

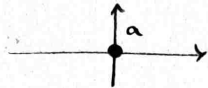
نام و نام خانوادگی: آبیانا لائبریری پاسخنامه تشریحی تکلیف شماره ۲ ... کلاس: دفتر: A

$$(1, 4a) \text{ و } (1, a^2 + 3) \Rightarrow 4a = a^2 + 3 \rightarrow -a^2 + 4a - 3 \rightarrow -(a^2 - 4a + 3)$$

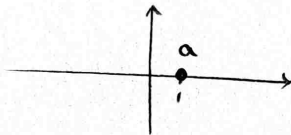
$$-(a-1)(a-3) = 0 \rightarrow \begin{cases} a=1 & \text{اگر } f(1) \rightarrow f_2 \{(1,4), (1,4), (2,3)\} \\ a=3 & \text{اگر } f(3) \rightarrow f_2 \{(1,12), (1,12), (2,9)\} \end{cases}$$

$$a \text{ مقایسه } = 1, 3$$

الف) $\begin{bmatrix} 0 \\ 0 \end{bmatrix} = a$



ب) $\begin{bmatrix} 1 \\ 0 \end{bmatrix} = a$



الف) $n=3$

$$|y-1| = 1 \rightarrow y-1 = \pm 1$$

$$\rightarrow \begin{cases} y=2 \\ y=0 \end{cases} \text{ تابع نیست}$$

ب) $y^5 - y = \frac{n^2}{2} \quad n=0$

$$y^5 - y = 0 \rightarrow y(y^4 - 1) = 0 \rightarrow y(y^2 - 1)(y^2 + 1) = 0 \rightarrow y(y-1)(y+1)(y^2 + 1) = 0$$

$$\rightarrow \begin{cases} y=0 \\ y=1 \\ y=-1 \end{cases} \text{ تابع نیست}$$

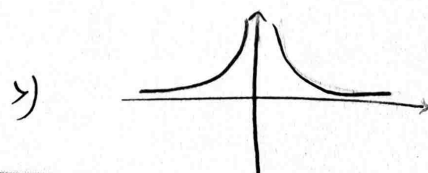
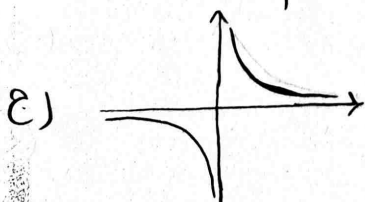
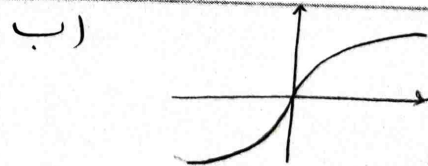
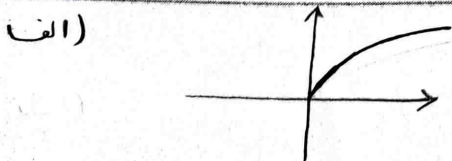
ج) $\cos \frac{y}{2} = 1 - \sin^2 n \rightarrow \cos \frac{y}{2} = \pm 1$

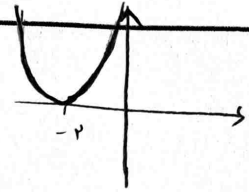
$$y \geq 0 \Rightarrow \begin{cases} y = 2\pi \\ y = \pi \end{cases} \text{ تابع نیست}$$

د) $n=0 \quad y(0) y = 0 \Rightarrow y \in \mathbb{R}$ شامل همه اعداد

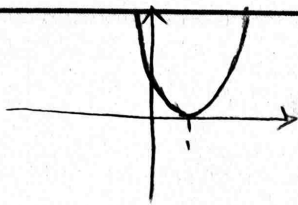
الف) $n^2 - 4n + |y-1| = 0 \rightarrow n(n-4) + |y-1| = 0 \rightarrow \begin{cases} n=0 \\ n=4 \\ y=1 \end{cases} \Rightarrow \begin{matrix} (0,1) \\ (4,1) \end{matrix}$

ب) $\begin{cases} y_1^5 + 3n_1 = 0 \\ y_2^5 + 3n_2 = 0 \end{cases} \xrightarrow{n_1=n_2} y_1^5 = y_2^5 \rightarrow y_1 = y_2 \text{ تابع هست}$

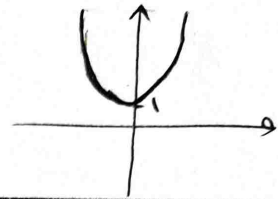




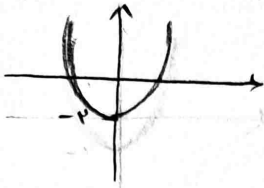
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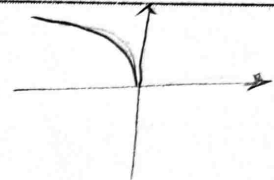
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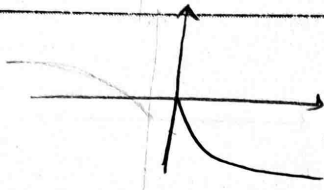
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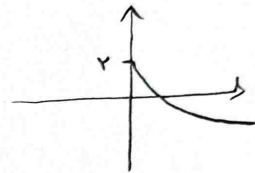
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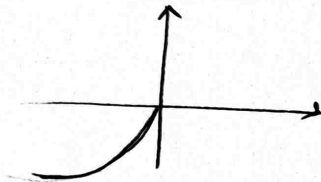
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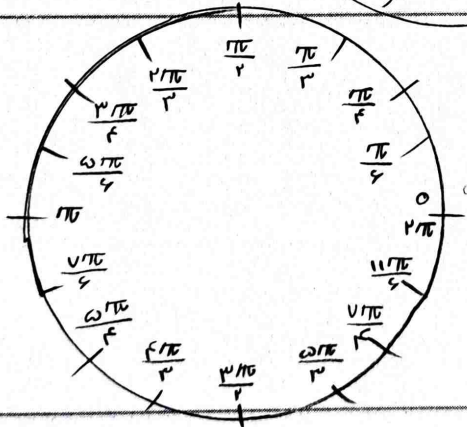
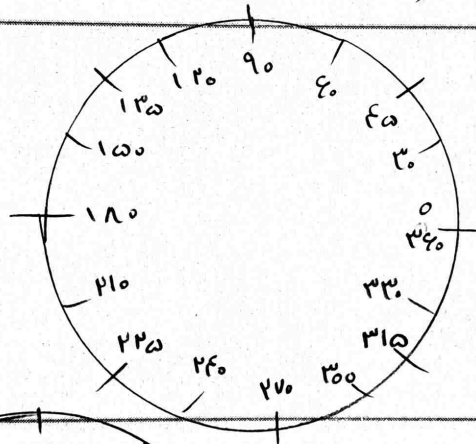
الف



۷)



ج)


$$\frac{1}{2} \quad \text{b.)}$$

الف) $-\frac{1}{2}$

$$y) -\frac{1}{r}$$

c) $\frac{1}{r}$