

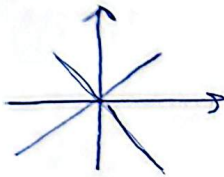
$$a^2 + 3 = 4a \rightarrow a^2 - 4a + 3 = 0 \rightarrow (a-3)(a-1) = 0$$

۳ ۱

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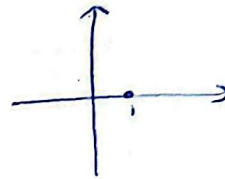
✓ ۲

الف)



تابع نیست

ب



تابع هست

✓ ۲

الف) $x=3$ $y=290$

ب) $y(y^2-1) = \frac{x^2}{4} \rightarrow y(y-1)(y+1) = \frac{x^2}{4} \rightarrow y(y-1)(y+1)(y+1) = \frac{x^2}{4}$

$x=0$ $y=0, 1, -1$

ج) $x=0$ $y=0, 2\pi$

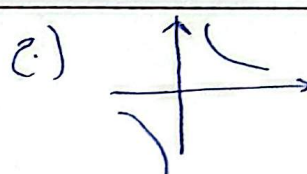
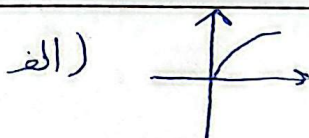
د) $x=0$ $y=\infty$

✓ ۲

الف) $|y-1| = \pm x - x^2 \rightarrow |y-1| = x(1-x) \rightarrow x=3$ $y = \pm 9-4$ ✗

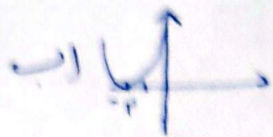
د) $\left. \begin{array}{l} y_1^{\wedge} = -3x_1 \\ y_2^{\omega} = -3x_2 \end{array} \right\} \quad x_1 = x_2 \rightarrow y_1^{\wedge} = y_2^{\omega} \rightarrow y_1 = y_2 \quad \checkmark$

✓ ۲

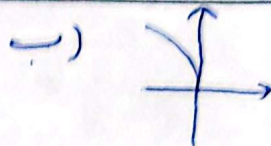
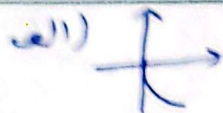
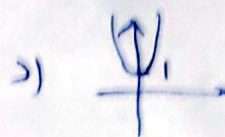


✓ ۲

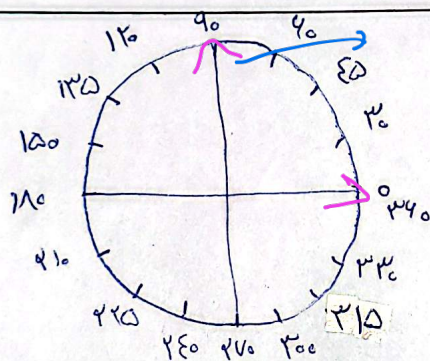
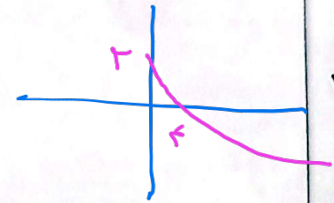
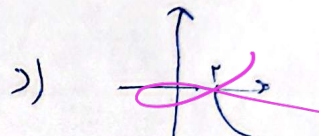




د) ✓

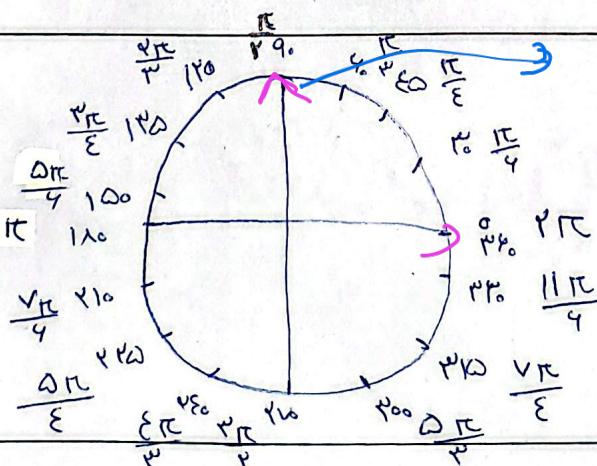


الف) ✓



حتماً رم نور

الف) ✓



حتماً رم نور

الف) ✓

الف) $-\frac{1}{p}$

ب) $\frac{1}{p}$

ج) $\frac{1}{p}$

د) $-\frac{1}{p}$

د) ✓