

$$f_2 \left\{ (b^4 a), (1 a^2 + 3) \circ (b^3 a) \right\}$$

$$4a^2 a^2 + 3 \rightarrow a^4 + 3 - 4a = 0$$

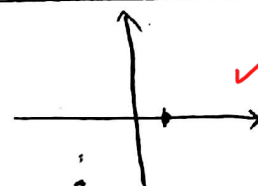
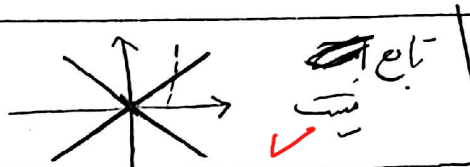
$$(a-1)(a-3) = 0$$

$$= a = 1 \text{ و } 3$$

برای تابع بودن

(۲)

$$|g| = |x|$$



$$|g| + \sqrt{x-1} = 0$$

$$\Rightarrow |g| = 0 \text{ و } \sqrt{x-1} = 0 \Rightarrow x = 1$$

شما جواب
پس تابع می باشد

(۲)

$$\checkmark |g-1| = \sqrt{x-2} \quad x=3 \rightarrow |g-1|=1 \Rightarrow g=2 \text{ و } 0$$

تابع نیست

$$\checkmark g^2 - g = \frac{x}{2} \quad x=0 \rightarrow g^2 - g = 0 \rightarrow g(g-1) = 0 \Rightarrow g=0 \text{ و } 1$$

تابع نیست

(۱، ۱، ۵)

$$\checkmark \sin^2 g + \cos^2 g = 1 \quad x=0 \rightarrow \sin^2 0 = 0 \Rightarrow \cos^2 g = 1 \Rightarrow g = 0 \text{ و } \pi \text{ و } 2\pi \text{ و } \dots$$

تابع نیست

$$x^2 + |g-1| = x \rightarrow |g-1| = x - x^2 \quad x=0 \rightarrow |g-1|=0 \Rightarrow g=1$$

(۱، ۲، ۵)

$$g^2 + 3x = 0 \rightarrow g_1^2 + 3x_1 = 0 \quad x_1 = 4 \Rightarrow g_1 = 2 \text{ و } -2$$

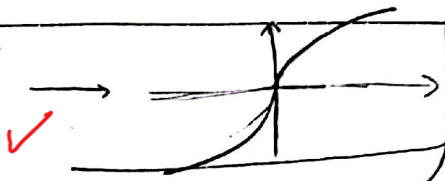
$$g_2^2 + 3x_2 = 0 \rightarrow g_2 = 2 \text{ و } -2$$

$$\Rightarrow g_1 = g_2$$

تابع است

(۴)

$$g = \sqrt{x}$$



$$g = \frac{1}{x^2}$$



$$g = \frac{1}{x^2}$$



$$g = \sqrt{x}$$

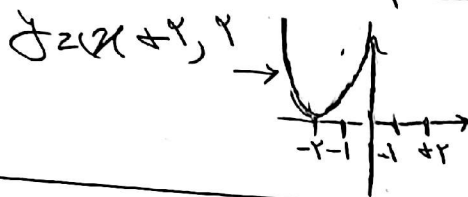
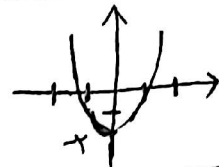


(۲)

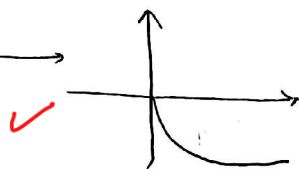
$$y = (x-1)^2$$



$$y = x^2 - 1$$



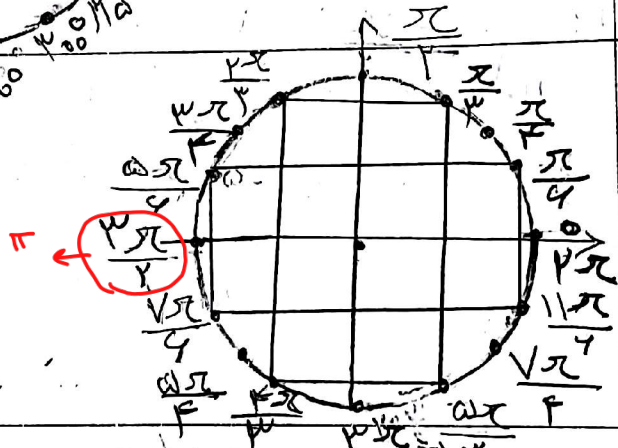
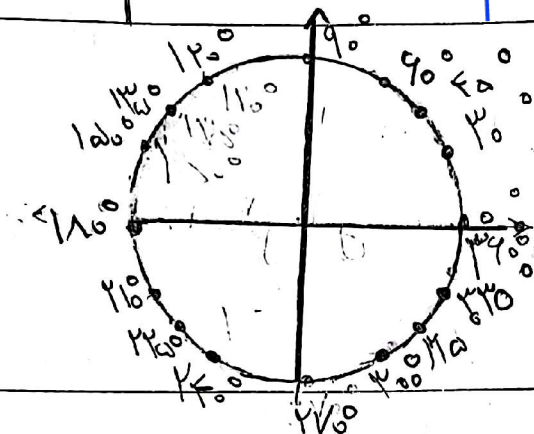
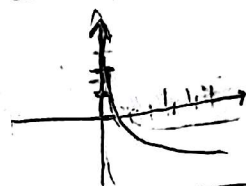
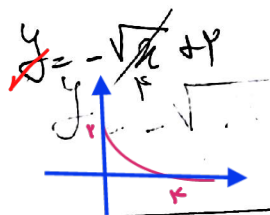
$$y = -\sqrt{x}$$



$$y = -\sqrt{-x}$$



$$y = \sqrt{-x}$$



$$\cos 120^\circ = -\frac{1}{2}$$

$$\cos \frac{2\pi}{3} = -\frac{1}{2}$$

$$\sin 120^\circ = \frac{\sqrt{3}}{2}$$

$$\sin \frac{2\pi}{3} = \frac{\sqrt{3}}{2}$$

سوال ۴:

$$x^2 + |y-1| = 4x \quad \text{الف)}$$

$x=0$ مثال نقض برای این رابطه نیست زیرا:
 نی جواب
 میده

$$|y-1|=0 \Rightarrow y=1$$

$$\Rightarrow \text{جواب درست} \quad x^2 - |y-1| = 4x \xrightarrow{x=1} 1 - |y-1| = 4 \rightarrow |y-1| = \underline{\underline{-3}}$$

$$\Rightarrow y = \underline{\underline{-2}} \quad \text{تابع نیست!}$$