

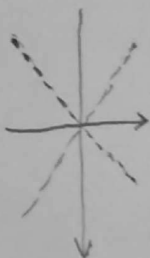
$$f = \left\{ (1, f_a) \text{ و } (2, f_a) \right\}$$

$$f_a = a^1 + 2 \Rightarrow a^1 + 2 - f_a = 0 \Rightarrow \boxed{a=1} \quad \boxed{a=2}$$

الف) $|y| = |x|$

دو خط $y=x$ و $y=-x$

دو خط $y=x$ و $y=-x$



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

چون $|y| \geq 0$ و $-\sqrt{x-1} \leq 0$ پس تنها در صورتی که هر دو صفر باشند معادله برقرار است.



الف) $|y-1| = \sqrt{x-1}$

$\Rightarrow x=1 \Rightarrow |y-1| = 0 \Rightarrow y=1$

$y-1=2 \Rightarrow y=3$
 $y-1=-2 \Rightarrow y=-1$

خ

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

ج) $\sin^2 x + \cos^2 \frac{y}{2} = 1 \Rightarrow \sin^2 x = 1 - \cos^2 \frac{y}{2} = \sin^2 \frac{y}{2} \Rightarrow \sin x = \pm \sin \frac{y}{2}$

د) $\sin y = x$

دو خط $y=x$ و $y=-x$

الف) $x^2 + |y-1| = x^2$ $x=1$

$1 + |y-1| = x^2 \Rightarrow |y-1| = x^2 - 1$

$\Rightarrow y-1=2 \Rightarrow y=3$
 $\Rightarrow y-1=-2 \Rightarrow y=-1$

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ب) $y^2 + x^2 = 0$

$x=0$
 $y=0$

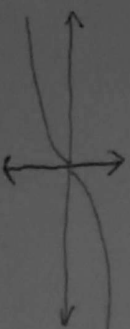
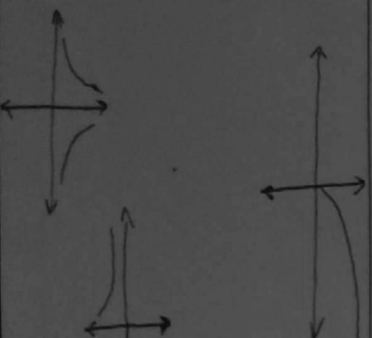
دو خط $y=x$ و $y=-x$

الف) $y = \sqrt{x}$

ب) $y = \sqrt{x}$

ج) $y = \frac{1}{x^2}$

د) $y = \frac{1}{x^2}$



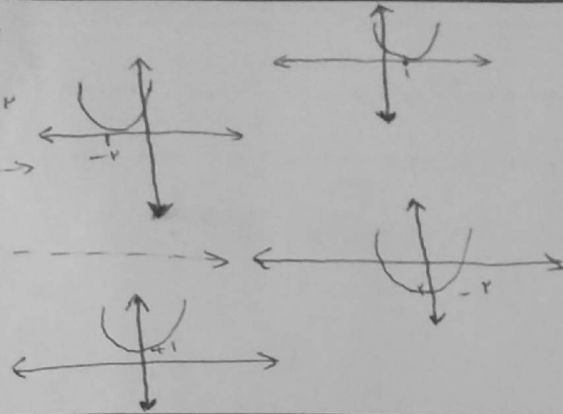
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$$a) y = (n-1)^r$$

$$b) y = (n+r)^r$$

$$c) y = n^r - r$$

$$d) y = n^r + 1$$



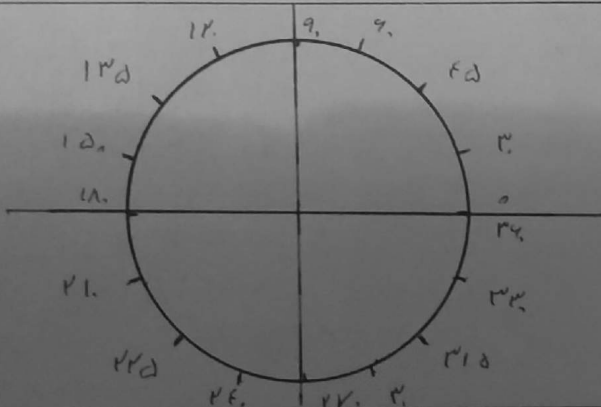
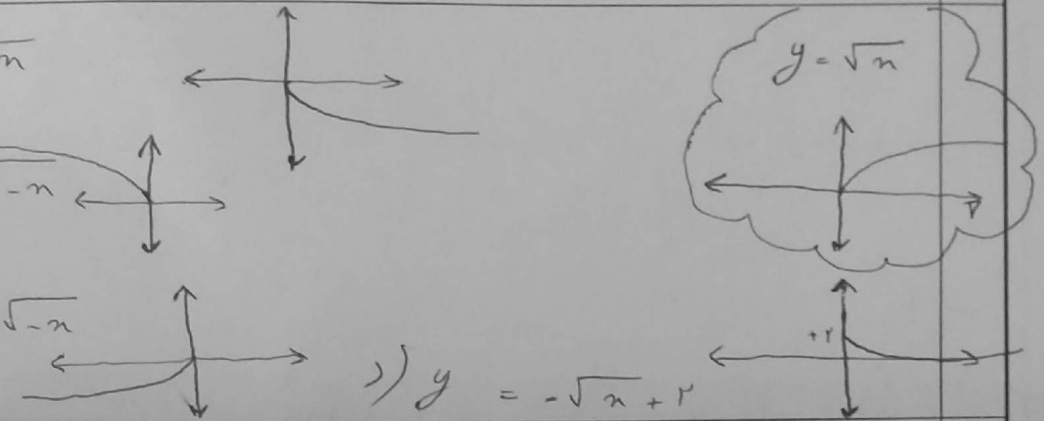
$$y = n^r$$

$$a) y = -\sqrt{n}$$

$$b) y = \sqrt{-n}$$

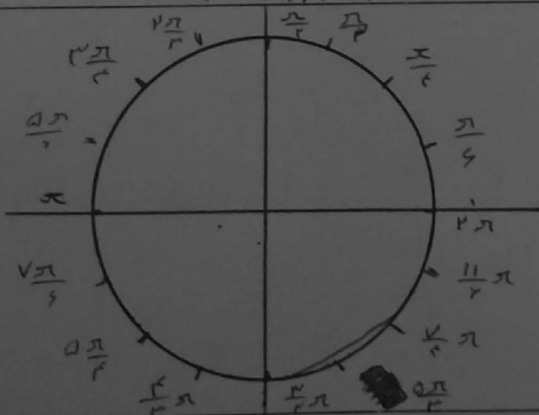
$$c) y = -\sqrt{-n}$$

$$d) y = -\sqrt{n} + r$$



$$\cos \rightarrow x$$

$$\sin \rightarrow y$$



$$\cos \rightarrow x$$

$$\sin \rightarrow y$$

$$a) \cos 110^\circ = -\frac{1}{r}$$

$$b) \sin 10^\circ = \frac{1}{r}$$

$$c) \cos \frac{11\pi}{6} = \frac{1}{r}$$

$$d) \sin \frac{11\pi}{6} = -\frac{1}{r}$$