

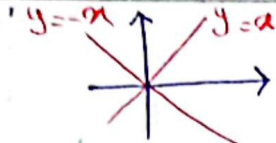
$$a^2 + 3 = 14a$$

$$a^2 - 14a + 3 = 0 \Rightarrow (a-1)(a-13) = 0$$

$$a = +1 \quad a = +13$$

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الف) $y = \pm x$

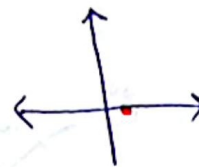


تابع نیست X

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ب) $|y| + \sqrt{x-1} = 0$

$$y=0 \quad x-1=0 \quad x=1$$



تابع است ✓

الف) $x=3 \quad |y-1| = \sqrt{1} \Rightarrow |y-1| = 1 \quad y-1=1 \rightarrow y=2$

$$y-1=-1 \rightarrow y=0$$

تابع نیست X

ب) $x=0 \quad y^5 - y = 0 \quad y(y^4 - 1) = 0 \quad y(y^2 - 1)(y^2 + 1) = 0$

تابع نیست X

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ج) $\sin^2 x + \cos^2 \frac{y}{4} = 1 \xrightarrow{x=0} \cos^2 \frac{y}{4} = 1 \rightarrow$ تابع نیست X

بدایه برده خنثی

د) $\forall xy = x \xrightarrow{x=0} y \rightarrow$ تابع نیست X

هر عددی

الف) $x=2 \rightarrow |y-1| = 4 \quad y-1=4 \rightarrow 5 \quad y-1=-4 \rightarrow -3$ تابع نیست X

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ب) $x=0 \rightarrow y^5 = 0 \quad y=0 \checkmark$

۱ $x=1 \quad y^5 = -3 \quad y = \sqrt[5]{-3} \checkmark$

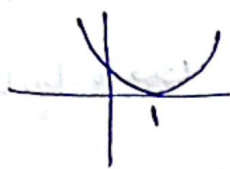
تابع است ✓



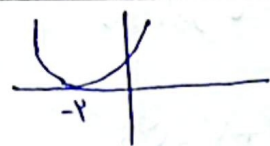
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الف)

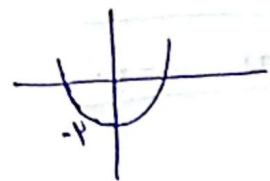


ب)

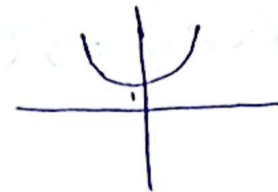


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ج)



د)



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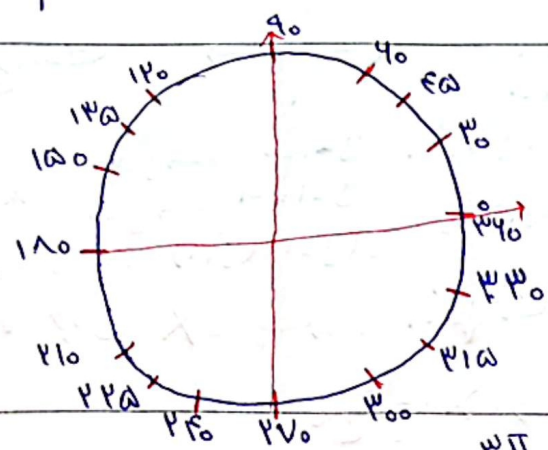
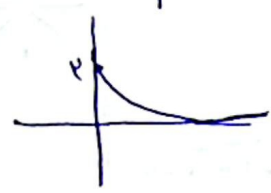


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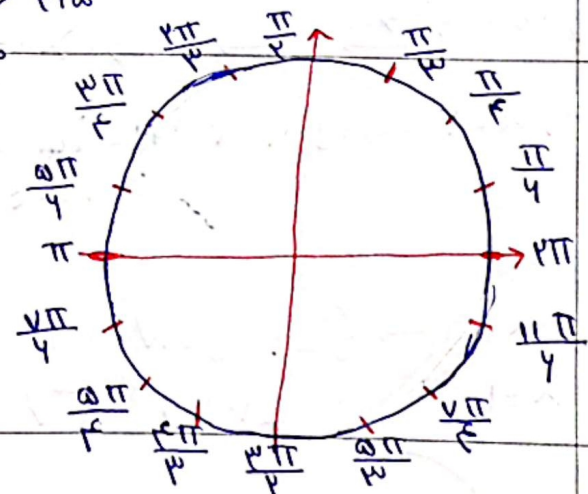
ج)



ج)



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الف)

$$\boxed{-\frac{1}{4}}$$



ب)

$$\boxed{\frac{1}{4}}$$

ج)

$$\cos \frac{5\pi}{4}$$

$$= \boxed{\frac{1}{4}}$$

٣٠°

د)

$$\frac{11\pi}{4} = 330^\circ$$

$$\boxed{-\frac{1}{4}}$$

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