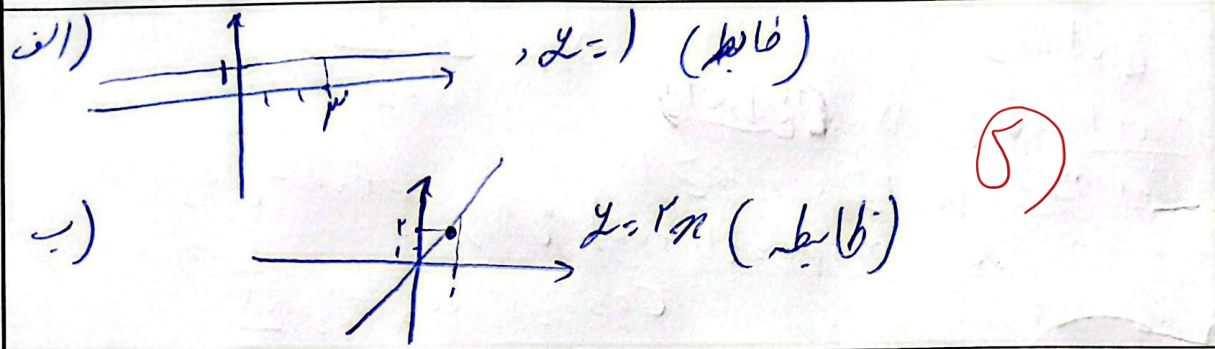
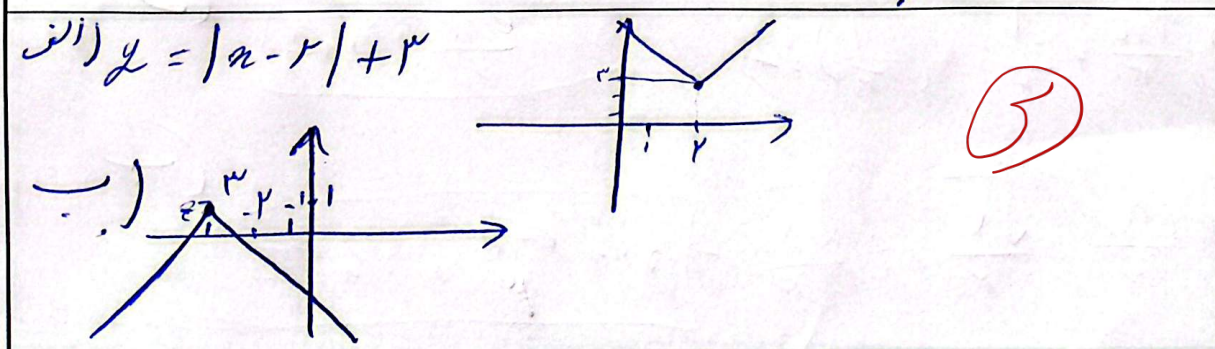
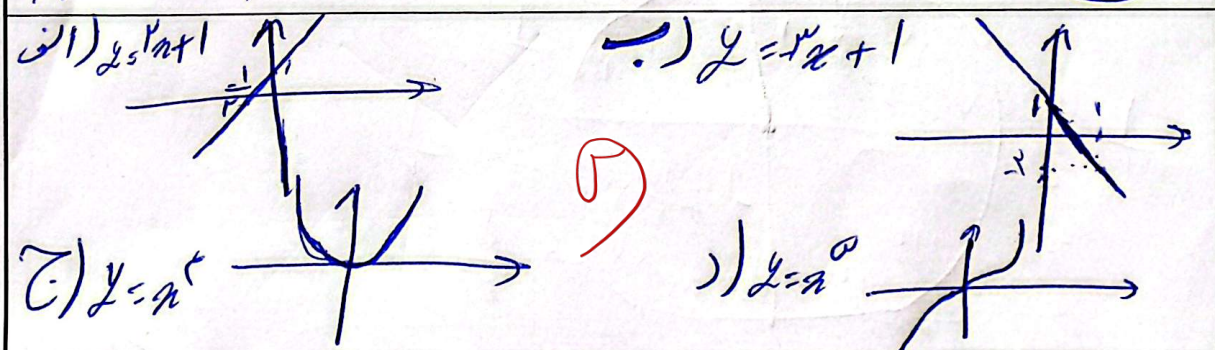


نام و نام خانوادگی آریین زمانی پاسخنامه تشریحی تکلیف شماره ۳ کلاس اسم پسر A

الف) $\begin{cases} x^3 = 2x^2 + a_1 \\ x^2 = 2ax^2 + a_2 \end{cases} \rightarrow \begin{cases} x_1 = a_1 \\ x_2 = a_2 \end{cases}$
 ب) $|x| + x^2 = a + 3 \rightarrow x^2 + |x| - a - 3 = 0$
 ج) $\sqrt{x-4} + |x-2| = 0$
 د) $x = \cos \theta \rightarrow \cos \theta = 0 \rightarrow \theta = \{2k\pi + \frac{\pi}{2}, 2k\pi - \frac{\pi}{2}\}$



الف) $y = ax + b$
 ب) $y = x^2 + ax + b$
 $\frac{-b}{2a} = 2 \rightarrow \frac{-a}{2} = 2 \rightarrow a = -4$
 $4 + (2x - 4) + b = 1 \rightarrow -4 + b = 1 \rightarrow b = 5$

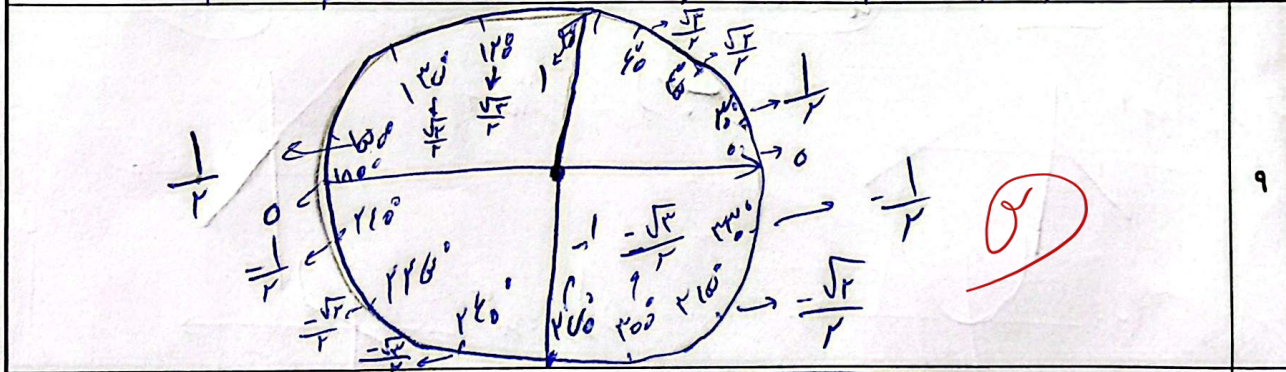
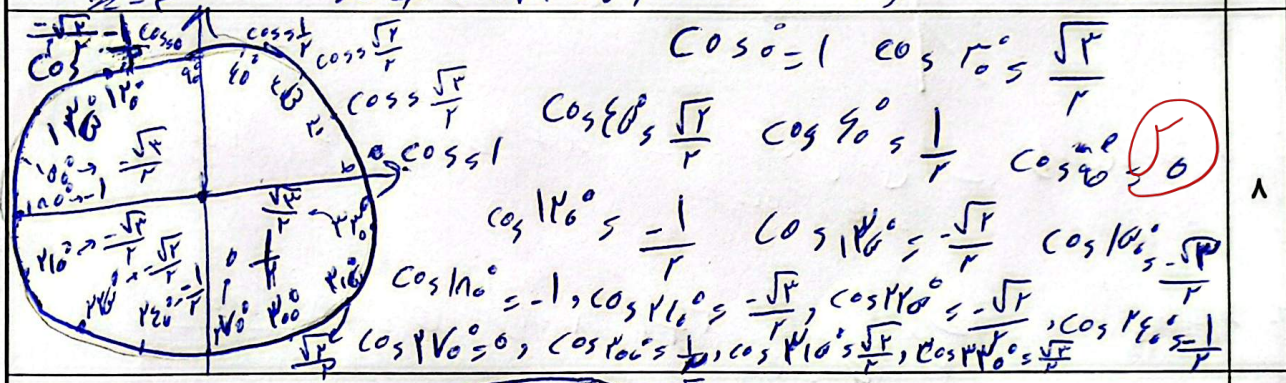


الف) $\frac{n+2}{n^2-4n}$ $Df = \mathbb{R} - \{0, 4\}$
 ب) $y = \frac{n+2}{n^2-4n+4} \rightarrow b^2-4ac < 0$ $n^2-4n+4 = (n-2)^2 \neq 0$ $Df = \mathbb{R}$

ج) $y = \frac{n+2}{n^2+4n+4} \rightarrow b^2-4ac > 0$ $n^2+4n+4 = (n+2)^2 \neq 0$ $Df = \mathbb{R}$
 د) $y = \frac{n+2}{n^2-4n+4} \rightarrow n^2-4n+4 = (n-2)^2 \neq 0$ $Df = \mathbb{R} - \{0, 4\}$

الف) $y = \sqrt{4-n} + \sqrt{n-2}$, $4-n \geq 0 \rightarrow n \leq 4$, $n-2 \geq 0 \rightarrow n \geq 2$
 $2 \leq n \leq 4$ $Df = [2, 4]$

ب) $y = \frac{n+1}{n^2+1}$ $Df = \mathbb{R}$
 ج) $y = \frac{n+1}{n^2-1}$ $n-1 \geq 0 \rightarrow n \geq 1$
 $n \neq 1$, $Df = [1, +\infty) - \{1\}$



الف) $\cos \frac{2\pi}{3} = -\frac{1}{2}$, $-\left(-\frac{1}{2}\right) = \frac{1}{2} \rightarrow \sin \frac{5\pi}{6}, \sin \frac{\pi}{6}$

ب) $\cos \frac{11\pi}{6} = \frac{\sqrt{3}}{2}$, $-\frac{\sqrt{3}}{2} \rightarrow \sin \frac{5\pi}{6}, \sin \frac{7\pi}{6}$