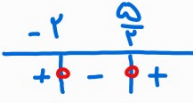


(۲-الف) $((\frac{1}{x})^n - 9)(3x - \varepsilon^n) \geq 0 \rightarrow$  $\rightarrow Df = (-\infty, -2] \cup [\frac{5}{3}, +\infty)$

$\downarrow$ $\downarrow$
 $(\frac{1}{x})^n = 9 \rightarrow x = -2$ $3x = \varepsilon^n \rightarrow x = \frac{5}{3}$

(۲-ب) $3 - 2(a) - (-2)^2 = 0 \rightarrow a = -\frac{1}{2}$ $-2a - 1 = 0$

$f(x) = \sqrt{3 - \frac{x}{2} - x^2} \rightarrow -x^2 - \frac{x}{2} + \frac{3}{2} = 0 \rightarrow x = (\frac{1}{2} \pm \sqrt{\frac{1}{4} + 12}) \times -\frac{1}{2}$ $\rightarrow x = -2$
 $\hookrightarrow x = \frac{3}{2} \rightarrow b = \frac{3}{2}$

$a + b = -\frac{1}{2} + \frac{3}{2} = 1$

$f(f(a)) = \frac{f(a)+1}{f(a)-1} = a \rightarrow \frac{\frac{a+1}{a-1} + 1}{\frac{a+1}{a-1} - 1} = \frac{\frac{a+1+a-1}{a-1}}{\frac{a+1-a+1}{a-1}} = \frac{2a}{2} = a$ -V

$x \in Df \rightarrow x \in \mathbb{R} - \{1\}$ پس برای تمامی نقاط در دامنه f بهر راست $\checkmark$

$f(x \cdot \sqrt{2} + \Delta \cdot \sin) = f(2, 0) \rightarrow x \cdot \sqrt{2} + \Delta \cdot \sin = 2, \Delta \rightarrow x \cdot \sqrt{2} + \Delta \cdot \sin = \frac{4}{\sqrt{2}}$ -10

$C \cdot \sin = \frac{-\Delta \pm \sqrt{\Delta^2 + \Delta^2}}{\Delta} \rightarrow C \cdot \sin = \frac{-\Delta + \Delta}{\Delta} = \frac{1}{\sqrt{2}}$
 $\hookrightarrow C \cdot \sin = \frac{-\Delta - \Delta}{\Delta} = -\frac{2}{\sqrt{2}} \times C \cdot \sin = -$

ملاحظه: $C \cdot \frac{\Delta}{\sqrt{2}} = \frac{1}{\sqrt{2}}$, $C \cdot \frac{\Delta}{\sqrt{2}} = \frac{1}{\sqrt{2}} \rightarrow f(2, 0) = 2$

$\downarrow$ $\downarrow$
 $\cos \frac{\pi}{4} = (\sqrt{2})^2 = 2$ $\cos \frac{\pi}{4} = (-\sqrt{2})^2 = 2$