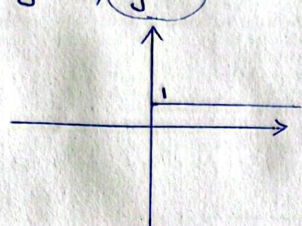
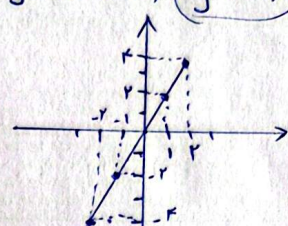
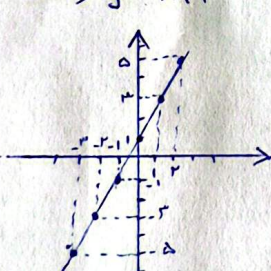
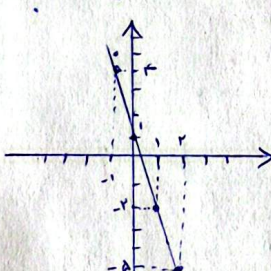
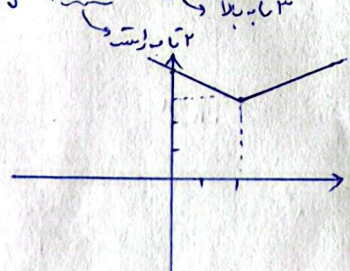
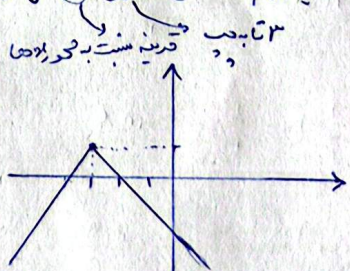
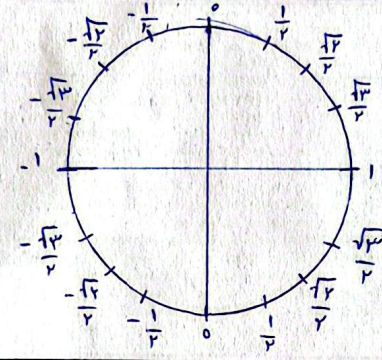
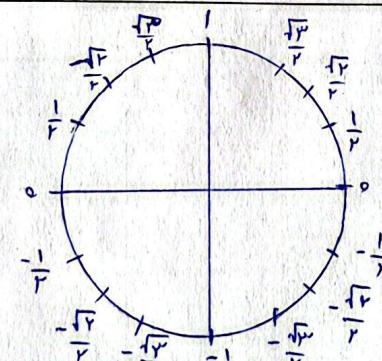


نام و نام خانوادگی: امیرضا هادی پاسخنامه تشریحی تکلیف شماره ۳ کلاس ۳م A

الف) $y^3 = 2x^2 + x$ → $\begin{cases} y_1 = \sqrt[3]{2x^2+x} \\ y_2 = \sqrt[3]{2x^2+x} \end{cases} \xrightarrow{x \leq x_1} y_1 \leq y_2$ تابع است	ب) $x=0 \rightarrow y \leq 3$ → $y = \pm 3$ تابع نیست	1
ج) $\sqrt{x-4} + y-2 \leq 0$ د) $x \leq 0 \rightarrow 0 \leq \cos y$ تابع نیست → $y = \frac{\pi}{2}, \frac{3\pi}{2}$	ج) $\sqrt{x-4} + y-2 \leq 0$ د) $x \leq 0 \rightarrow 0 \leq \cos y$ تابع نیست → $y = \frac{\pi}{2}, \frac{3\pi}{2}$	1
الف) $y = k / y = 1$ 	ب) $y = ax + b / y = 2x$ 	2
الف) $y = x$ تابع هائ (الف) → $a=1, b=0$ → $1 + 2(0) \leq 1$	ب) ext: $\begin{cases} -\frac{b}{fa} \\ -\frac{\Delta}{4a} \end{cases}$ → $-\frac{a}{2} = 2 \rightarrow a = -4$ → $-\frac{(a^2-4b)}{4} \leq 1 \rightarrow -14+2b \leq 4 \rightarrow b \leq 9$	3
الف) $y = 2x + 1$ 	ب) $y = -3x + 1$ 	4
الف) $y = x-2 + 3$ 	ب) $y = - x+3 + 1$ 	5

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) $y = \frac{x+4}{x^2(x-4)}$ ریشهها $x=0, 4, -2$ $\rightarrow D_f = \mathbb{R} - \{0, 4, -2\}$	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