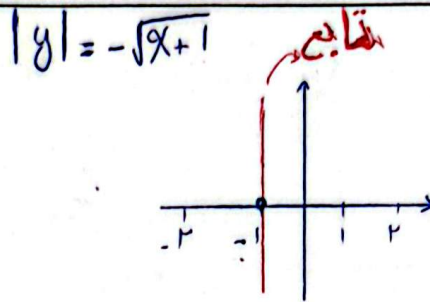
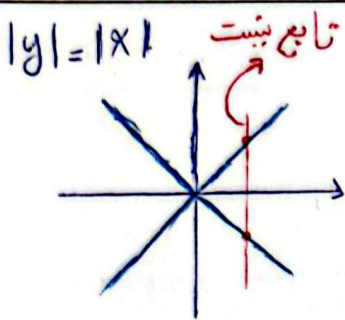


$$\begin{aligned} 4a &= a^2 + 3 \\ a^2 - 4a + 3 &= 0 \\ (a-3)(a-1) &= 0 \\ a &= 3, 1 \end{aligned}$$

3, 1

1



2

الف) $|y-1| = \sqrt{x-2}$
 $x=2$
 $|y-1| = 1 \Rightarrow \begin{cases} y=2 \\ y=0 \end{cases}$

ب) $y^4 - y = \frac{x^2}{2}$
 $x=0$
 $(y(y-1)(y+1)(y^2+1))$
 $y = 0, 1, -1$

ج) $\sin^2 x + \cos^2 y = 1$
 $x=0 \Rightarrow \cos^2 y = 1$
 $y = 0, \pi, 2\pi, \dots$
 $(\cos 0)^2 = 1, (\cos \pi)^2 = 1$

3

د) $2xy = x$
 $x=0 \Rightarrow y = \mathbb{R}$

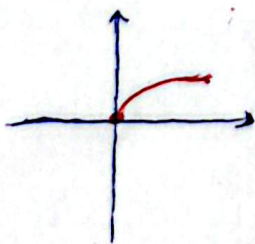
الف) $x^2 + |y-1| = 4x$
 $|y-1| = x(4-x)$
 $x=1 \Rightarrow y=2$
 $|y-1| = 3 \Rightarrow y=4$
 $y=-2$

ب) $y^4 + 3x = 0$
 $y^4 = -3x$
 $y = \sqrt[4]{-3x}$

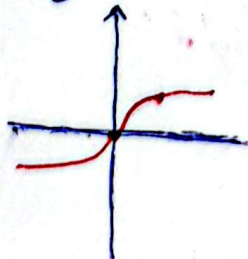
چون به ازای هر x یک y مشخص دریافت می کنیم رابطه ما تابعی است.

4

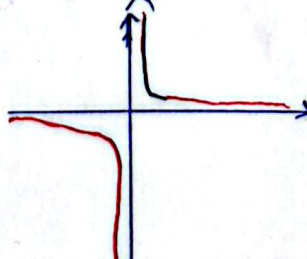
الف) $y = \sqrt[4]{x}$



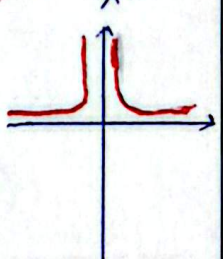
ب) $y = \sqrt[4]{x}$



ج) $y = \frac{1}{x^3}$



د) $y = \frac{1}{x^4}$



5

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
				٨
				٩
الف) $\cos 120^\circ = -\frac{1}{2}$	ج) $\cos \frac{4\pi}{3} = \frac{1}{2}$			١٠
ب) $\sin 150^\circ = \frac{1}{2}$	د) $\sin \frac{11\pi}{6} = -\frac{1}{2}$			