

$$1) y^2 = 2x^2 - n$$

$$\begin{cases} y_1 = \sqrt{2x^2 - n} \\ y_2 = -\sqrt{2x^2 - n} \end{cases} \xrightarrow{x \rightarrow y} y_1 = y_2 \text{ تابع}$$

$$2) \sqrt{x-2} + |y-2| = 0 \text{ تابع است}$$

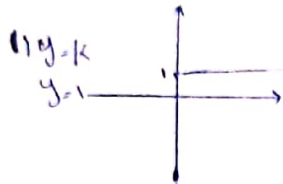
$$x-2=0 \Rightarrow x=2$$

$$y-2=0 \Rightarrow y=2$$

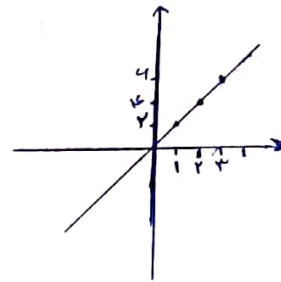
$$3) |y| + x^2 = n+3 \Rightarrow |y| = 3$$

$$\Rightarrow \begin{cases} 1) y=3 \\ 2) y=-3 \end{cases} \text{ تابع نیست}$$

$$4) \sin \cos y \xrightarrow{n=0} \cos y = \left\{ \frac{\pi}{2}, \frac{3\pi}{2} \right\} \text{ تابع نیست}$$



$$5) y = a \sin b = y = 2x$$



$$1) y = n$$

$$\Rightarrow a \sin b = 1 \Rightarrow a=1, b=0$$

$$\hookrightarrow 1 + \sin 0 = 1$$

$$2) \text{ معادله مستقیم } \Rightarrow \begin{cases} x = -\frac{b}{a} \\ y = -\frac{\Delta}{\Delta a} \end{cases}$$

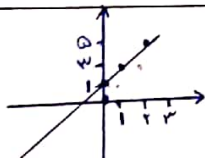
$$a+b = -2+1 = -1$$

$$-\frac{b}{\Delta a} = 2 \Rightarrow -\frac{a}{2} = 2 \Rightarrow -a = 4 \Rightarrow a = -4$$

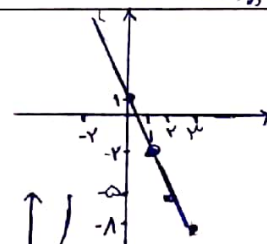
$$-\frac{\Delta}{\Delta a} = 1 \Rightarrow -\frac{(a^2 - 4b)}{2} = 1 \Rightarrow -\frac{16 - 4b}{2} = 1 \Rightarrow -8 + 2b = 1 \Rightarrow 2b = 9 \Rightarrow b = 4.5$$

$$\Delta b = 4.5 - 1 = 3.5$$

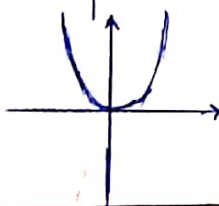
$$1) y = 2x+1$$



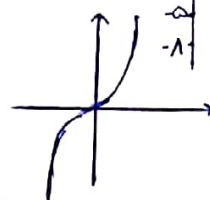
$$2) y = x^2 + 1$$



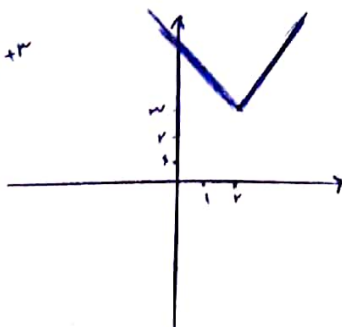
$$3) y = 2x^2$$



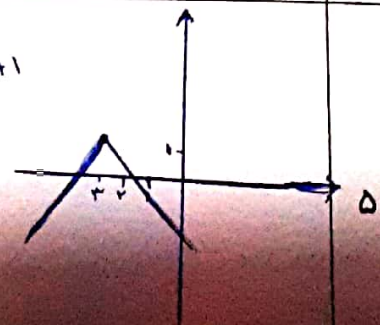
$$4) y = x^2$$



$$1) y = |x-2| + 3$$



$$2) y = -|x+3| + 1$$



$$1) \frac{n+r}{n^2-\varepsilon n} \Rightarrow n(n-\varepsilon) < \varepsilon \quad D_F = \mathbb{R} - \{0, \varepsilon\}$$

$$\frac{r(n+\varepsilon)}{n^2+n+\varepsilon} \quad D_F = \mathbb{R}$$

$$\frac{r(n+\varepsilon)}{n^2-\sqrt{n+1}\varepsilon} \Rightarrow n^2-\sqrt{n+1}\varepsilon > 0$$

$$\Delta < 0, \text{ لا يوجد حقيقي}$$

$$D_F = \mathbb{R}$$

$$\frac{r(n+\varepsilon)}{n^2-\varepsilon n} \Rightarrow n^2(n-\varepsilon) > n^2(n+r)(n-r) \quad D_F = \mathbb{R} - \{0, r, -r\}$$

$$1) y = \sqrt{4-n} + \sqrt{n-r}$$

$$\Rightarrow n-r > 0 \Rightarrow n > r$$

$$4-n > 0 \Rightarrow n < 4$$

$$\} \cap D_F = [r, 4]$$

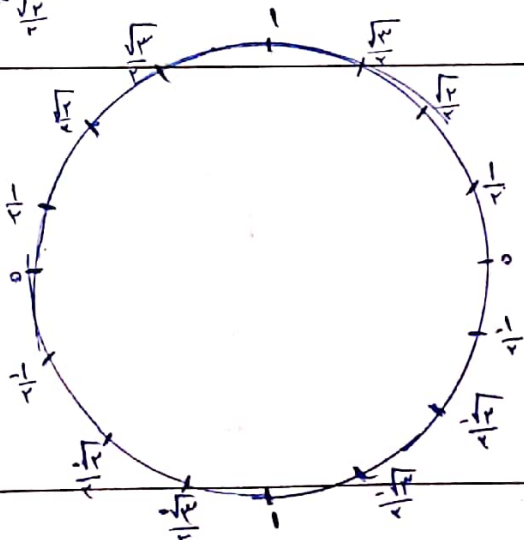
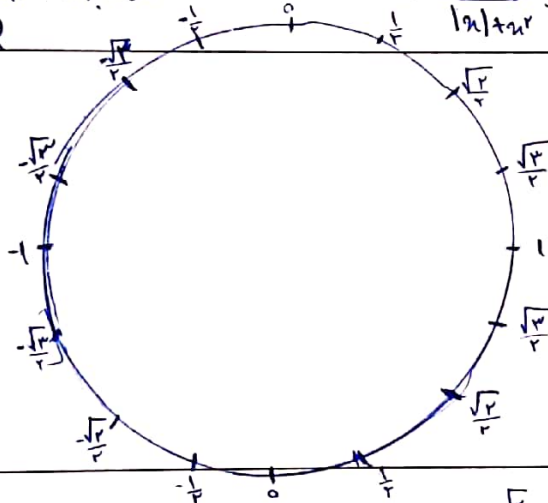
$$1) y = \sqrt{n-r} \Rightarrow n-r > 0 \Rightarrow n > r$$

$$n-\varepsilon \Rightarrow n-\varepsilon > 0 \Rightarrow n > \varepsilon$$

$$D_F = [r, +\infty) - \{\varepsilon\}$$

$$1) y = \frac{r(n+1)}{n^2+1} \Rightarrow n^2+1 > 0 \Rightarrow n^2 \neq -1 \quad D_F = \mathbb{R}$$

$$1) y = \frac{r(n+r)}{|n|+nr} \Rightarrow |n|+nr > 0 \quad D_F = \mathbb{R} - \{0\}$$



$$1) \sin n = -\cos \frac{r\pi}{r} \Rightarrow -(-\frac{1}{r}) = \frac{1}{r} \cdot \sin n$$

$$\Rightarrow n = \frac{\pi}{r}, \frac{\Delta \pi}{r}$$

$$1) \sin n = -\cos \frac{11\pi}{4} \Rightarrow -\frac{\sqrt{2}}{2} = \sin n$$

$$\Rightarrow n = \frac{5\pi}{4}, \frac{7\pi}{4}$$