

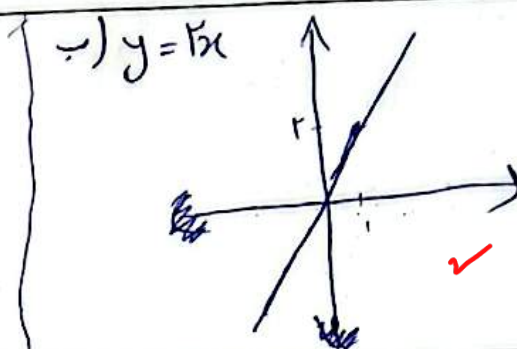
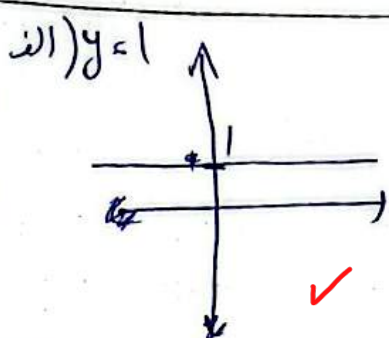
نام و نام خانوادگی پاسخنامه تشریحی تکلیف شماره ۳۷ کلاس (در صورتی که)

۱) $\begin{cases} y_1^2 = 2x_1^2 + 2x_2^2 \\ y_2^2 = 2x_1^2 + 2x_2^2 \end{cases} \Rightarrow y_1^2 = y_2^2 \Rightarrow y_1 = y_2$ تابع است ✓

۲) $x=0 \rightarrow |y| = 2 \Rightarrow y = \pm 2$ تابع نیست ✓

۳) $x=1 \rightarrow \sqrt{1-4} = \sqrt{-3}$ تابع است ✓

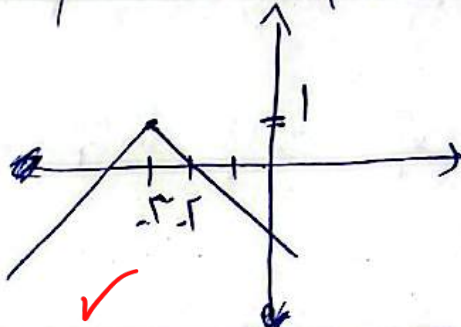
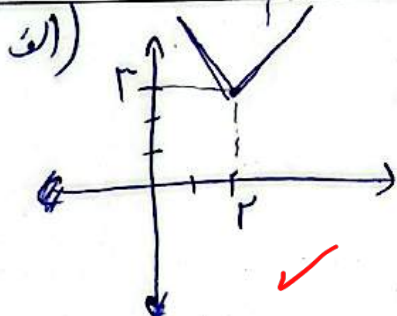
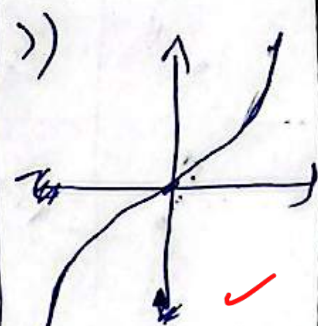
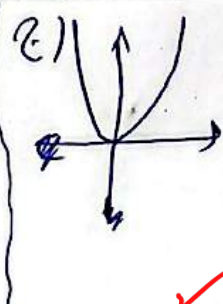
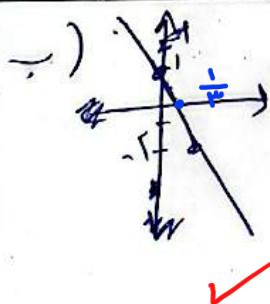
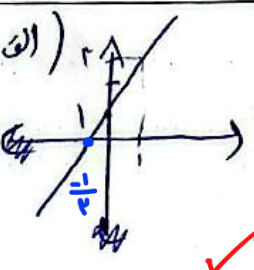
۴) $x=0 \rightarrow \cos y = 0 \Rightarrow y = \frac{\pi}{2}, \frac{3\pi}{2}$ تابع نیست ✓

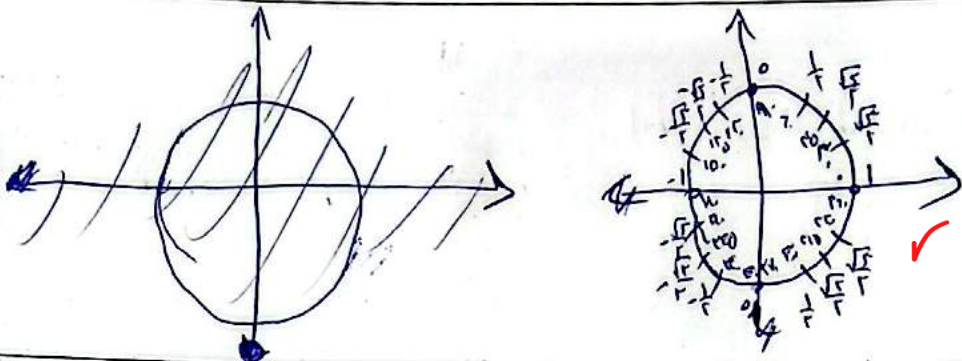
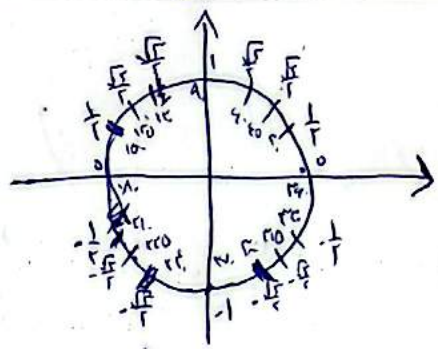


۵) $y = \sin x \Rightarrow a \leq b \Rightarrow a+2b \leq 4$

۶) $y = \frac{a}{x} \Rightarrow a = -2$ ~~۷) $y = \frac{a^2-4b}{x} \Rightarrow 17-4b \leq -2 \Rightarrow b \leq 4$~~

$\Rightarrow a+2b \leq -2+8 = 6$



$\checkmark$ 1) $x^2 - 1 \neq 0 \Rightarrow x \neq \pm 1 \Rightarrow D_f = \mathbb{R} - \{-1, 1\}$ $\checkmark$ 2) $x^2 - 4x + 1 \neq 0 \Rightarrow D_f = \mathbb{R}$ $\checkmark$ 3) $x^2 + 4x + 1 \neq 0 \Rightarrow D_f = \mathbb{R}$ $\checkmark$ 4) $x^2 - 1 \neq 0 \Rightarrow x^2(x-1)(x+1) \neq 0 \Rightarrow x \neq -1, 0, 1 \Rightarrow D_f = \mathbb{R} - \{-1, 0, 1\}$	2 6
$\checkmark$ 5) $x-1 > 0 \Rightarrow x > 1, x-1 < 0 \Rightarrow x < 1 \Rightarrow D_f = [1, \infty)$ $\checkmark$ 6) $x^2 + 1 \neq 0 \Rightarrow D_f = \mathbb{R}$ $\checkmark$ 7) $x > 1, x-1 \neq 0 \Rightarrow D_f = [1, +\infty) - \{1\}$ $\checkmark$ 8) $x^2 + x \neq 0 \Rightarrow x \neq 0 \Rightarrow D_f = \frac{1}{2}\mathbb{R} - \{0\}$	2 7
	2 8
	2 9
$\checkmark$ 9) $-\cos \frac{7\pi}{4} = -(-\frac{1}{2}) = \frac{1}{2} \quad \sin \frac{\pi}{4} = \sin \frac{0\pi}{4} = \frac{1}{2}$ $\checkmark$ 10) $-\cos \frac{11\pi}{4} = -\frac{\sqrt{2}}{2} \quad \sin \frac{5\pi}{4} = \sin \frac{0\pi}{4} = -\frac{\sqrt{2}}{2}$	2 10