

۱) اف $f^{-1}(a) \Rightarrow \{y\} = \{a + \{m\}\} \quad \{y\} = \{m\} \quad \{a\} = \frac{\{y\}}{2} \quad \begin{cases} a + \{m\} = y \\ \{m\} = y - a \end{cases}$ (1)

$y - a = \frac{\{y\}}{2} \quad a = y - \frac{\{y\}}{2} \rightarrow y = a - \frac{\{a\}}{2} \quad f(m) = f^{-1}(m) \rightarrow a + \{m\} = a - \frac{\{m\}}{2}$

$2\{m\} = -\{m\} \rightarrow \{m\} = 0 \quad a = \{0, 1\}$ (نہیں، فقط، جو، نہ، یا، اور، لیکن)

$\rightarrow f \circ f^{-1}(a) = a \quad \left\{ a - \frac{a}{2} = a \rightarrow a = \frac{a}{2} \right\}$

۲) $y = \frac{a}{\varepsilon} \quad y = a \rightarrow \frac{a}{\varepsilon} = -\frac{b}{\varepsilon} \rightarrow a = -b \rightarrow a + b = 0$ (2)

مقابلہ $a = -\frac{b}{\varepsilon}$

$f(f(a)) = \frac{a(\frac{a+3}{\varepsilon a+b}) + 3}{\varepsilon(\frac{a+3}{\varepsilon a+b}) + b} \rightarrow \frac{a(a+3) + 3(\varepsilon a+b)}{\varepsilon(a+3) + b(\varepsilon a+b)} \xrightarrow{\text{مساوی}} \frac{(a^2+12)a + 3(\varepsilon a+b)}{(\varepsilon a + \varepsilon b)a + \varepsilon b^2}$

$\rightarrow \frac{(a^2+12)a + 3(0)}{\varepsilon(0)a + 12 + b^2} = \frac{(a^2+12)a}{b^2+12} \xrightarrow{a=-b} \frac{(a^2+12)a}{a^2+12} \rightarrow f \circ f(a) = a$

$f \circ f(\omega - \sqrt{a}) = \omega - \sqrt{a}$

۳) $y = a \rightarrow \frac{ma+3}{a+m+3} = a \quad m+3 = a^2 + m+3a$ (3)

$\rightarrow a^2 + 3a - 3 = 0 \quad \frac{1}{a} + \frac{1}{\beta} \rightarrow \frac{a+\beta}{a\beta} = \frac{-b}{\frac{c}{a}} \Rightarrow \frac{-3}{-3} = 1$

۴) $f(a) = |2a+\omega| - |\omega a-2| \quad \begin{cases} 2a+\omega=0 & a=-\frac{\omega}{2} \\ \omega a-2=0 & a=0/\varepsilon \end{cases}$ (4)

$-\frac{\omega}{2}$	$0/\varepsilon$
$-2a-\omega + \omega a-2$	$2a+\omega + \omega a-2$
$\rightarrow 3a-V$	$\rightarrow 3a+3$
$\begin{vmatrix} 1 & -\varepsilon & 1 & -3 \\ 1 & -4 & 1 & -13 \end{vmatrix}$	$\begin{vmatrix} 1 & -\varepsilon & 1 & 3 \\ 1 & -4 & 1 & 13 \end{vmatrix}$
(مساوی)	(نہیں)

$y = -3a + V \quad f^{-1}(a)$
 $a = -3y + V$
 $y = -\frac{a}{3} + \frac{V}{3}$

$$f(x) = x + \sqrt{x} \longrightarrow f(x) = (\sqrt{x+1})^2 - 1$$

(4)

$$f^{-1}(x) \Rightarrow y+1 = (\sqrt{x+1})^2 \quad \sqrt{y+1} = \sqrt{x+1} \quad \sqrt{x} = \sqrt{y+1} - 1 \quad x = (\sqrt{y+1} - 1)^2$$

$$\longrightarrow f^{-1}(x) = (\sqrt{x+1} - 1)^2 \quad \begin{array}{l} \text{برای دامنه اش باید بر } \\ \text{احصا بکنیم } f(x) \end{array} \quad y = (\sqrt{x+1})^2 - 1 \quad (\sqrt{x+1})^2 = y+1$$

⊕
↳ $y+1 \geq 0 \quad y \geq -1$

پس دامنه و راجعه

$$\Rightarrow f^{-1}(x) = (\sqrt{x+1} - 1)^2 \quad \text{و } f^{-1}(x) = [-1, +\infty)$$

$$r^a + q^a - 1 = a \quad r^a = 1 \quad r^a = r^0 \quad a = 0 \quad \text{در یک نقطه قطع می شود} \quad (5)$$

$$\sqrt{x} + \sqrt{y} = r \quad \sqrt{y} = r - \sqrt{x} \quad y = (r - \sqrt{x})^2$$

(10)

$$f \circ f(x) \rightarrow (r - \sqrt{(r - \sqrt{x})^2})^2 \rightarrow (r - |r - \sqrt{x}|)^2$$

$$f \circ f(x) = r + r + x - r\sqrt{x} - r|r - \sqrt{x}| \quad f \circ f(x) = 1 + x - r\sqrt{x} - r|r - \sqrt{x}|$$