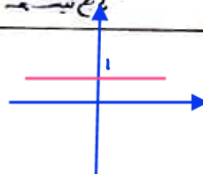


۴) $y^3 - x = 2x^2 \rightarrow y = \sqrt[3]{x^2 + 2x}$ تابع است - بازای هر یک از x و y یک به یک است -

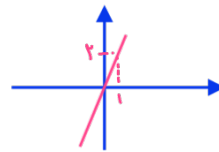
✓) $|y|^{2-x^2-x^3} \rightarrow |y|^{2-x^2-x^3} \rightarrow |y|^{2-x^3} \rightarrow y = \pm x^3 \rightarrow$ تابع نسبت

ج) $\sqrt{x-4} + |y-2| = 0 \rightarrow \sqrt{x-4} = -|y-2|$ $\rightarrow y=2$ هم‌بندی امکان مثبت است و هم در مخرج
بسیار راه‌های مثبت و منفی در مخرج
د) $x = \cos y \rightarrow \cos y = 0 \rightarrow y = 90^\circ, 270^\circ$ $\rightarrow 1 < \pi < \frac{3}{2}\pi$ است

$$\text{iii) } y \in I_1^* \rightarrow y \in I_2 \rightarrow f(x) \in I_1$$



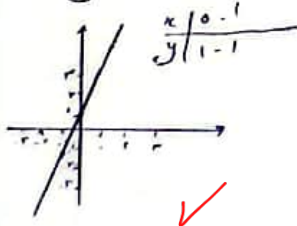
ب) $y: ax+b \rightarrow y_2 y+b \rightarrow b_2 0 \rightarrow f(x)_2 y_2$



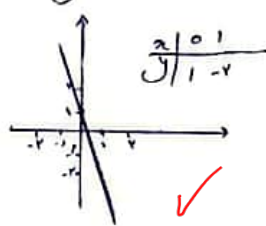
$$\text{ii) } y = ax + b \rightarrow y = x \rightarrow ax + b = x \rightarrow ax + 0 = x \rightarrow a = 1 \quad b = 0 \rightarrow a + b = 1$$

$1 + 2(-) \rightarrow 1 - 2 = -1$
 $-1) \text{ Lin } \left\{ \begin{array}{l} \frac{-b}{\epsilon a} \rightarrow -b = \epsilon a \rightarrow b = -\epsilon a \rightarrow b = -\epsilon a \\ \frac{-a}{\epsilon a} \rightarrow -1 = \epsilon a \rightarrow b = -\epsilon a \end{array} \right\}$
 $-1 \text{ Lin } \left\{ \begin{array}{l} \frac{-b}{\epsilon a} \rightarrow -b = \epsilon a \rightarrow b = -\epsilon a \rightarrow b = -\epsilon a \\ \frac{-a}{\epsilon a} \rightarrow -1 = \epsilon a \rightarrow b = -\epsilon a \end{array} \right\}$

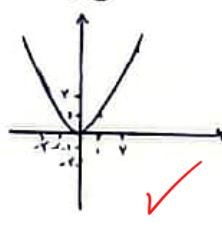
الف $y = 2x + 1$



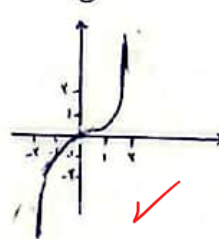
$$\text{b.) } y_1 = x_{n+1}$$



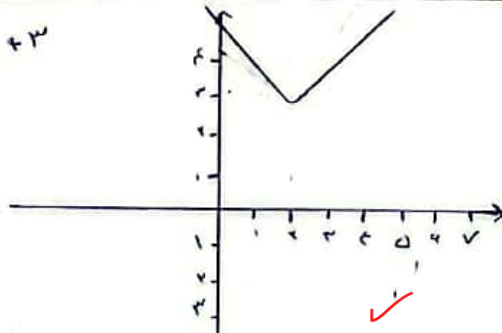
ج) y, x^k



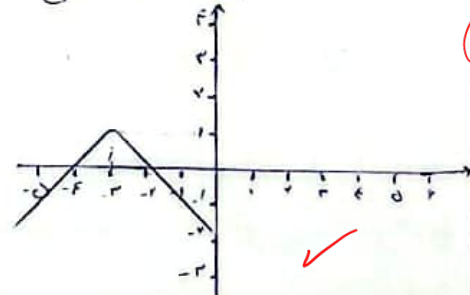
$$1) y = x^4$$



الف) $y = |x - 2| + 3$



$$\rightarrow y_2 = (x + \sqrt{x})$$



الف) $y = \frac{x+f}{x^2-fx} \rightarrow x^2-fx = 0 \rightarrow x(x-f) = 0$ if $x=f$, $x^2-fx=0 \rightarrow x=0$ ~~$x=f$~~
 $\rightarrow x(x-f) \Rightarrow D_y = \mathbb{R} - \{0, f\}$

ب) $y = \frac{x+f}{x^2 - \sqrt{x+1}}$ $\rightarrow x^2 - \sqrt{x+1} = 0 \rightarrow x^2 = \sqrt{x+1}$ $\rightarrow x = 1$

ج) $y = \frac{x+f}{x^2+x+f} \rightarrow x^2+x+f = 0 \rightarrow x^2+x = -f \rightarrow x^2+x+2 = 0$ $\rightarrow x = 1$
 تعیین علامت نیاز نداره! $\Delta = 1 - 4(1)(f) = -16$

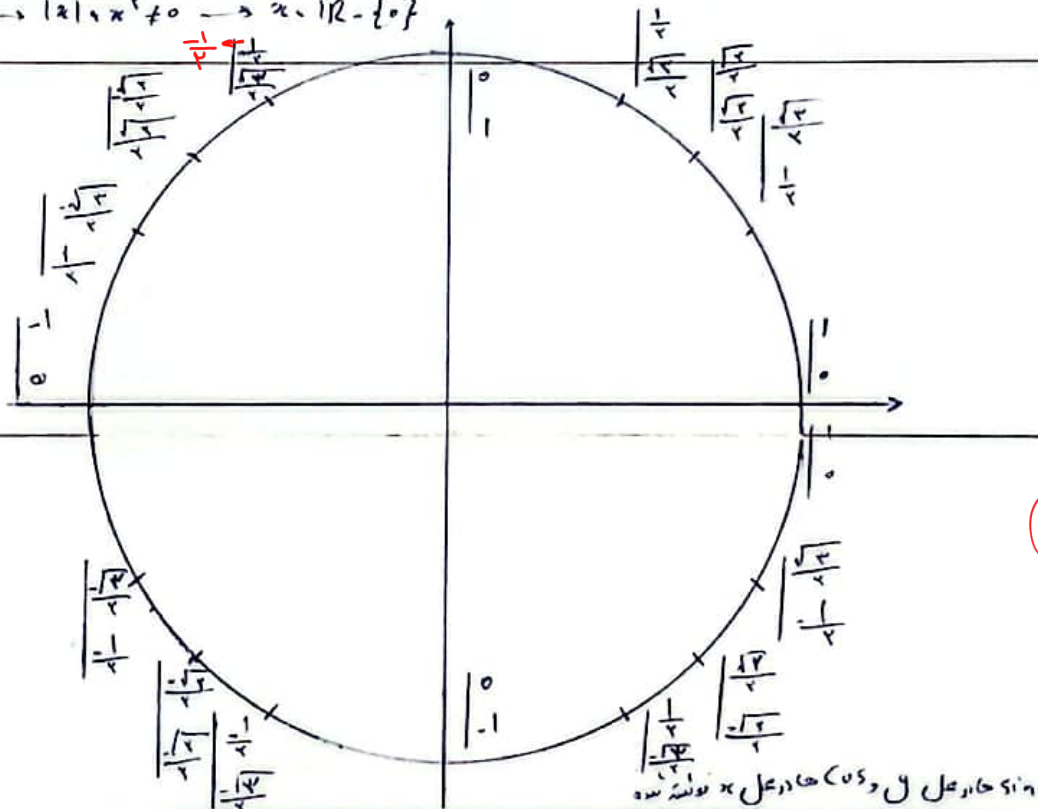
د) $y = \frac{x+f}{x^2-fx} \rightarrow x^2-fx = 0 \rightarrow x(x-f) = 0 \rightarrow x = 1$ $\rightarrow x = \mathbb{R} - \{0, f\}$

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

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

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

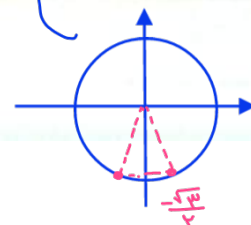
ح) $y = \frac{x+2}{|x|+x^2} \rightarrow |x|+x^2 \neq 0 \rightarrow x = \mathbb{R} - \{0\}$



الف) $\cos \frac{3\pi}{4} = \cos 135^\circ = -\frac{1}{\sqrt{2}} \rightarrow \sin 45^\circ = \frac{1}{\sqrt{2}} \rightarrow 2k\pi + \frac{\pi}{4}, 2k\pi + \frac{5\pi}{4}$

ب) $\cos \frac{11\pi}{4} = \cos 330^\circ = \frac{\sqrt{3}}{2} \rightarrow \sin 30^\circ = \frac{1}{2} \rightarrow 2k\pi + \frac{\pi}{6}, 2k\pi - \frac{5\pi}{6}$

سینوس در زوایای $2k\pi + \frac{\pi}{6}$ و $2k\pi + \frac{5\pi}{6}$



$$\text{ج) } y = x^2 + ax + b \quad \text{Min} \int_1^2$$

$$x_5 = \frac{-b}{1a} \rightarrow \frac{-a}{1} = 1 \Rightarrow \underline{\underline{a = -1}}$$

$$y_5 = 1 \rightarrow 1 = (1)^2 - 1(1) + b \Rightarrow \underline{\underline{b = 1}}$$

$$\left. \begin{array}{l} \\ \end{array} \right\} a + 1b = -1 + 1(1) = \underline{\underline{0}}$$