

$y = \frac{an+r}{en+b}$ $\frac{a}{e} = -\frac{b}{e} \rightarrow a = -b$ $f(n) = f^{-1}(n)$ (1)
 $f \circ f(n) = f^{-1} \circ f(n) = n$
 $\rightarrow f \circ f(1-\sqrt{5}) = 1-\sqrt{5}$ (1)

$f(n) = \frac{mn+r}{n+m+r}$ $\frac{1}{\alpha} + \frac{1}{\beta} = ?$ (10)
 $a \rightarrow \frac{am+r}{a+m+r} = \alpha$ $\alpha^2 + m\alpha + r\alpha = am + r$ $\rightarrow \alpha^2 + m\alpha + r\alpha - am - r = 0$
 $\rightarrow \alpha^2 + (m+r)\alpha - r = 0$ $\frac{b}{a} = -r$ $\frac{1}{\alpha} + \frac{1}{\beta} = \frac{\alpha + \beta}{\alpha\beta} = \frac{-r}{-r} = 1$ (1)

$f(n) = \sqrt{(n+d)^2} - \sqrt{(n-5)^2} \rightarrow f(n) = |n+d| - |n-5|$ (5)
 $f(n) = \sqrt{n} \rightarrow f^{-1}(n) = \frac{n}{e}$
 $y = \sqrt{x} \rightarrow x = y^2 \rightarrow y = \sqrt{x} \rightarrow y = \frac{x}{e}$ (1)

$g(n) = cf(n) - 1$ $g^{-1}(n) = af^{-1}(\frac{n+b}{c}) + d$ $\frac{ac+d}{cb} = ?$ (1)
 $g^{-1} = \frac{1}{c} f^{-1}(\frac{n+1}{1}) \Rightarrow a = \frac{1}{n}, b = 1, c = 1, d = 0$
 $\frac{\frac{1}{c} \times 1 + 0}{1 \times 1} = \frac{1}{c} = \frac{1}{5} = \frac{1}{n}$

$f(n) = n + 5\sqrt{n}$ $(\sqrt{n+1})^2 - 1 = y \rightarrow (\sqrt{y+1} - 1)^2 = n$ (5)
 $D_{f^{-1}} = R_f = [0, +\infty)$ $f^{-1}(n) = (\sqrt{n+1} - 1)^2$ $D_{f^{-1}} = [0, +\infty)$
 $f^{-1}(n) = (\sqrt{n+1} - 1)^2$ $D_{f^{-1}} = R_f = [0, +\infty)$

$y = n - 1 + 5^n$ $(n-1) + 5^n$ (1)
 $y = n - 1 + 5^n \rightarrow f(n) = n - 1 + 5^n$ $f(n) = n - 1 + 5^n \rightarrow 5^n = 1 \rightarrow n = 0$

$f(n) = n^2 + 5n$ $y = \sqrt{f^{-1}(n)} - n$ (1)
 $f^{-1}(n) \geq n$ $f \circ f^{-1}(n) \geq f(n) \rightarrow n \geq f(n)$
 $f(n) = n^2 + 5n \leq 0 \rightarrow n \in (-\infty, 0]$

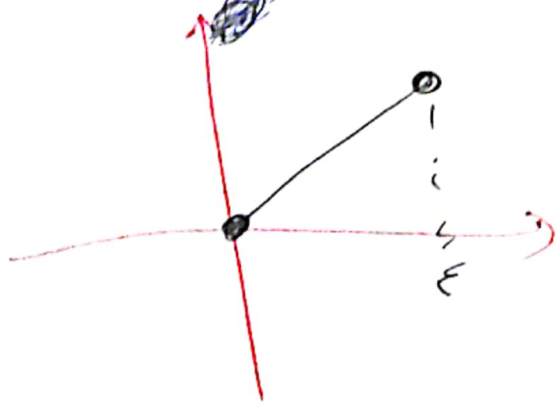
$g(x) = -x + \sqrt{x+4}$ (9) $g = y = x - 4$?

$g(x) = \left(\sqrt{\frac{1}{x} - x} + \frac{1}{x}\right)^2 - 4 = x - 4 = \frac{1}{x} - x + \frac{1}{x} + \sqrt{\frac{1}{x} - x}$

$x - 4 \rightarrow$ (1)

$\sqrt{x} + \sqrt{y} = 2$ $f \circ f(x)$ $f(x) = f^{-1}(x)$ (10)

$f \circ f = f \circ f^{-1} = x$ $\sqrt{y} = 2 - \sqrt{x} \rightarrow 2 - \sqrt{x} \geq 0 \rightarrow x = [0, 4]$ $x = [0, 4]$



(6) جواب در
 جایی که نقطه برابر
 $x = [0, 1)$

بردار جانبی / B