

نام و نام خانوادگی آیدر. آ. ق. ج. پاسخنانه تشریحی تکلیف شماره ۲ ... کلاس ۲۰۲۰م. ۲۰۲۱م.

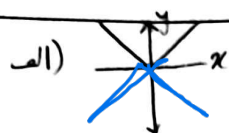
$$f = \{(1, 4a)(1, a^2+3)(2, 3a)\}$$

$$f a = a^2 + 3$$

$$a = 1, 2 \quad a = 3 \Rightarrow f = \{(1, 12), (1, 12), (2, 9)\}$$

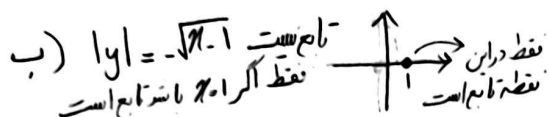
$$a = 1 \Rightarrow f = \{(1, 4), (1, 4), (2, 3)\}$$

✓



$$y = \pm 91 = 181$$

تابع است.



if: $x \in \mathbb{R} - 1$
باشه تابع نیست

الف) $x = 3 \Rightarrow |y-1| = \sqrt{3-2} = 1$ تابع نیست
 $|y-1| = 1 \Rightarrow y = 0, 2$

ب) $x = 0 \Rightarrow y^5 - y = 0$ تابع نیست
 $y(y^4 - 1) = 0 \Rightarrow \begin{cases} y = 0 \\ y = \pm 1 \end{cases}$

ج) $\sin^2 x = 1 \Rightarrow \cos^2 \frac{y}{2} = 0$ تابع نیست
 $\Rightarrow x = \pm 1 \Rightarrow 270^\circ, 90^\circ \Rightarrow y = 90^\circ, 270^\circ$
 $\cos^2 \frac{y}{2} = 0 \Rightarrow \frac{y}{2} = 90^\circ \Rightarrow y = 180^\circ$
 $\frac{y}{2} = 270^\circ \Rightarrow y = 540^\circ$

د) $x = 0 \quad y^2 x y = 0$
 $y \in \mathbb{R}$ تابع نیست

الف) $|y-1| = 4x - x^2$ تابع نیست

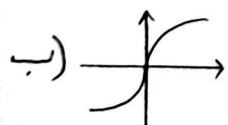
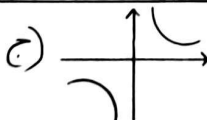
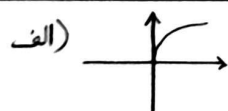
$|y-1| = -(x^2 - 4x)$ قدر مطلق باید مثبت باشد

مثال نقض بنین

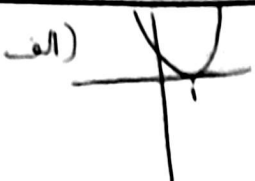
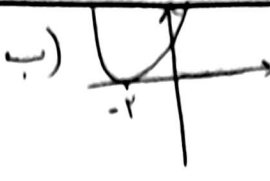
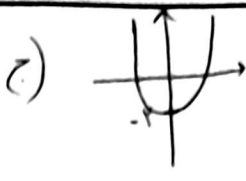
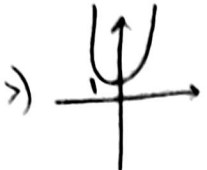
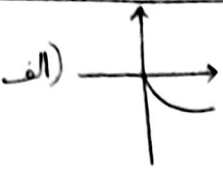
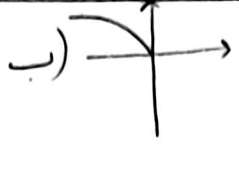
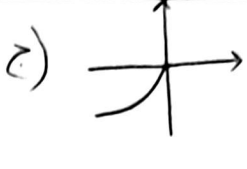
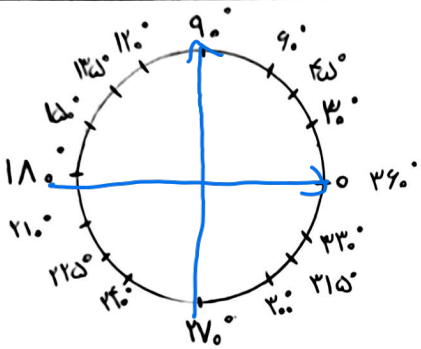
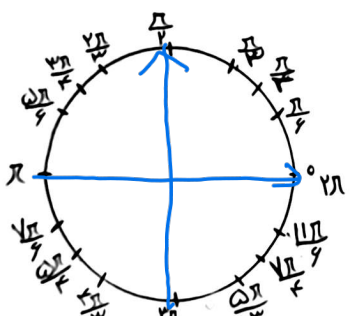
$x = 1 \Rightarrow |y-1| = 3 \Rightarrow y-1 = 3 \Rightarrow y = 4$
 $y-1 = -3 \Rightarrow y = -2$

ب) $y^3 + 3x = 0$ تابع است

$y_1^3 = -3x_1 \quad x_1 = x_2 \Rightarrow y_1^3 = y_2^3 \Rightarrow y_1 = y_2$
 $y_2^3 = -3x_2$



✓

الف)  ب)  ج)  د)  ✓ (د)	۶
الف)  ب)  ج)  د)  ✓ (ب)	۷
 حتما یک سؤد <u>۱،۷۵</u>	۸
 حتما یک سؤد <u>۱،۷۵</u>	۹
الف) $\cos 120^\circ = -\frac{1}{2}$ ب) $\sin 150^\circ = \frac{1}{2}$ ج) $\cos \frac{5\pi}{3} = \frac{1}{2}$ د) $\sin \frac{11\pi}{6} = -\frac{1}{2}$ ✓ (د)	۱۰