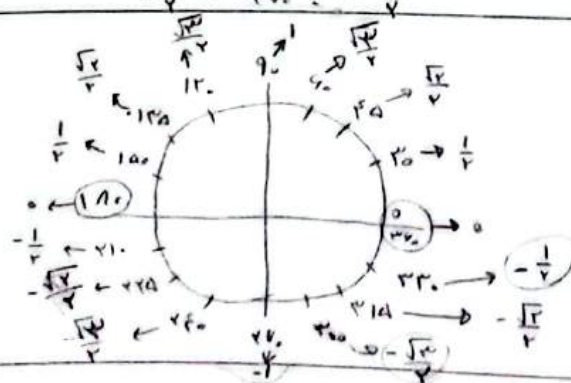
$$c) x - 2 \geq 0 \rightarrow x \geq 2 \rightarrow [2, +\infty), \quad x - 5 \neq 0 \rightarrow (x \neq 5) \Rightarrow [2, +\infty) - \{5\}$$

$$d) \frac{1}{x} + \frac{x}{x+1} \neq 0 \rightarrow x = 0 \quad \mathbb{R} - \{0\}$$



کوسین زوايا

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سینوس زوايا

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$$\frac{\pi}{4}, 135^\circ \rightarrow \frac{3\pi}{4}$$

$$\left(\frac{1}{\sqrt{2}}, \frac{\sqrt{2}}{2} \right) \text{ at } 45^\circ$$

$$\left(\frac{1}{\sqrt{2}}, -\frac{\sqrt{2}}{2} \right) \text{ at } 315^\circ$$

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$$240^\circ, 300^\circ \rightarrow \frac{4\pi}{3}, \frac{5\pi}{3}$$