

نام و نام خانوادگی: ... شماره: ... با استفاده تشریحی تکلیف شماره ۲ ... کلاس: ... B

$$f = \{(1, \kappa a), (1, a^2 + 3), (2, 3a)\} \Rightarrow (1, \kappa) (1, \kappa) (2, 12)$$

$$\kappa a = a^2 + 3$$

$$a^2 - \kappa a + 3 = 0$$

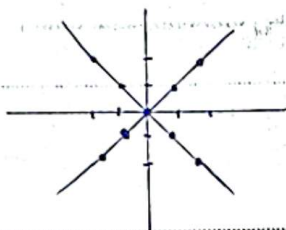
$$a < 3$$

✓

به ازای مقادیر ۱ و ۳ این رابطه یک تابع است.

۱

الف) $|y| = |x| \Rightarrow \begin{cases} x & x \geq 0 \\ -x & x < 0 \end{cases}$



$$\begin{aligned} |y| &= x & x &\geq 0 \\ |y| &= -x & x &< 0 \end{aligned}$$

تابع زوج

ب) $|y| + \sqrt{x-1} = 0 \Rightarrow |y| = 0 \Rightarrow y = 0$

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تابع زوج

$$\sqrt{x-1} = 0 \Rightarrow x = 1$$

یک نقطه
۱۰

۲

الف) $|y-1| = \sqrt{x-2} \quad x=4$

$$|y-1| = 2 \Rightarrow \begin{cases} y-1 = 2 \Rightarrow y = 3 \\ y-1 = -2 \Rightarrow y = -1 \end{cases}$$

$$|y-1| = -2 \Rightarrow y = -1$$

روشن اول: $y^2 - y = \frac{x^2}{4} \quad x=0$

$$y^2 - y = 0 \Rightarrow y(y-1) = 0 \Rightarrow y = 0, 1, -1$$

روشن دوم: بین دو مقدار قرار گرفته و توان فرد داریم پس تابع نیست.

۳

ج) $\sin^2 x + \cos^2 \frac{y}{2} = 1 \quad \sin^2 \theta + \cos^2 \theta = 1$

$$\frac{1 - \sin^2 x}{\cos^2 x} = \cos^2 \frac{y}{2} \xrightarrow{\text{جذری کنیم}} \begin{cases} \cos \frac{x}{2} = \pm \cos \frac{y}{2} \\ \frac{\sqrt{3}}{2} = \pm \cos \frac{y}{2} \end{cases}$$

د) $2xy = x \quad x=0$

$$2 \times 0 \times y = 0$$

بیشتر مقدار ... ۱, ۲, ۳, ۴, ۵, ۶, ۷, ۸, ۹, ۱۰

ب) $y^2 + 3x = 0$

$$y^2 = -3x$$

$$y = \sqrt{-3x}$$

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الف) $x^2 + |y-1| = \kappa x \quad x=1$

$$1 + |y-1| = \kappa$$

✓

$$|y-1| = 3$$

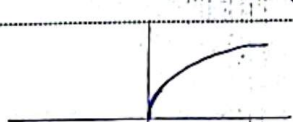
$$|y-1| = 3$$

$$y-1 = \pm 3 \Rightarrow y < -2$$

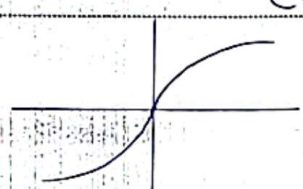
تابع زوج نیست.

تابع است.

الف) $y = \sqrt{x}$



ب) $y = \sqrt{x}$



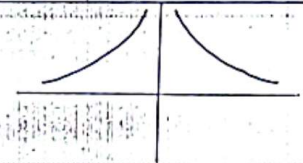
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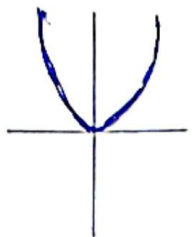
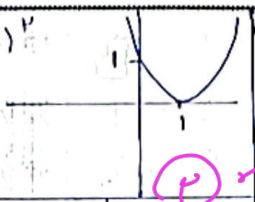
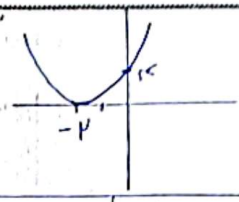
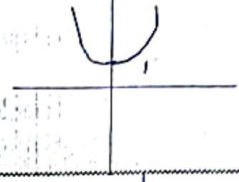
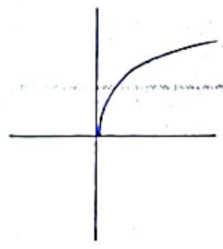
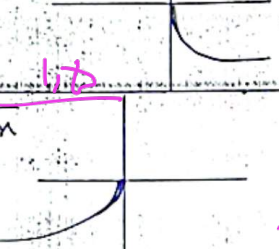
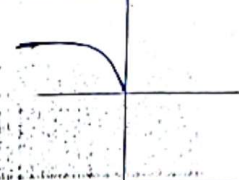
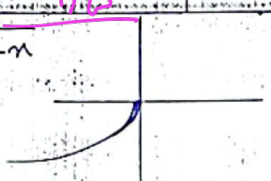
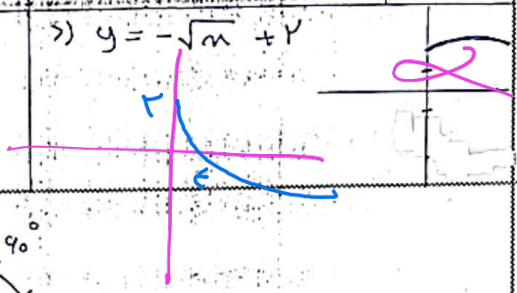
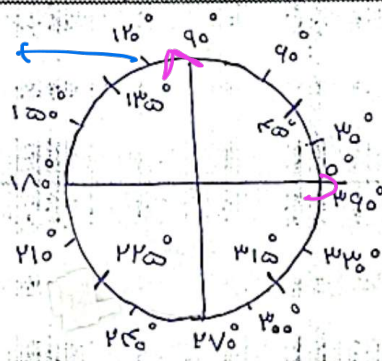
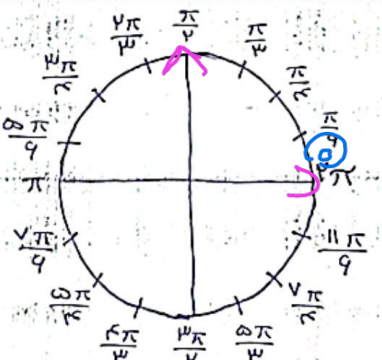
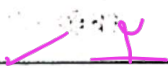
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ج) $y = \frac{1}{x^2}$



د) $y = \frac{1}{x^2}$



$y = x^p$ 	الف) $y = (x-1)^p$ 	ب) $y = (x+1)^p$ 	6
	ج) $y = x^p - p$ 	د) $y = x^p + 1$ 	
$y = \sqrt{x}$ 	الف) $y = -\sqrt{x}$ 	ب) $y = \sqrt{-x}$ 	7
	ج) $y = -\sqrt{-x}$ 	د) $y = -\sqrt{x} + p$ 	
هـ) $\cos 120^\circ = -\frac{1}{2}$ 			
هـ) $\sin 150^\circ = \frac{1}{2}$ 			
الف) $\cos 120^\circ = -\frac{1}{2}$ 	ب) $\sin 150^\circ = \frac{1}{2}$ 		10
ج) $\cos \frac{9\pi}{3} = \cos 300^\circ = \frac{1}{2}$	د) $\sin \frac{11\pi}{4} = \sin 330^\circ = -\frac{1}{2}$		