

عرفان حقیر یازدهم سر A ۱۸۱۲۵

Subject

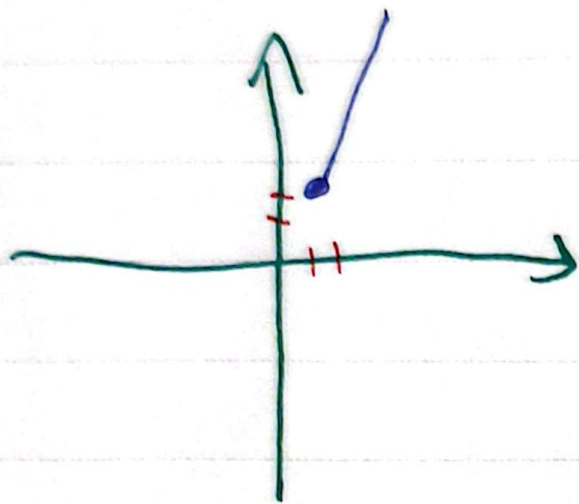
Date

$$(1) \left\{ (r, 2) (n, 2) (r, n-1) (m, 2) (-1, 2) \right\}$$

$$m = r \quad n^2 - n = 2 \Rightarrow n = 2 \quad \text{نمف ۱} \quad \checkmark$$

$$- \left\{ (-1, 1) (1, 2) (2, 3) (a, m-1) (a+2, n) (m, 3) \right\}$$

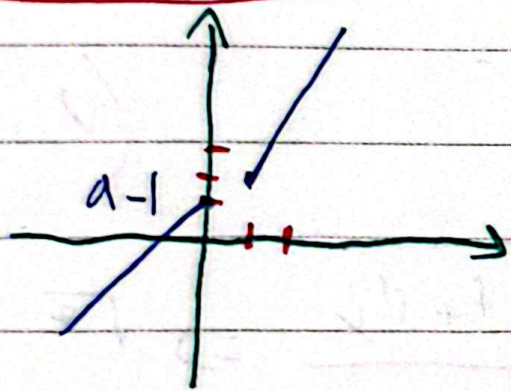
$$n = 2 \quad a = -1 \quad n = 2 \quad \checkmark$$



برای $n < 1$: $n+a$ (۲)

$$(-\infty, 1+a) \Rightarrow 1+a \leq 2$$

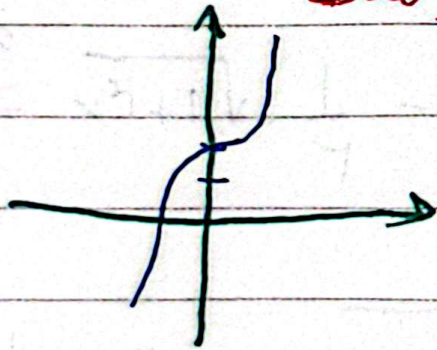
$$a \leq 1 \quad \checkmark \quad \textcircled{۲}$$



$$\left\{ \begin{array}{l} a-1 \leq r \\ a \end{array} \right\} = a < r \Rightarrow \cdot (a < r) \quad \text{✓}$$

r

$$y = n^r + r$$



two r , i

$$f(x) = \sqrt[r]{n - r}$$

$$y = n^r + r \Rightarrow n^r = y - r \Rightarrow$$

$$n = \sqrt[r]{y - r} \Rightarrow \sqrt[r]{n - r} \quad \text{✓}$$

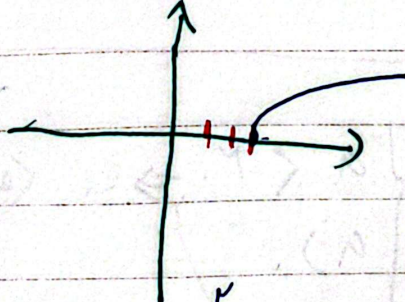
r

(۴) غالباً سهیم است و ~~یک~~ یک نیست $\Rightarrow y = n^2 - 2n + 1$

(۵) تابع هموگرافیک است و همواره یک به یک است
 $y = \frac{3n+1}{n-2} \Rightarrow$ 1/NO

$$n = \frac{-2y + 1}{y + 3} \Rightarrow f^{-1}(n) = \frac{+2n+1}{n+3}$$

یک به یک نیست $\Rightarrow y = 2$ ✓
 $\therefore \frac{2n+1}{n+2} \Rightarrow \frac{n+2}{n+2} + \frac{n+2}{n+2} \Rightarrow y = 2$ ✓

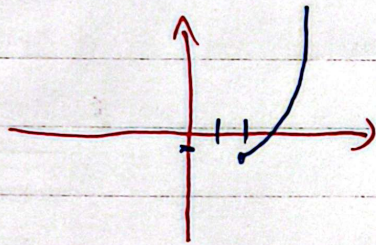
(۶) یک به یک نیست
 $y = \sqrt{n-3} \Rightarrow$ 

$$y^2 = n - 3 \Rightarrow n = y^2 + 3 \Rightarrow f^{-1}(n) = n^2 + 3$$

$$-) \quad x^r = rx + r, \quad x \in [r, +\infty)$$

$$\begin{vmatrix} r \\ -1 \end{vmatrix}$$

1, 0, 0 (4)



two x_1, x_2

$$y = (x-r) + 1 \Rightarrow y-1 = (x-r)$$

$$\sqrt[r]{y-1} + r = x \Rightarrow \sqrt[r]{x+1} + r = x \quad x \in [-1, +\infty)$$

$$y = \sqrt{n} + n \Rightarrow y = t + t \Rightarrow t + t - y = 0$$

(✓)

$$\Delta = 1 - r(1)(-y) = 1 + ry \Rightarrow \frac{-1 \pm \sqrt{1 + ry}}{r} \Rightarrow \text{IND}$$

$$n = \left(\frac{-1 + \sqrt{1 + ry}}{r} \right)^r \Rightarrow n = y + \frac{1}{r} - \frac{1}{r} \sqrt{1 + ry} \Rightarrow$$

$$n + \frac{1}{r} - \frac{1}{r} \sqrt{1 + rn} \Rightarrow n + \frac{1}{r} - \sqrt{\frac{1}{r} + n} \Rightarrow a = 1$$

$$b = \frac{1}{r}$$

$$c = -\frac{1}{r}$$

$$a + rb + rc \Rightarrow 1 + \frac{1}{r} - \frac{1}{r} = 1$$

$$y = \frac{n}{\sqrt{n^r - r}}$$

$$f(n_1) = f(n_r) \Rightarrow \frac{n_1}{\sqrt{n_1^r - r}} = \frac{n_r}{\sqrt{n_r^r - r}} \Rightarrow$$

$$\frac{n_1^r}{n_1^r - r} = \frac{n_r^r}{n_r^r - r} \Rightarrow n_1^r n_r^r - r n_1^r = n_1^r n_r^r - r n_r^r$$

$$n_1^r = n_r^r \Rightarrow n_1 = \pm n_r \xRightarrow{\text{نتیجۀ مثبت است}} n_1 = n_r \checkmark$$

$$f(n) \Rightarrow n = \frac{y}{\sqrt{y^r - r}} \Rightarrow n^r = \frac{y^r}{y^r - r} \Rightarrow y^r n^r - r n^r = y^r \Rightarrow$$

$$y^r n^r - y^r = r n^r \Rightarrow y = \pm \sqrt{\frac{r n^r}{n^r - 1}} \quad \text{یا } n, \text{ مقادیر اند} \checkmark$$

$$f(n) = y = \frac{\sqrt{r} n}{\sqrt{n^r - 1}} \checkmark$$

$$\frac{n}{1+|n|} = \frac{-r}{\omega} \quad n) \cdot \quad \frac{n}{1+n} = \frac{-r}{\omega} \quad n = \frac{-r}{\omega} \quad \text{جواب 9}$$

1

$$\frac{n}{1-n} = \frac{-r}{\omega} \Rightarrow -r + rn = \omega n$$

$$n = \frac{-r}{\omega}$$

$$\frac{-r}{\omega} + \frac{r}{r\omega} \Rightarrow \frac{-\omega r + r}{r\omega} = \frac{-r\omega + r}{r\omega}$$

$$g\left(-\frac{r}{\omega}\right) = b$$

$$g(b) = -\frac{r}{\omega}$$

$$b = \frac{r}{r\omega}$$

$$g(n) = \left(n + \frac{1}{n}\right)^r \Rightarrow \left(-\frac{r}{\omega} + \frac{1}{r\omega}\right)^r = \frac{r}{r\omega}$$

$$f(n) \Rightarrow n^r + 1 \Rightarrow \sqrt[n^r + 1]{n^r + 1} + n^r + 1 = 1r \quad n=r \quad (1.)$$

$$g^{-1}(1r) = r \quad \checkmark \quad (r)$$