

$$f(a) = v(a+1) = va+v$$

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$$14a + 1f = 13a - f + a \quad | 4a + 1f = 4a - f$$

$$10a = -11 \quad \boxed{a = -1/10}$$

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$$\sqrt{v-\sqrt{w}} + \frac{1}{\sqrt{v-\sqrt{w}}} + v + \sqrt{v+\sqrt{w}} + \frac{1}{\sqrt{v+\sqrt{w}}} + v$$

(۲)

$$\sqrt{v+\sqrt{w}} + \sqrt{v-\sqrt{w}} + \sqrt{v+\sqrt{w}} + \sqrt{v-\sqrt{w}} + 4$$

$$v(\underbrace{\sqrt{v+\sqrt{w}} + \sqrt{v-\sqrt{w}}}_A) \rightarrow \boxed{v\sqrt{4+4}} \rightarrow \text{جواب آند}$$

$$A^2 = v + \sqrt{w} + v - \sqrt{w} + v = 4 \quad A = \sqrt{4}$$

$$v(vf(x) - wf(-x)) = 4x^v - x$$

(۳)

$$w(vf(-x) - wf(x)) = 4x^v + x$$

$$\begin{cases} 4f(x) - 4f(x) = 1x^v - vx \\ 4f(-x) - 4f(x) = 12x^v + wx \end{cases}$$

$$-4f(x) = 10x^v + x \quad f(x) = -\frac{5}{2}x^v - \frac{1}{4}x$$

$$\boxed{x = -1} \quad 4f(0) = 14 + 4m + 3m - 1 \quad f(0) = \frac{14+7m}{4}$$

$$\boxed{x = 0} \quad v f(0) = 3m - 1 \quad f(0) = \frac{3m-1}{v} = \frac{14+7m}{4}$$

$$\frac{3m-1}{v} = \frac{14+7m}{4}$$

$$4m - 3 = 14 + 7m \quad \uparrow$$

$$4m = 17 \quad \boxed{m = \frac{17}{4}}$$

$$vf(-1) = \frac{w+1v+w}{-1} = f(-1) = -9$$

(۵)

$$\text{پروپ: } y = ax + b$$

$$ax + b + \frac{a}{x} + b = vb + \frac{ax^v + a}{x}$$

$$f(x) = 3x - 4$$

$$\frac{ax^v + vb + a}{x} = \frac{3x^v - 11x + 4}{x}$$

$$a = 3$$

$$b = -4$$

$$y = 3x - 4$$

$$f(-1) = -9$$

$D_f = 1-x \geq 0 \quad x \leq 1 \quad D_f = D_g$ سارافاضی ④

$D_g = (1-x)^3 \geq 0 \quad x \leq 1 \quad -\sqrt{(1-x)^3(1-x)} = (x-1)\sqrt{1-x}$
 $-1|1-x| = (x-1) \quad f=g$

$D_f = x \geq 0 \quad \leadsto D_f = D_g \quad \sqrt{x^3 \times x} = |x| \times \sqrt{x} = x\sqrt{x}$ ⑤
 $D_g = x^3 \geq 0 \quad x \geq 0 \quad f=g$

$D_f = x \geq 0 \quad \leadsto \text{موجب}$ ⑥
 $D_g = \begin{matrix} x \geq 0 \rightarrow \sqrt{x} \\ x \leq 0 \rightarrow \sqrt{-x} \times x \end{matrix} \leadsto \text{موجب}$ ⑦

الف) $\frac{f(1)+g(1)}{f(1)-g(1)} = \frac{1+1}{1-1} = \frac{2}{0} = \infty$ ⑧

ب) $\frac{f(2)+g(2)}{f(2)-g(2)} = \frac{2+2}{2-2} = \frac{4}{0} = \infty$ ⑨

ج - $f(0)g(-1) \leadsto f(0)=0 \quad g(-1)=0$ ⑩

$g(x) =$
 $\left\{ (1,1) (0,0) \left(\frac{1}{2}, \frac{1}{2}\right) \left(-\frac{1}{2}, \frac{1}{2}\right) \left(\frac{1}{3}, -1\right) \right\}$
 $\begin{matrix} \mu x - 1 = 1 & x = 1 \\ \mu x - 1 = -1 & x = 0 \\ \mu x - 1 = 0 & x = \frac{1}{2} \\ \mu x - 1 = -1 & x = -\frac{1}{2} \\ \mu x - 1 = 1 & x = \frac{1}{3} \end{matrix}$

د) $h(x) = f(|x|)$ ⑪
 $\left\{ (2,1) (-2,1) (0,0) \left(\frac{1}{2}, -1\right) \left(-\frac{1}{2}, -1\right) \right\}$ ⑫