

$$ع) y = \frac{n+r}{n^r+n+r} = \frac{n^r+n+r}{n^r+n+r} \neq 0 \quad n^r+r=n \quad n^r+n+r \neq 0 \quad R=\mathbb{R}$$

$$\frac{-1 \pm \sqrt{1-4r}}{2}$$

$$د) \frac{n+r}{n^r - rn^r} = \frac{n^r - rn^r}{n^r - rn^r} \neq 0 \quad n^r = rn^r \quad n \neq \pm 1 \quad D_f = \mathbb{R} - \left\{ \frac{1}{r} \right\}$$

$$الف) y = \sqrt{2-n} + \sqrt{n-r} \Rightarrow y-n \geq 0 \quad n-r \geq 0$$

$$r \leq n \leq 2 \quad n \geq r$$

$$D_f = [r, 2]$$

$$ب) y = \frac{n+1}{n^r+1} \Rightarrow \frac{n^r+1}{n^r+1} \neq 0 \quad D_f = \mathbb{R}$$

$$ع) y = \frac{\sqrt{n-r}}{n-r} \quad n-r \geq 0 \quad n-r \neq 0$$

$$n \geq r \quad n \neq r$$

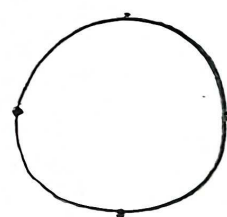
$$D_f = [r, r) \cup (r, +\infty)$$

$$= [r, +\infty) - r$$

$$د) y = \frac{r(n+r)}{|n|+n^r} \Rightarrow \frac{|n|+n^r}{|n|+n^r} \neq 0 \quad n \neq 0 \quad D_f = \mathbb{R} - \{0\}$$



د سوال 1



$$الف) r = -\frac{1}{r} \Rightarrow \frac{1}{r}$$

$$ب) r = \sqrt{\frac{r}{r}} \Rightarrow -\frac{\sqrt{r}}{r}$$

$$\frac{\partial H}{\partial r}, \frac{\partial H}{\partial r}$$

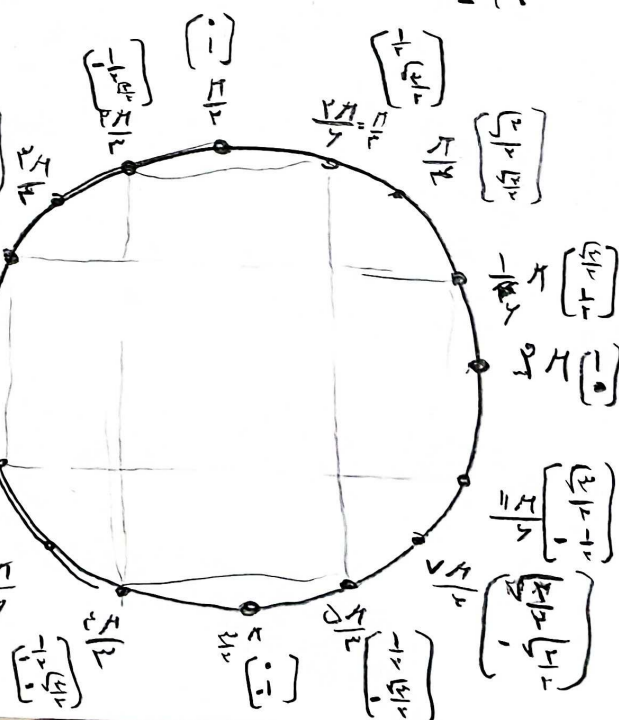
$$\frac{\partial H}{\partial r}, \frac{\partial H}{\partial r}$$

$$\left[\frac{\sqrt{r}}{r} \right]$$

$$\left[-1 \right]$$

$$\left[\frac{\sqrt{r}}{r} \right]$$

$$\left[\frac{\sqrt{r}}{r} \right]$$



(1)

الف) $y^2 - m = 2m^2 \Rightarrow y^2 = 2m^2 + m \quad y^2 = m(2m+1)$ تابع هست

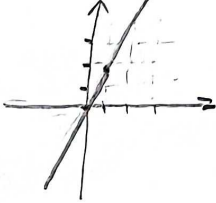
ب) $|y| + m^2 = m + 2$ $\pm y$ تابع نیست.
 $\pm y \neq m = 2$

ج) $\sqrt{m-4} + |y-2| = 0$ $m=4 \quad y=2$ تابع هست.

د) $m = \cos y$  تابع هست.

(2)

الف)  $f(m) = 1$

ب)  $f(m) = 2m$

ان) $y = am + b$ $y = m$ $am + b = m$

$1 + 2(0) = 1$

ب) 

$1 = 2 + \frac{2a+b}{-2}$ $2a+b = -3$
 $b = -4a$ $-6 = 4a$

$-2a = -3 \quad a = 1.5$

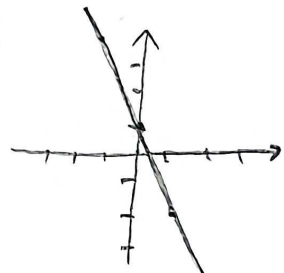
$\frac{-b}{2a} = 2$ $\frac{b}{4a} = \frac{2}{1}$ $b = 8a$

$b = -12 = 1.5 \times 8$

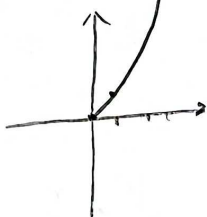
ان) $y = 2m + 1$



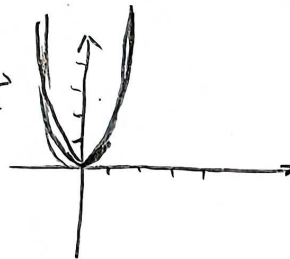
ب) $y = -2m + 1$



ج) $y = m^2$



د) $y = m^2$



الف)

(3)

ب)

ان) $y = \frac{m+2}{m^2-4m}$ $m^2 - 4m \neq 0$ $Q_f = (1, 4)$

(4)

ب) $y = \frac{m+2}{m^2-4m+12}$ $\Rightarrow \frac{m+2}{(m-2)^2+m} = 0$
 $(m-2)^2 = -m$ $m^2 - 4m + 12 = -m$
 $m^2 + 12 = -5m$