

الف) به نظر

$$x + [n] = y \quad x + [n] = x - 1 - [n]$$

$$[n + [n]] = [y]$$

$$[2[n]] = [y]$$

$$F^{-1}(n) \quad y + [y] = n \rightarrow n - [y] = y$$

$$\rightarrow y = n - 1 - [n]$$

ب) ۱

$$F \circ F^{-1}(n) = n - \frac{1}{2}$$

$$n = \frac{1}{2}$$

$$y = \frac{an + 3}{5n + b}$$

کل برضو (دوبین) $\rightarrow$ شیار اول درسم

$$\frac{-b}{5} = \frac{a}{5} \rightarrow a = -b$$

یعنی هم‌نسبت تابع
با تابع برابر

$$F \circ F(2 - \sqrt{4})$$

$$\Rightarrow F \circ F^{-1}(2) = n \rightarrow F \circ F^{-1}(2 - \sqrt{4}) = 2 - \sqrt{4}$$

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$$f = \frac{mn + 3}{n + (m+3)} \quad f^{-1} = \frac{-(m+3) + 3}{x - m}$$

$$\rightarrow mn^2 - mn^2 + 3n - 3m = -(m+3)n + 3n - (m+3)^2 + 3(m+3)$$

$$3 - m^2 = -m - 3 \rightarrow m^2 - m = 4 \Rightarrow m = 2 \quad \text{یعنی } \frac{-b}{a} = 1$$

$$\frac{1}{a} + \frac{1}{\beta} = \frac{\beta + \alpha}{\beta \alpha} = \frac{1 - 4}{-4} = -\frac{1}{4}$$

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$$y = \sqrt{m+3} \quad F(n) = \sqrt{(n+2)^2} - \sqrt{(2n-2)^2}$$

$$\frac{-\frac{a}{r}}{\frac{1}{r}} \quad \frac{1}{r}$$

$$\frac{3n - \sqrt{}}{\sqrt{m+3}} \quad \frac{-3m+3}{\sqrt{m+3}} \rightarrow -3m+3 = y \rightarrow y - \sqrt{m+3} = -3m \rightarrow n = \frac{y - \sqrt{m+3}}{3}$$

تنوعی

$$y = \frac{-m}{3} + \frac{\sqrt{m+3}}{3}$$

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$$F(n) = n + 2\sqrt{n} \rightarrow R_F = [0, +\infty) = D_{F^{-1}}$$

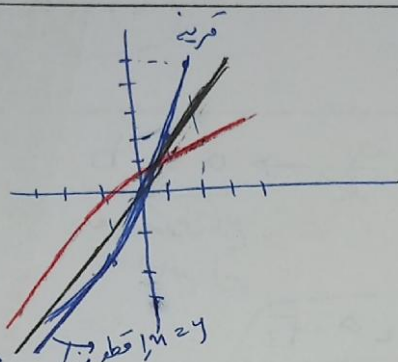
$$F(n) = n + 2\sqrt{n} \xrightarrow{\sqrt{n} = t} y = t^2 + 2t \rightarrow y = (t+1)^2 - 1 \rightarrow y+1 = (t+1)^2$$

$$\rightarrow \pm\sqrt{y+1} = t+1 \rightarrow t =$$

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$$y = n - 1 + 2^n$$

اسم



در یک نقطه

نقطه قطع منحنی از محور

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$$y = \sqrt{F^{-1}(n)} - n$$

$$F^{-1}(n) \geq 0 \rightarrow F^{-1}(n) \geq n \xrightarrow{F} F \circ F^{-1}(n) \neq F(n)$$

$$n \geq n^2 + \epsilon n \rightarrow n^2 + \epsilon n \leq 0 \rightarrow n(n^2 + \epsilon) \leq 0 \leq \pm\sqrt{\epsilon}$$

$$\begin{array}{ccc} -\sqrt{\epsilon} & 0 & +\sqrt{\epsilon} \\ -\phi & -\phi & +\phi \\ \hline & \epsilon & \end{array} \quad \begin{array}{l} \text{محدود} \rightarrow 0 \\ \text{ناحیه} \end{array}$$

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$$F(n) = -n + \sqrt{n+\epsilon} \xrightarrow{\text{نیاز دارد}} F^{-1}(n) \xrightarrow{\text{نمی‌تواند}} F^{-1}(n+\epsilon) = g(n)$$

$$F^{-1}(n+\epsilon) = n - \epsilon \xrightarrow{F} n + \epsilon = F(n - \epsilon) \rightarrow n + \epsilon = -(n - \epsilon) + \sqrt{n - \epsilon + \epsilon}$$

$$\rightarrow n + \epsilon = \epsilon - n + \sqrt{n+1} \rightarrow 2n + 1 = \sqrt{n+1} \rightarrow n + 1 = \epsilon n^2 + \epsilon n + 1$$

$$\epsilon n^2 + \epsilon n = 0 \rightarrow n(\epsilon n + \epsilon) = 0 \leq -\frac{\epsilon}{\epsilon}$$

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$$\sqrt{n} + \sqrt{y} = 2$$

$$\sqrt{y} = 2 - \sqrt{n} \xrightarrow{\text{توان}} y = \epsilon + n - \epsilon\sqrt{n} = (2 - \sqrt{n})^2$$

$$F \circ F(n) = (2 - \sqrt{(2 - \sqrt{n})^2})^2 = (2 - (2 - \sqrt{n}))^2 = (\sqrt{n})^2 = n$$

$$y = n$$

$$y \geq 0$$

$$n \geq 0$$



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