

$\lambda > 2 \rightarrow \text{سلیم} = \frac{\epsilon}{\lambda} = 2$, $\lambda < 2 \rightarrow \text{سلیم} = \frac{-4}{\lambda} = 2$ (a)
 $-2^2 + 4(2) + 3K \leq 2^2 - \epsilon(2) + K$
 $\rightarrow -4 + 8 + 3K \leq 4 - 2\epsilon + K$
 $2K \leq -1\epsilon \rightarrow K \leq -\frac{\epsilon}{2}$

$f(n) = \begin{cases} \epsilon n & n > 0 \\ 2n & n < 0 \end{cases}$

$\begin{cases} an + bn = \frac{1}{\epsilon} \\ an - bn = \frac{1}{\epsilon} \end{cases} \Rightarrow \begin{cases} a+b = \frac{1}{\epsilon} \\ a-b = \frac{1}{\epsilon} \end{cases} \rightarrow \begin{cases} 2a = \frac{2}{\epsilon} \rightarrow a = \frac{1}{\epsilon} \\ b = -\frac{1}{\epsilon} \end{cases}$
 $\Rightarrow ab = \frac{1}{\epsilon} \times (-\frac{1}{\epsilon}) = -\frac{1}{\epsilon^2}$

$f(x) = -b \rightarrow \frac{4+\epsilon}{2+m} = -10 \rightarrow b = -10 - 10m \rightarrow m \rightarrow 0$
 $\Rightarrow f(n) = \frac{4n+\epsilon}{n-2} \rightarrow f(f(n)) = \frac{n(\frac{4n+\epsilon}{n-2}) + \epsilon}{\frac{4n+\epsilon}{n-2} - 2}$
 $\rightarrow \frac{4n^2 + \epsilon n + \epsilon n - 2\epsilon}{4n + \epsilon - 2n + 4} = \frac{4n^2 + 2\epsilon n - 2\epsilon}{2n + 4 + \epsilon} = \frac{14n}{14} = n = f \circ f(n)$

$g = \frac{4n+\epsilon}{n-2} \Rightarrow 2y - 4y = 4n+\epsilon \rightarrow 2y - 4n = 4y + \epsilon$
 $\Rightarrow 2(y-2n) = 4y + \epsilon \rightarrow n = \frac{4y+\epsilon}{y-4} \rightarrow f^{-1}(n) = \frac{4n+\epsilon}{n-2}$
 $\Rightarrow \frac{4n+\epsilon}{n-2} = 2 \rightarrow 4n + \epsilon = 2n - 4 \rightarrow 2n = -4 - \epsilon \rightarrow n = -\frac{4+\epsilon}{2}$

$f(4n) = 4 - g(\frac{n}{2}) \rightarrow f^{-1}(-2) = 4 - 2n \rightarrow f(4-2n) = -2$
 $\rightarrow \frac{n}{2} \xrightarrow{g} 4 \rightarrow g^{-1}(4) = \frac{n}{2} \rightarrow 2g^{-1}(4) = n$
 $\rightarrow \epsilon g^{-1}(4) = 2x \rightarrow \epsilon g^{-1}(4) = f^{-1}(-2)$
 $\Rightarrow 4n + 4 - 2n = 4$

فرقة ١٣
 $-y = \frac{-\omega n - 13}{1+n} \rightarrow y = \frac{\omega n + 13}{n+1} \xrightarrow{\text{نضرب}}$ $y = \frac{\omega(n-1) + 13}{(n-1)+1}$ (9)

دالة باين $f = \frac{\omega n + 13}{n-1} - 13 = \frac{\omega n + 13 - 13n + 13}{n-1} = \frac{13n + 4}{n-1} = f(n)$

$y = \frac{13n + 4}{n-1} \xrightarrow{f^{-1}(n)} x = \frac{13y + 4}{y-1} \Rightarrow 13y - 13 = 13y + 4 \Rightarrow 13y - 13y = 17$ (17)

$\Rightarrow y(n-1) = 17 \rightarrow f^{-1}(n) = \frac{13n + 4}{n-1} \rightarrow \frac{13n + 4}{n-1} = \frac{13(n-1) + 17}{n-1}$

$\Rightarrow 13n + \omega n - 4 = 13(n-1) + 17 \Rightarrow 13n + \omega n - 4 = 13n - 13 + 17$
 $\Rightarrow 13n - 13n - 4 = 0 \Rightarrow \omega n = 4 \Rightarrow \frac{-b}{a} = \frac{+13}{1} = 13$ (13) ✓

$y = n + \varepsilon[n] \xrightarrow{[n]=K} y = n + \varepsilon K \xrightarrow{\text{نضرب}} n = y + \varepsilon K$ (1,0) (10)
 $\rightarrow g(n) = n - \varepsilon K \rightarrow g(n) = n - \varepsilon[n] \rightarrow f(n) - g(n) \rightarrow$
 $= n + \varepsilon[n] - n - \varepsilon[n] = 0$ ✓

$f^{-1}(n) = n - \frac{\varepsilon}{2}[n] \rightarrow f^{-1}g = n + \varepsilon[n] - n + \frac{\varepsilon}{2}[n] = \frac{\varepsilon}{2}[n]$