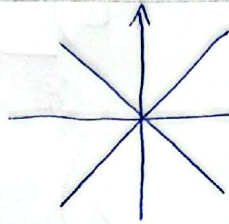


$$a^2 + 2 = 2a \rightarrow a^2 - 2a + 2 = 0 \xrightarrow{a=x} x^2 - 2x + 2 = 0 \rightarrow a+b+c=0$$

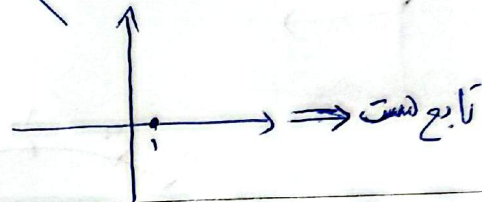
$$\boxed{a=1, a=3} \quad \begin{matrix} a=x \\ x=1 \\ x=3 \end{matrix} \quad \begin{matrix} x=1 \\ x=3 \end{matrix}$$

$$\text{الف) } |y| = |x| \begin{cases} y=x \\ y=-x \end{cases}$$



تابع نیست

$$\text{ب) } |y| + \sqrt{x-1} = 0 \rightarrow y=0, \sqrt{x-1}=0 \rightarrow x=1$$



تابع هست

$$\text{الف) } |y-1| = \sqrt{x-2} \xrightarrow{x=4} |y-1| = \sqrt{4-2} = \sqrt{2} \rightarrow y=1+\sqrt{2}, y=1-\sqrt{2}$$

$$\text{ب) } y^2 - y = \frac{x^2}{2} \xrightarrow{x=0} y^2 - y = 0 \rightarrow y(y-1) = 0 \rightarrow y=0, y=1$$

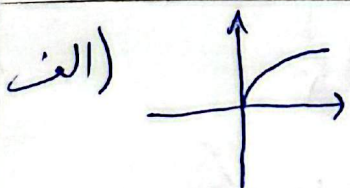
$$\text{ج) } \sin^2 x + \cos^2 \frac{y}{2} = 1 \xrightarrow{x=0} \cos^2 \frac{y}{2} = 1 \rightarrow \cos \frac{y}{2} = \pm 1 \rightarrow \frac{y}{2} = 0, \frac{y}{2} = \pi \rightarrow y=0, y=2\pi$$

$$\text{د) } 2xy = x \xrightarrow{x=0} 2xy = 0 \rightarrow y \in \mathbb{R}$$

$$\text{الف) } x^2 + |y-1| = 2x \xrightarrow{x=1} |y-1| = 2-1=1 \rightarrow y=2, y=0 \rightarrow \text{تابع نیست}$$

$$\text{ب) } y^2 + 2x = 0 \rightarrow y^2 = -2x \rightarrow \begin{cases} y_1^2 = -2x_1 \\ y_2^2 = -2x_2 \end{cases} \xrightarrow{x_1=x_2} y_1^2 = y_2^2 \rightarrow y_1 = y_2$$

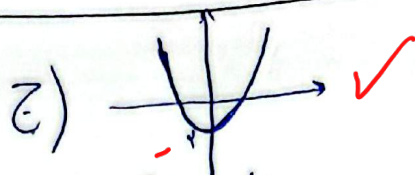
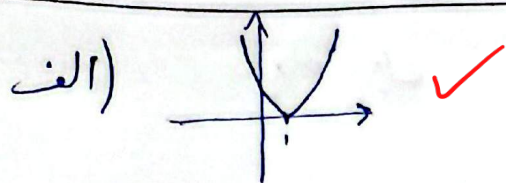
تابع هست

ج)

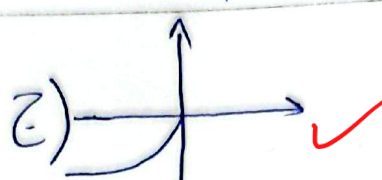
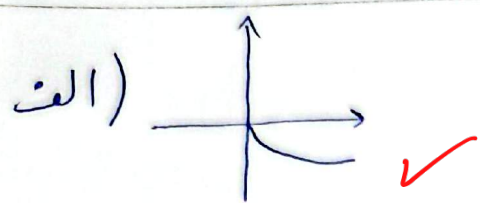
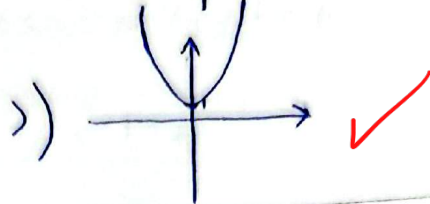
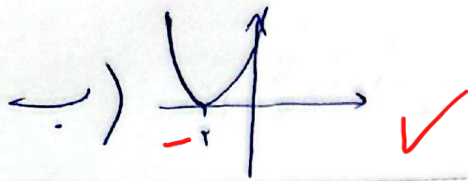
ب)

د)

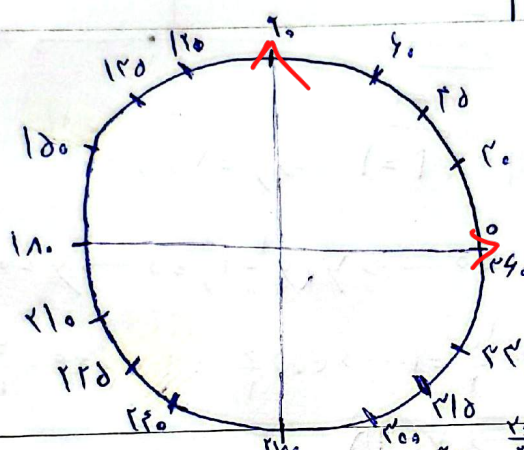
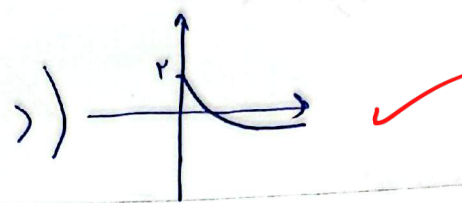
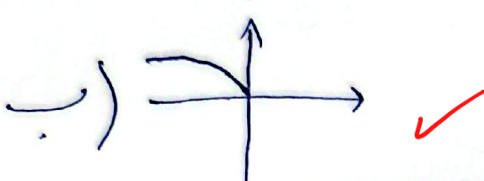
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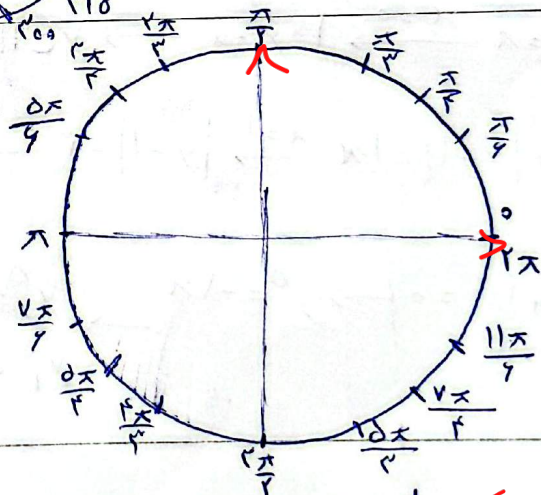
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الف) $\cos 120^\circ = -\frac{1}{2}$ ✓

ج) $\cos \frac{5\pi}{6} = \cos 150^\circ = -\frac{1}{2}$ ✓

ب) $\sin 150^\circ = \frac{1}{2}$ ✓

د) $\sin \frac{11\pi}{6} = \sin 330^\circ = -\frac{1}{2}$ ✓

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