

$$f = \{(1, 4a), (1, a^2 + 3), (2, 3a)\}$$

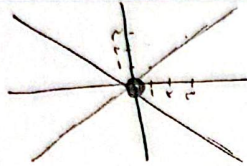
$$4a = a^2 + 3$$

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

$$(a - 3)(a - 1) = 0 \quad a = 1, 3$$

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$$|y| = |x|$$



$$y = x \quad x = 2$$

$$y = -x \quad -2 = -(-2)$$

برای ۱ و ۲ دو تای داریم
تابع نیست

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$$|y| + \sqrt{x-1} = 0$$

$$|y| = 0 \quad y = 0$$

$$\sqrt{x-1} = 0 \quad x = 1$$

فقط نقطه $(1, 0)$ دارد

تابع است

$$|y-1| = \sqrt{x-2}$$

$$y-1 = \pm \sqrt{x-2}$$

$$y = 1 + \sqrt{x-2}$$

$$|y-1| = \sqrt{3-2} = 1$$

$$x = 3$$

تابع نیست

$$y^2 - y = \frac{x^2}{4}$$

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

$$y(y-1) = 0$$

$$(y-1)(y+1) = 0$$

$$y^2 - 1 = 0$$

تابع نیست

$$\sin^2 x + \cos^2 \frac{y}{4} = 1$$

$$x = 0$$

$$\cos^2 \frac{y}{4} = 1$$

$$y = 0, 2\pi, -2\pi, \dots$$

تابع نیست

$$x^2 y = m$$

$$\frac{x^2 y}{m} = \frac{x}{m}$$

$$xy = 1$$

$$y = \frac{1}{x}$$

$$m \neq 0$$

تابع نیست

مهری جابجایی می شود $m = 0$

$$x^2 + |y-1| = 4x \quad x = 1 \quad |y-1| = 3$$

$$y-1 = 3$$

$$-y+1 = 3$$

$$y = 4$$

$$y = -2$$

تابع نیست

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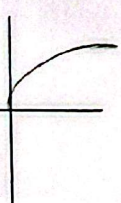
$$x = 0 \rightarrow y = 0$$

$$x = -\frac{1}{3} \rightarrow y = 1$$

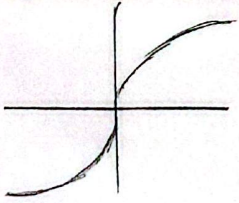
$$x = \frac{1}{3} \rightarrow y = -1$$

تابع است

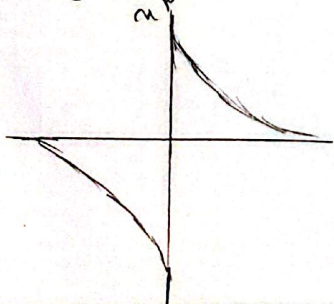
$$y = \sqrt{x}$$



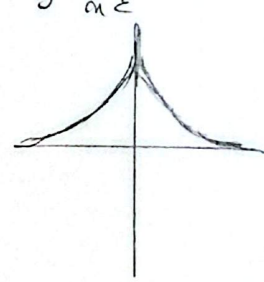
$$y = \sqrt[5]{x}$$



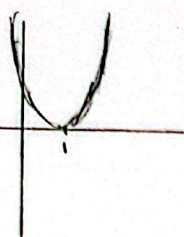
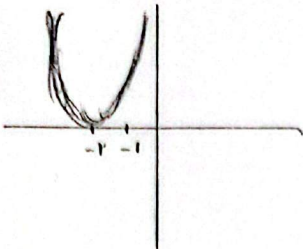
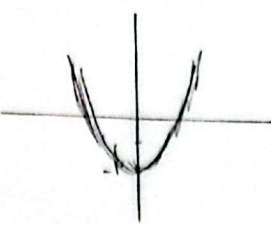
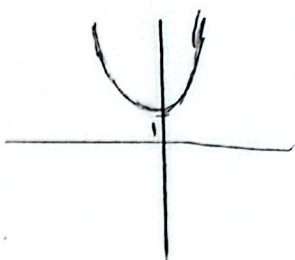
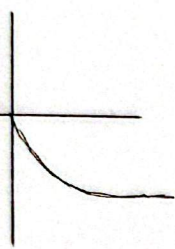
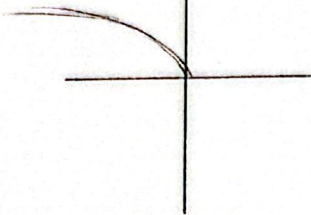
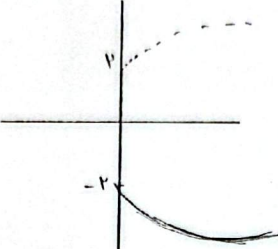
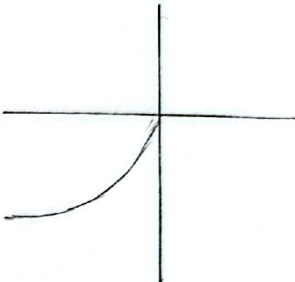
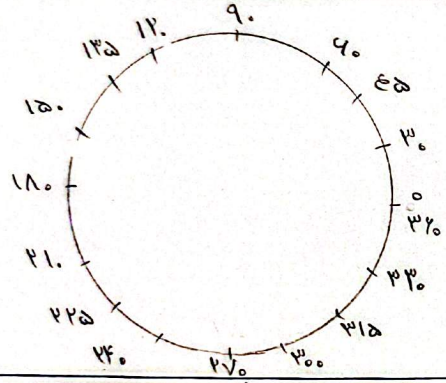
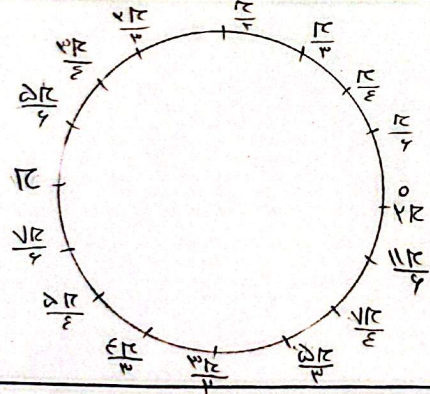
$$y = \frac{1}{x^3}$$



$$y = \frac{1}{x^4}$$



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الف  ب  ج  د 	٦
الف  ب  ج  د 	٧
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$\cos 120^\circ = -\frac{1}{2}$ $\sin 120^\circ = \frac{1}{2}$ $\cos \frac{2\pi}{3} = \frac{1}{2}$ $\sin \frac{11\pi}{6} = -\frac{1}{2}$	١٠