

$$Q(z) = \begin{cases} \cot \frac{\pi z}{\pi}, & z \leq 1 \\ \sqrt{z+1}, & z > 1 \end{cases} \quad \text{Rob} \left(\frac{z}{\pi} \right) \sim \frac{z}{\pi} < 1 \rightarrow \cot \frac{1}{\pi} \frac{\pi z}{\pi} = \cot \frac{z}{\pi} = \sqrt{z}$$

$$\Rightarrow \ell(\sqrt{r}) \sim \sqrt{r} > 1 \sim \sqrt{(\sqrt{r})^2 + 1} = \underline{r}$$

$$\begin{aligned} \rightarrow) \log\left(\frac{x}{\mu}\right) &\sim g\left(\frac{x}{\mu}\right) = \gamma\left(\frac{x}{\mu}\right)^{\gamma} = \frac{x}{\mu} \sim h\left(\frac{x}{\mu}\right) = \sqrt{\frac{\gamma x^{\gamma} - 1}{\gamma}} = \frac{\sqrt{x}}{\mu} \\ \rightarrow) \log(\sqrt{x}) &\sim g(\sqrt{x}) = \frac{\sqrt{x}}{1-\sqrt{x}} \xrightarrow{\sim} -(1+\sqrt{x}) \rightarrow h(-1-\sqrt{x}) = [-1-\sqrt{x}] \\ &= -x \end{aligned}$$

$$\begin{aligned} g \circ R\left(\frac{\pi}{F}\right) &\sim R\left(\frac{\pi}{F}\right) = \sin \frac{\pi}{F} = \frac{\sqrt{F}}{F} \sim g\left(\frac{\sqrt{F}}{F}\right) = \frac{\sqrt{F}}{F} \left(\sqrt{1 - \frac{F}{F}} \right) \\ &= \frac{\sqrt{F}}{F} \times \frac{\sqrt{F}}{F} = \frac{1}{F} \end{aligned}$$

iii) $\log(n) = \{ (4,0) (4,0) (4,1r) (1,1r) \}$

$$\rightarrow \text{goal}(n) = \emptyset$$

$$c) \text{ } h \circ h(m) = \emptyset$$

$$2) g \circ g \omega_1 = \{ (1, 1), (1, 4), (4, 1) \}$$

$$\begin{aligned} Q &= \{(r, 1), (c, r), (f, 0), (l, v)\} \\ g &= \{(1, r), (c, 1), (a, 3), (b, 1)\} \end{aligned} \quad \rightarrow (a, b) = ? \rightarrow \boxed{(f, 0)}$$

$$\text{log} = \{(1,1) (2,2) (a,1) (b,2)\} \rightarrow (x,y) \in \text{log} \rightarrow a=x$$

$\overline{gob} \rightarrow 1 \Rightarrow 2$
 $3 \Rightarrow 2 \Rightarrow$ *نقد*

$b = 5 \rightarrow (4, 1) \in \text{go}^B$, از آنجا که تنها مجهول b است $\Rightarrow 5 \Rightarrow 4$

$$g(rn+r)$$

$$rn+r = -1 - 2 = -3$$

$$-r + r - r = -r$$

$$h(x) = rx + r \rightarrow h(x) = ax + b \rightarrow a(ax+b) + b = a^2x + ab + b = rx + r$$

$$g(rn+r) = rn+r$$

$$a=r \rightarrow \begin{cases} r^2b = r + \epsilon \\ b = 1 \end{cases} \rightarrow rn+1$$

$$a=-r \rightarrow \begin{cases} r^2b = r + \epsilon \\ -b = r \rightarrow b = -r \end{cases} \rightarrow -rn-r$$

$$g(h(-1)) = rn+r \rightarrow g(rn+1) = rn+r \rightarrow g(-1) = -\delta$$

$$g(h(\frac{1}{r})) = -\delta$$

$$g(-\frac{1}{r} - r) = rn+r$$

1.0

$$h(x) = \sqrt{x+|x|}, \quad g(x) = \frac{1}{x^2 - \epsilon x}$$

$$g \circ h \sim \frac{1}{x+|x| - \sqrt{x+|x|}} \rightarrow x < \dots$$

$$\rightarrow D_{g \circ h} = (\cdot, \infty) - \{1\}$$

مخرج را از مخرج

$$h(x) = \sqrt{\frac{1-x}{1+x}} \rightarrow -1 \leq x \leq 1$$

$$g(x) = \sqrt{\frac{x}{1+x}} \rightarrow x \leq 1$$

$$(h+g) \circ h = h+g(\sqrt{\frac{1-x}{1+x}}) \xrightarrow{\text{مخرج را از مخرج}} \boxed{[1, 1]}$$

$$D \sim [-1, 1]$$

$$h(\frac{r_{n+1}}{n-r}) = r_{n+1} \sim \frac{r_{n+1}}{n-r} = t \sim r_{n+1} = t_n - r\epsilon$$

$$h(t) = r_{n+1} \rightarrow h(\frac{r_{n+1}}{t-r}) = r(\frac{r_{n+1}}{t-r}) + 0 \xrightarrow{t=r} \frac{1+r\epsilon}{t-r} = \frac{1+r\epsilon}{t-r}$$

$$\Rightarrow h(n + \frac{1}{n}) = n^2 + \frac{1}{n} = (n + \frac{1}{n})(n^2 - 1 + \frac{1}{n^2}) \rightarrow h(t) = t(t^2 - 1)$$

$$\Rightarrow h(n) = n(n^2 - 1)$$

$$h(x) = x\sqrt{x} \rightarrow x > 0$$

$$g(1) \rightarrow 0$$

$$g(\sqrt{x}) \rightarrow \dots$$

$$g(h(x)) = 0 \rightarrow x\sqrt{x} = 1 \rightarrow x = 1$$

$$x\sqrt{x} = \sqrt{x} \rightarrow x = 1$$

1.0