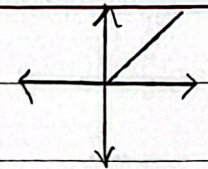
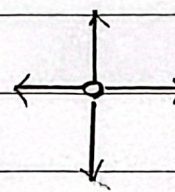


$$\{(1, 1), (1, a^2+3), (2, 3a)\} \rightarrow 4a = a^2+3 \Rightarrow a = \frac{a^2+3}{4} \quad (1)$$

$$a \rightarrow 1 \rightarrow 1 = \frac{1^2+3}{4} = \frac{4}{4} = 1$$

$$(الف) |y| = |x| \rightarrow$$

(۲)

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


$$(الف) x=4 \rightarrow |y-1| = \sqrt{4-1} = \sqrt{3} = 2 \rightarrow y=3 \text{ و } y=-1 \quad (3)$$

$$(ب) x=0 \rightarrow y^2 - y = \frac{0^2}{4} = 0 \rightarrow y=1 \text{ و } y=0$$

$$(ج) x = \frac{\pi}{2} \rightarrow \sin \frac{\pi}{2} = 1 \rightarrow 1^2 + \cos^2 \frac{y}{2} = 1 \rightarrow \cos^2 \frac{y}{2} = 0$$

$$y = \frac{\pi}{2} \text{ و } \frac{3\pi}{2}$$

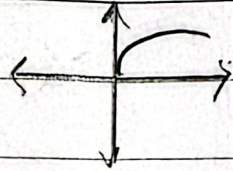
$$(د) x=0 \rightarrow x^2 \times y = 0 \rightarrow y \rightarrow \text{هر عددی} \Rightarrow E/R$$

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

$$y \sim 4 \text{ و } -2 \text{ (تابع نیست)}$$

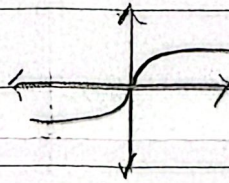
$$(ب) y^2 + 3x = 0 \Rightarrow y^2 = -3x \rightarrow y = \sqrt{-3x} \text{ و } y = -\sqrt{-3x} \text{ (تابع است)}$$

الف) $y = \sqrt[4]{x}$

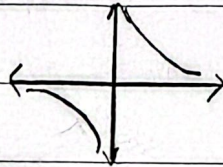


(5)

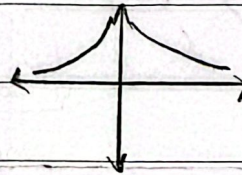
ب) $y = \sqrt[5]{x}$



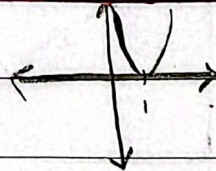
ج) $y = \frac{1}{x^3}$



د) $y = \frac{1}{x^2}$

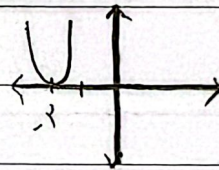


الف) $y = (x-1)^2$

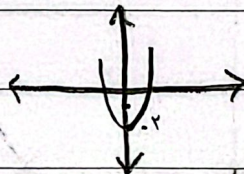


(6)

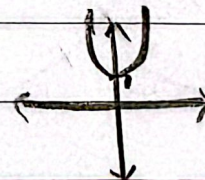
ب) $y = (x+2)^2$



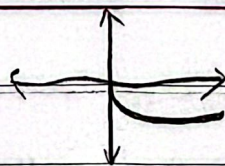
ج) $y = x^2 - 4$



د) $y = x^2 + 1$

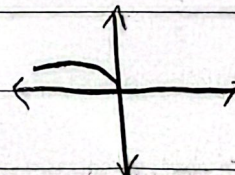


الف) $y = -\sqrt{x}$

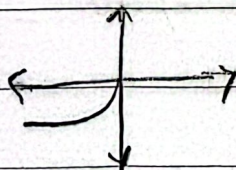


(7)

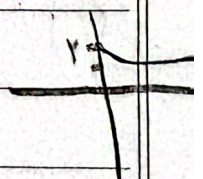
ب) $y = \sqrt{-x}$

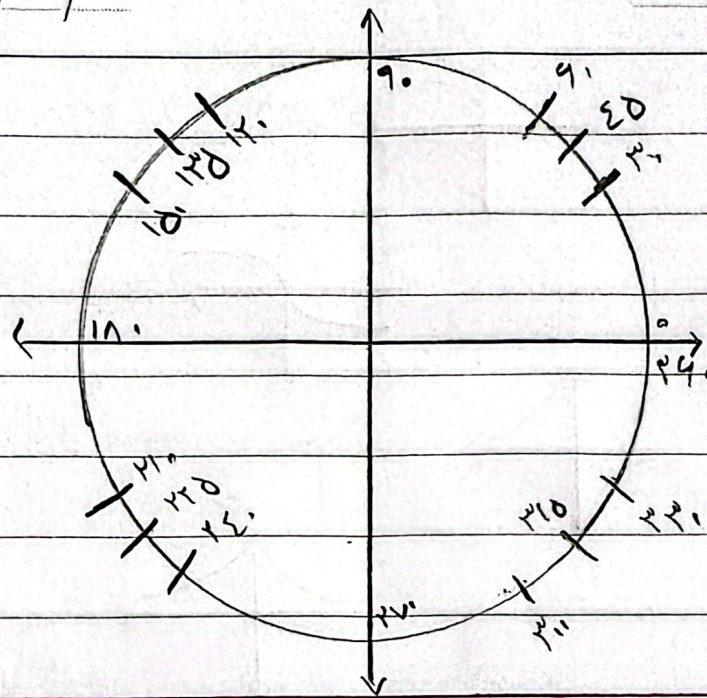


ج) $y = -\sqrt{-x}$

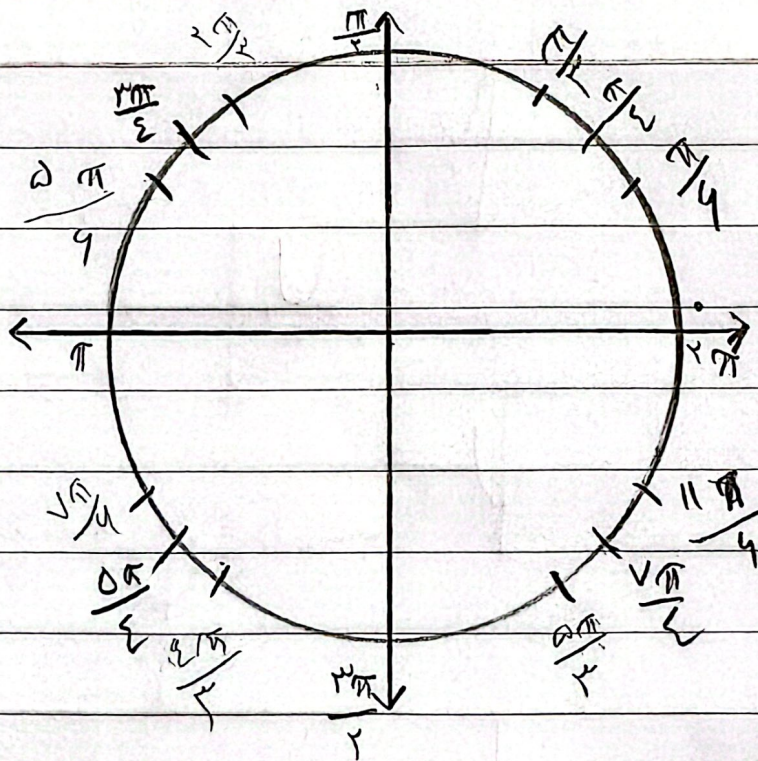


د) $y = -\sqrt{x+2}$





①



②

الف) $\cos 120^\circ = -\frac{1}{2}$

ب) $\sin 180^\circ = 0$

③

ج) $\cos \frac{5\pi}{3} = \frac{1}{2}$

د) $\sin \frac{11\pi}{9} = -\frac{1}{2}$