

$$4a = a^2 + 3$$

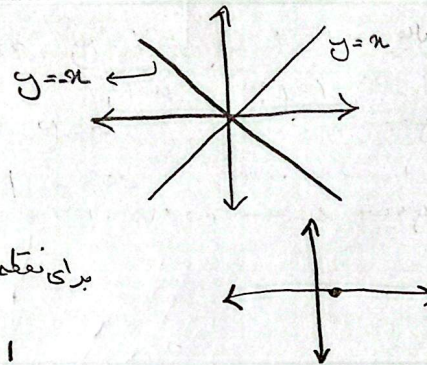
$$a^2 - 4a + 3 = 0$$

$$(a - 1)(a - 3)$$

$$\boxed{a = 1} \quad \boxed{a = 3}$$

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تابع نیست $\rightarrow y = \pm |x| \rightarrow |y| = |x|$ الف



برای نقطه (۱, ۰) هر دو نامقی $\rightarrow y = 0$ $x - 1 = 0 \rightarrow x = 1$ تابع

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به ازای یک x دو $y \rightarrow y = 0, y = 2 \rightarrow |y - 1| = \sqrt{x - 2} \xrightarrow{x=3} |y - 1| = 1$ الف

به ازای یک x سه $y \rightarrow y = 0, y = \pm 1 \rightarrow y(y^2 - 1) = 0 \xrightarrow{x=0} y = \frac{x^2}{4} \rightarrow y^4 - y = \frac{x^2}{4}$ ب

به ازای یک x چندین $y \rightarrow 0, \sqrt{2}, -\sqrt{2} \rightarrow \cos^2 y = 1 \xrightarrow{x=0} \sin^2 x + \cos^2 y = 1$ ج

به ازای یک x چندین $y \rightarrow$ هر عددی $\rightarrow y = x \xrightarrow{x=0} 2xy = x$ د

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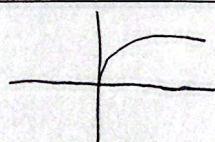
تابع نیست $\rightarrow y = -2, y = 4 \xrightarrow{x=1} x^2 + |y - 1| = 4x \rightarrow |y - 1| = 3$ الف

به ازای هر x فقط یک $y \rightarrow y = \sqrt{-3x} \rightarrow y^2 = -3x \rightarrow y^2 + 3x = 0$ ب

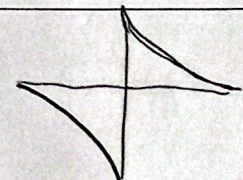
تابع است $\rightarrow y_1 = y_2 \rightarrow y_1^2 = y_2^2 \rightarrow y_1^2 + 3x_1 = 0 \rightarrow y_1^2 + 3x_1 = 0$ $\rightarrow y_1 = y_2$

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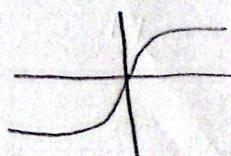
الف) $y = \sqrt[4]{x}$



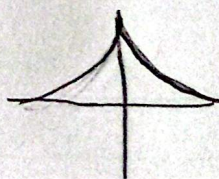
ج) $y = \frac{1}{x^3}$



ب) $y = \sqrt[5]{x}$

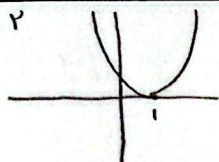


د) $y = \frac{1}{x^4}$

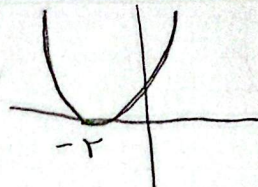


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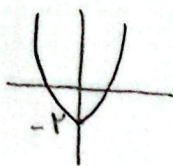
الف) $y = (x-1)^2$



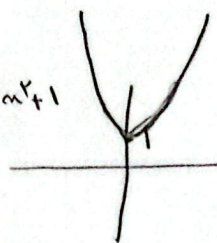
ب) $y = (x+2)^2$



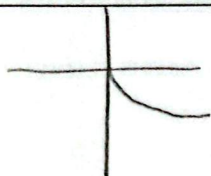
ج) $y = x^2 - 2$



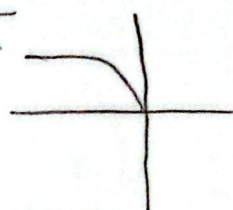
د) $y = x^2 + 1$



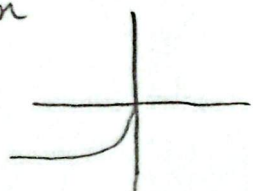
الف) $y = -\sqrt{x}$



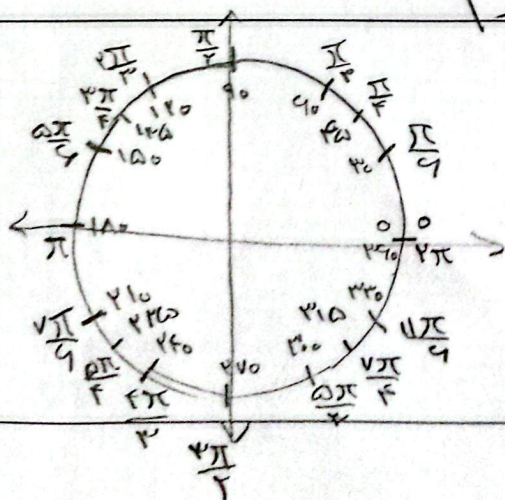
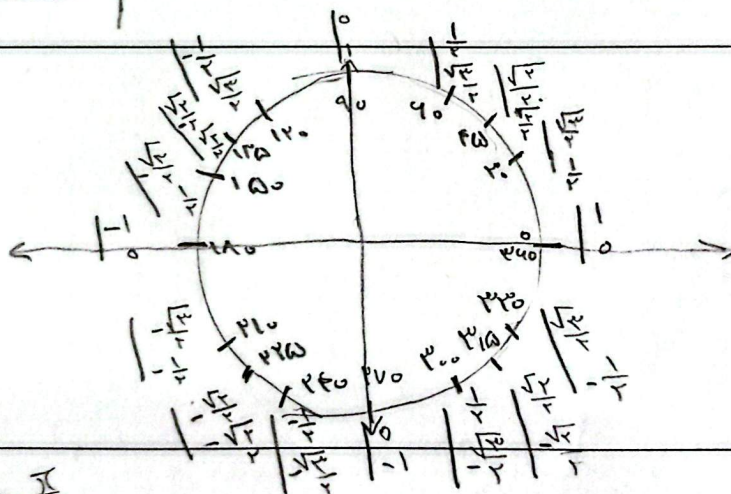
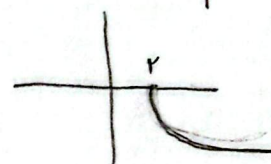
ب) $y = \sqrt{-x}$



ج) $y = -\sqrt{-x}$



د) $y = -\sqrt{x} + 2$



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

ج) $\sin 150^\circ \rightarrow \frac{1}{2}$

ب) $\cos \frac{2\pi}{3} \rightarrow \cos 120^\circ \rightarrow -\frac{1}{2}$

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