

$$f = \{(1, fa), (1, a^2 + 3), (2, fa)\}$$

$$fa = a^2 + 3$$

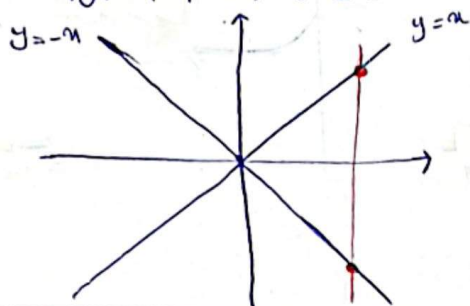
$$-fa + a^2 + 3 = 0$$

$$(a-3)(a-1) = 0$$

$$\rightarrow a = 3, 1$$

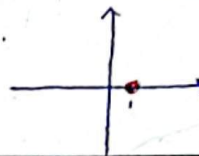
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الف) $|y| = |x| \Rightarrow y = \pm x$ (تابع نسبت)



ب) $|y| + \sqrt{x-1} = 0$ (تابع نسبت)

$$\rightarrow \boxed{y=0}, \quad \begin{matrix} x-1=0 \\ x=1 \end{matrix} \rightarrow (1, 0)$$



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الف) $|y-1| = \sqrt{x-2}$ (تابع نسبت)

$$\rightarrow \boxed{x=2} \Rightarrow |y-1| = 2$$

$$\rightarrow \boxed{y=3, -1}$$

ب) $y^5 - y = \frac{x^2}{3}$ (تابع نسبت)

$$\rightarrow x=0 \Rightarrow y^5 - y = 0$$

$$\rightarrow \boxed{y=1, -1, 0}$$

ج) $\sin^2 x + \cos^2 y = 1$ (تابع نسبت)

$$\rightarrow \boxed{x=90^\circ} \Rightarrow \left(\frac{\sqrt{2}}{2}\right)^2 + \cos^2 \frac{y}{2} = 1$$

$$\cos^2 \frac{y}{2} = \frac{1}{2} \rightarrow \cos \frac{y}{2} = \pm \frac{1}{\sqrt{2}}$$

$$\frac{y}{2} = 45^\circ \text{ یا } 135^\circ$$

$$\rightarrow \boxed{y=90^\circ, 270^\circ}$$

$$\rightarrow x=0 \Rightarrow 2x \times y = 0$$

$$\rightarrow \boxed{y=180^\circ}$$

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الف) $x^2 + |y-1| = 4x$ (تابع نسبت)

$$\rightarrow \boxed{x=1} \Rightarrow |y-1| = 3$$

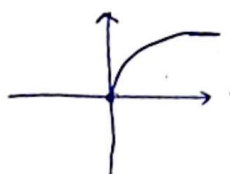
$$\rightarrow \boxed{y=4, -2}$$

ب) $y^5 + 3x = 0$ (تابع نسبت)

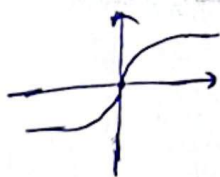
$$\begin{cases} y_1^5 = 0 - 3x_1 \\ y_2^5 = 0 - 3x_2 \end{cases} \xrightarrow{x_1 = x_2} y_1 = y_2 \Rightarrow \boxed{y_1 = y_2}$$

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الف) $y = \sqrt{x}$



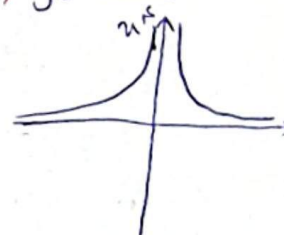
ب) $y = \sqrt[3]{x}$



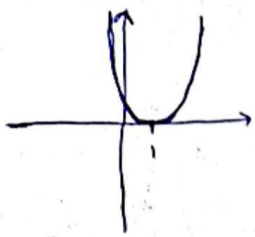
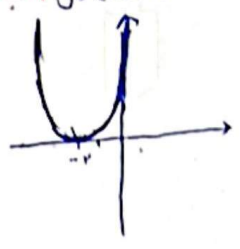
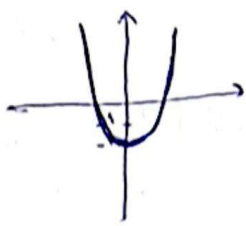
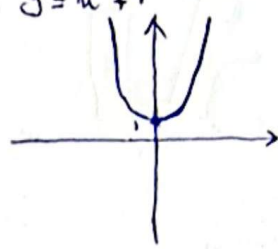
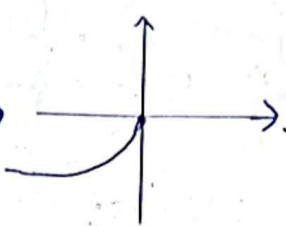
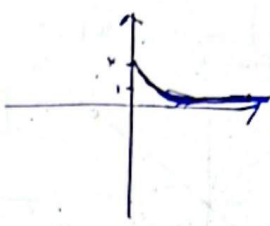
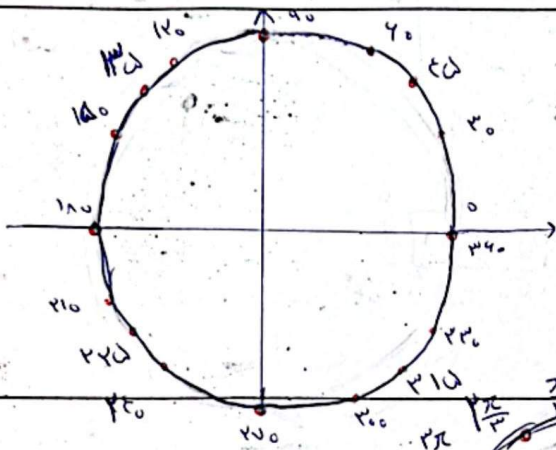
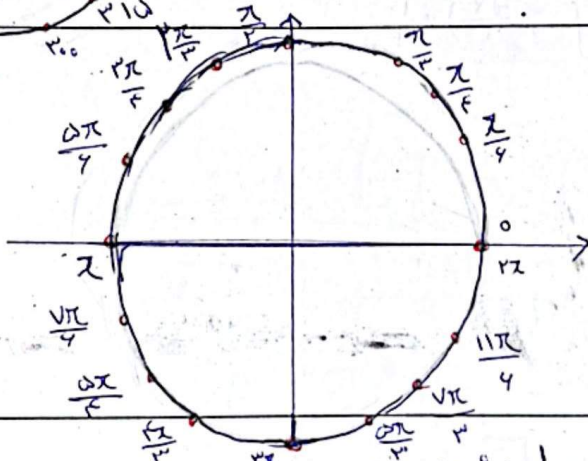
ج) $y = \frac{1}{x^2}$



د) $y = \frac{1}{x^3}$



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الف) $y = (x-1)^2$ 	ب) $y = (x+2)^2$ 	ج) $y = x^2 - 2$ 	د) $y = x^2 + 1$ 	٦
الف) $y = -\sqrt{x}$ 	ب) $y = \sqrt{-x}$ 	ج) $y = -\sqrt{-x}$ 	د) $y = -\sqrt{x+2}$ 	٧
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				٩
الف) $\cos 120^\circ = -\frac{1}{2}$	ب) $\sin 150^\circ = \frac{1}{2}$	ج) $\cos \frac{5\pi}{3} = \frac{1}{2}$ $120^\circ \leftarrow$	د) $\sin \frac{11\pi}{4} = -\frac{1}{2}$ $330^\circ \leftarrow$	١٠