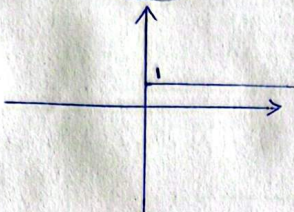
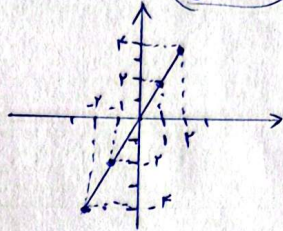
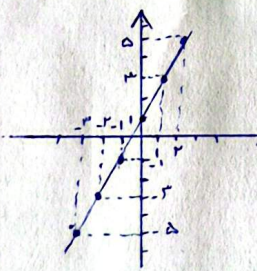
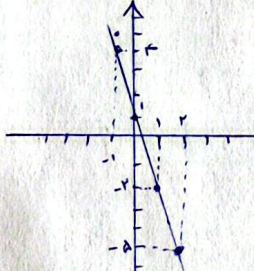
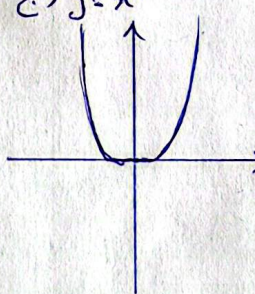
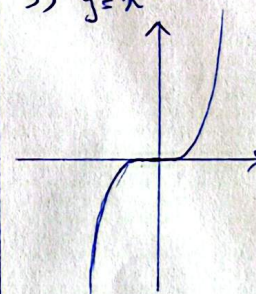
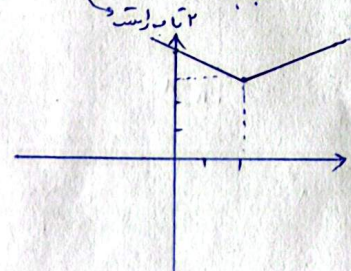
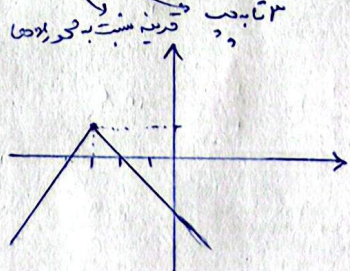
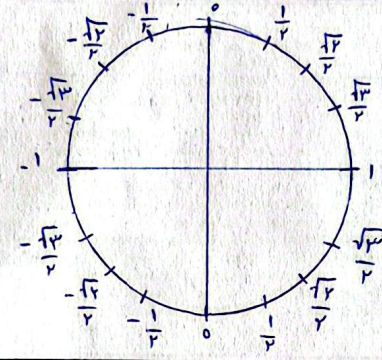
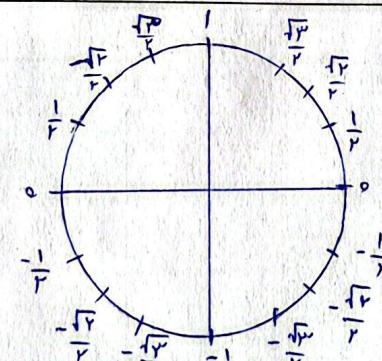


نام و نام خانوادگی: پاسخنامه تشریحی تکلیف شماره ۳ کلاس: A

الف) $y^3 = 2x^2 + x$ → $\begin{cases} y_1 = \sqrt[3]{2x_1^2 + x_1} \\ y_2 = \sqrt[3]{2x_2^2 + x_2} \end{cases} \xrightarrow{x_1 = x_2} y_1 = y_2$ تابع است	ب) $x=0 \rightarrow y \leq 3$ → $y = \pm 3$ تابع نیست	۱	
ج) $\sqrt{x-4} + y-2 = 0$ د) $x=0 \rightarrow 0 \leq \cos y$ → $y = \frac{\pi}{2}, \frac{3\pi}{2}$ تابع نیست	→ $x-4 \leq y-2 \leq 0 \rightarrow x \leq 4, y \leq 2$ تابع است	۱	
الف) $y=k / y=1$ 	ب) $y=ax+b / y=2x$ 	۲	
الف) $y=x \rightarrow$ تابع همتا (الف) → $a=1, b=0$ → $1+2(0) \leq 1$	ب) ext: $\begin{cases} -\frac{b}{2a} \\ -\frac{\Delta}{4a} \end{cases}$ → $-\frac{a}{2} = 2 \rightarrow a = -4$ → $-\frac{(a^2-4b)}{4} \leq 1 \rightarrow -14+2b \leq 4$ → $b \leq 9$	۳	
الف) $y=2x+1$ 	ب) $y=-3x+1$ 	ج) $y=x^2$  د) $y=x^3$ 	۴
الف) $y= x-2 +3$ → تابع یکتا 	ب) $y= x+3 +1$ → تابع یکتا 	۵	

الف) $y = \frac{x+4}{x(x-4)}$ ریشهها $x=0, 4$ $\rightarrow D_f = \mathbb{R} - \{0, 4\}$	ب) $y = \frac{x+4}{x^2 - \sqrt{x+4}}$ $\Delta = 15$ ریشه ندارد $\rightarrow D_f = \mathbb{R}$	6
ج) $y = \frac{x+4}{x^2 + x + 4}$ $\Delta = -3$ ریشه ندارد $\rightarrow D_f = \mathbb{R}$	د) $y = \frac{x+4}{x^2(x^2-4)}$ ریشهها $x=0, 2, -2$ $\rightarrow D_f = \mathbb{R} - \{0, 2, -2\}$	6
الف) $y = \sqrt{4-x} + \sqrt{x-2}$ $\frac{4}{-} + \frac{4}{+} =$ $\rightarrow D_f = [2, 4]$	ب) $y = \frac{3x+1}{x^2+1}$ $D_f = \mathbb{R}$	7
ج) $y = \frac{\sqrt{x-2}}{x-4}$ $\rightarrow x \geq 2$ $x-4 \rightarrow x \neq 4$ $\rightarrow D_f = [2, +\infty) - \{4\}$	د) $y = \frac{2x+3}{ x +x^2}$ $D_f = \mathbb{R} - \{0\}$	7
		8
		9
الف) $\sin x = -\cos \frac{2\pi}{3}$ 120° $\rightarrow -(-\frac{1}{2}) = \frac{1}{2} = \sin x$ $\rightarrow x = 30^\circ, 150^\circ \Rightarrow \boxed{\frac{\pi}{6}, \frac{5\pi}{6}}$	ب) $\sin x = -\cos \frac{11\pi}{4}$ 330° $\rightarrow -\frac{\sqrt{3}}{2} = \sin x$ $\rightarrow x = 240^\circ, 300^\circ \Rightarrow \boxed{\frac{4\pi}{3}, \frac{5\pi}{2}}$	10