

آخرین رجب گروه دهم پنجشنبه

الف) $y^3 = 2x^2 + x$ $\begin{cases} y_1^3 = 2x_1^2 + x_1 \\ y_2^3 = 2x_2^2 + x_2 \end{cases} \xrightarrow{m_1 = m_2} y_1^3 - y_2^3 \rightarrow y_1 = y_2$ تابع مت

ب) $|y| + 1 = 1 + 3 \rightarrow |y| = 3$ قابل قطع $x = 1$

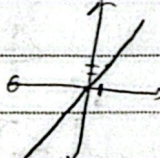
تابع نیست
زیرا قدر مطلق نه تواند منفی باشد
خطاب

ج) $\sqrt{x-4} + |y-2| = 0$

$\sqrt{x-4} = 0 \rightarrow x = 4$ $|y-2| = 0 \rightarrow y = 2$ تابع است

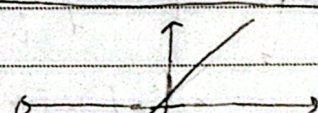
د)

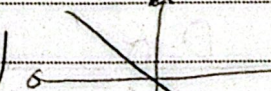
الف) $y = 1$ $x = 3$ 

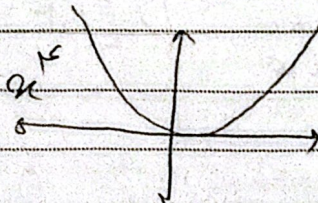
ب) $y - y_0 = m(x - x_0) \Rightarrow y - 2 = 2(x - 1)$ $y = 2x$ 

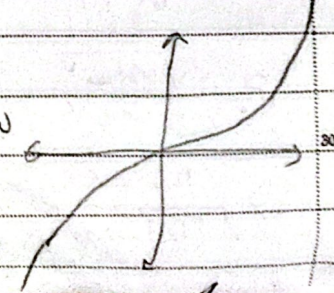
الف) $y = \frac{ax+b}{x}$ $ax+b = -x \rightarrow a+2b = 1 \times 2(0) = 1$

ب)

الف) $y = 2x + 1$ 

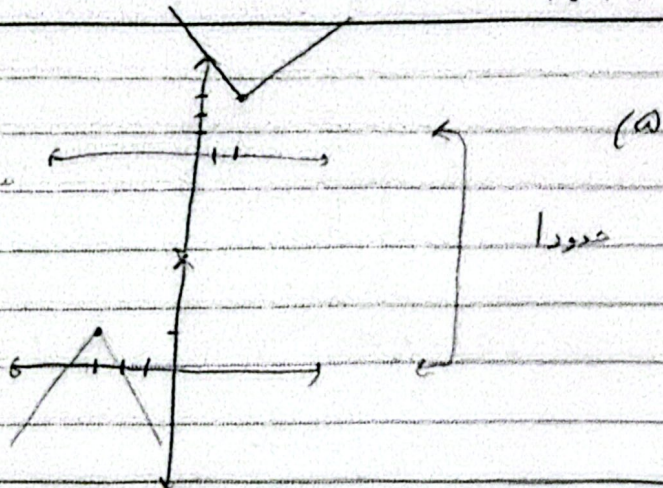
ب) $y = -2x + 1$ 

ج) $y = x^2$ 

د) $y = x^3$ 

$$\text{الف) } y = |x-1| + 1$$

منطقة تحت المحاور



$$\text{ب) } y = -|x+1| + 1$$

$$\text{الف) } y = \frac{x+1}{x^2-1}$$

$$x^2-1=0$$

$$x^2-1=0$$

$$x(x-1)=0$$

$$x=0, 1$$

$$D = \mathbb{R} - \{0, 1\}$$

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

$$D = \mathbb{R}$$

$$\text{ج) } \frac{x+1}{x^2+1}$$

$$x^2+x+1=0$$

$$\Delta = 1-4 = -3$$

$$D = \mathbb{R}$$

$$\text{د) } \frac{x+1}{x^2-1}$$

$$x^2-1=0$$

$$x^2(x-1)=0 \Rightarrow x^2(x-1)(x+1)$$

$$\rightarrow x=0, 1, -1 \quad D = \mathbb{R} - \{0, 1, -1\}$$

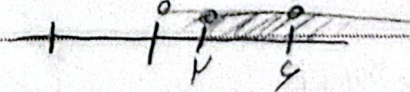
$$\text{هـ) } y = \sqrt{4-x} + \sqrt{x-1}$$

$$4-x \geq 0$$

$$x-1 \geq 0$$

$$x \leq 4$$

$$x \geq 1$$



$$D = [1, 4]$$

$$\text{و) } \frac{x+1}{x^2+1}$$

$$x^2+1 \neq 0$$

$$x^2 \neq -1$$

$$D = \mathbb{R}$$

$$\text{ز) } \frac{\sqrt{x-1}}{x-1}$$

$$x-1 \geq 0$$

$$x \geq 1$$

$$x-1 \neq 0$$

$$x \neq 1$$

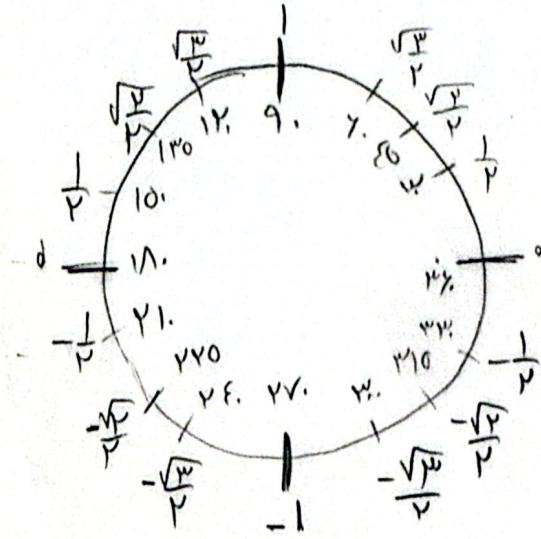
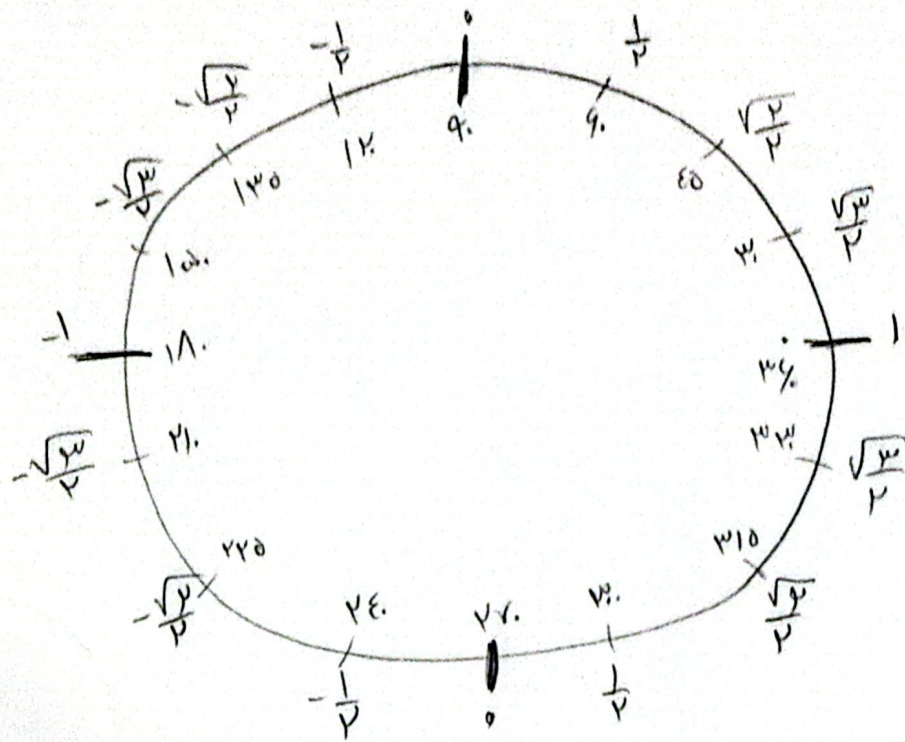
$$D = [1, 1) \cup (1, \infty)$$

$$\text{ح) } \frac{x+1}{|x|+x^2}$$

$$|x|+x^2 \neq 0$$

$$|x|+x^2=0 \rightarrow |x|=0 \Rightarrow x=0$$

$$D = \mathbb{R} - \{0\}$$



الذ $\frac{\sqrt{2}}{3}$ حرين كين $= \frac{\sqrt{2}}{2}$

سينوس $= \frac{1}{4}$ و $\frac{\sqrt{2}}{2}$

ب $\frac{112}{6}$ ترين سينوس $= \frac{\sqrt{2}}{2} = \frac{\sqrt{2}}{2}$ سينوس $= \frac{\sqrt{2}}{3}$ و $\frac{\sqrt{2}}{3}$