

پاسخ

۲۰

نام و نام خانوادگی ایمان محمد جباری پاسخنامه تشریحی تکلیف شماره ۳ ... کلاس ... چهارم دبیرستان A

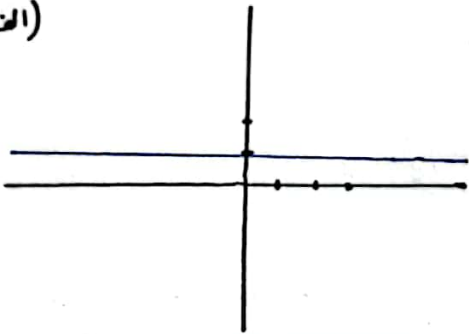
الف) $y^2 - 2x = 2x^2 \Rightarrow y^2 = 2x^2 + x$ $\xrightarrow{x=y}$ $y^2 = y^2 \Rightarrow y=y$
 $y^2 = 2x^2 + x$ تابع است

ب) $|y| + x^2 = x + 3 \xrightarrow{x=0} |y| = 3 \Rightarrow y = \pm 3$
 تابعی نیست تابع است

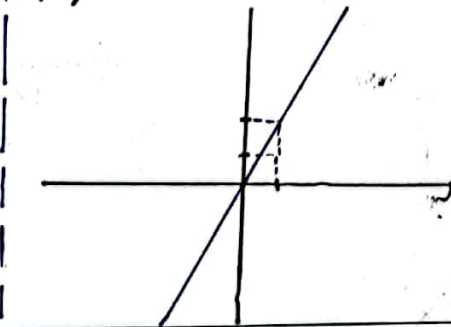
ج) $\sqrt{x-4} + \sqrt{y-2} = 0 \Rightarrow \begin{cases} \sqrt{x-4} = 0 \Rightarrow x=4 \\ \sqrt{y-2} = 0 \Rightarrow y=2 \end{cases}$
 تابع است

د) $x = \cos y \xrightarrow{x=\frac{1}{2}} y = \{2k\pi \pm \frac{\pi}{3} | k \in \mathbb{Z}\}$
 تابع نیست

الف)



ب)



الف) $y = ax + b = x \Rightarrow$
 $a=1$
 $b=0$

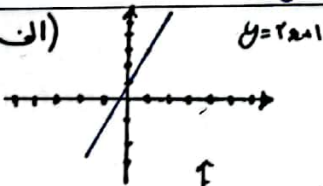
$a+2b=1+0=1$

ب) $y = x^2, ax+b$ $a = a^2 - 2b = 1 - 2b = -1 \Rightarrow b=1$

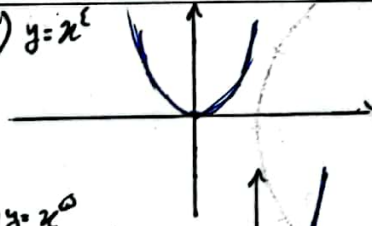
$\min = \left| \frac{-b}{2a} \right| = \left| \frac{-1}{2} \right| = \frac{1}{2} \Rightarrow \begin{cases} \frac{-a}{2} = \frac{1}{2} \Rightarrow a = -1 \\ \frac{-b}{2} = \frac{1}{2} \Rightarrow b = -1 \end{cases}$

$a+2b = -1+1=0$

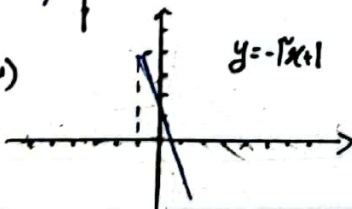
الف)



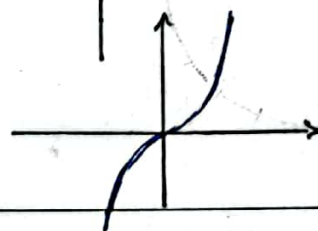
ج) $y = x^2$



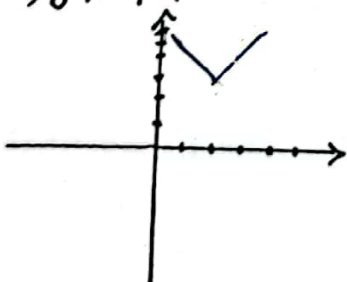
ب)



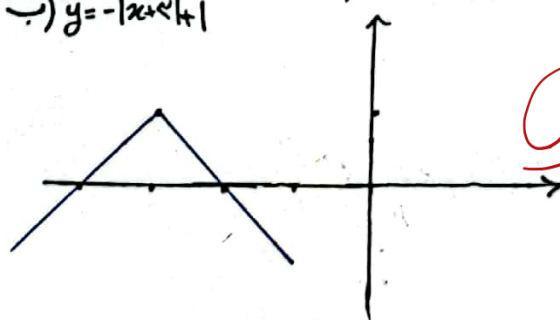
د) $y = x^3$

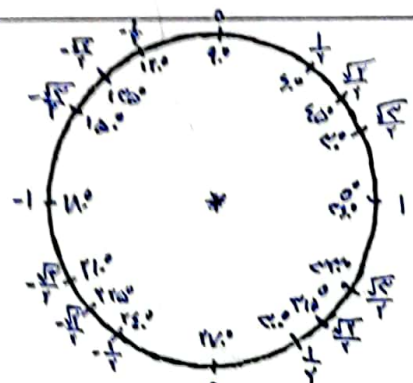
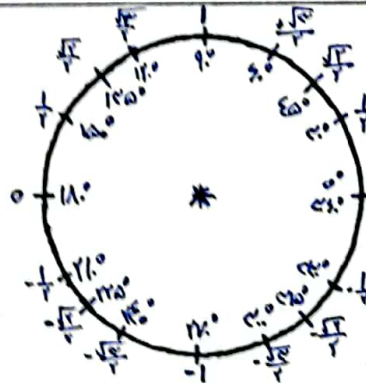


الف) $y = |x-2| + 3$



ب) $y = -|x+4| + 1$



الف) $y = \frac{x+1}{x^2-1}$ $x^2-1 \neq 0 \Rightarrow x \neq \pm 1$ ✓ $D_f = \mathbb{R} - \{1, -1\}$ ب) $y = \frac{x+1}{x^2(x+1)}$ $x \neq 0, x \neq -1$ ✓ $D_f = \mathbb{R} - \{0, -1\}$ ج) $y = \frac{x+1}{x^2(x+1)}$ $x \neq 0, x \neq -1$ ✓ $D_f = \mathbb{R}$	د) $y = \frac{x+1}{x^2-1}$ $\Rightarrow x^2(x-1)(x+1) = 0 \Rightarrow \begin{cases} x=0 \\ x=1 \\ x=-1 \end{cases}$ $D_f = \mathbb{R} - \{0, 1, -1\}$
الف) $y = \sqrt{x-1} + \sqrt{x+2}$ $\Rightarrow x-1 \geq 0 \Rightarrow x \geq 1$ $x+2 \geq 0 \Rightarrow x \geq -2$ $x \geq 1$ $D_f = [1, \infty)$ ب) $y = \frac{x+1}{x+1}$ $\Rightarrow D_f = \mathbb{R}$	ج) $y = \frac{\sqrt{x-2}}{x-1}$ $\Rightarrow x-2 \geq 0 \Rightarrow x \geq 2$ $x \neq 1$ $D_f = [2, \infty) - \{1\}$ د) $y = \frac{x+2}{ x +x^2}$ $x \neq 0 \Rightarrow D_f = \mathbb{R} - \{0\}$
	کسینوس ها
	سینوس ها
الف) $\{rk\pi \pm \frac{\pi}{3} \mid k \in \mathbb{Z}\}$ ب) $\{rk\pi + \frac{\pi}{2}, rk\pi + \frac{3\pi}{2} \mid k \in \mathbb{Z}\}$	