

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

$$f(x) = va \xrightarrow{\text{حق!}} 14a + 14$$

$$\rightarrow 14a - 3a - a = 10$$

$$2f(x) = f(-x) + a$$

$$1 \cdot a = 10 \rightarrow a = 10$$

$$14a - 14 = 3a - x + a$$

$$1 \cdot a = -14 \rightarrow a = -14$$

$$(x - \sqrt{4})(x + \sqrt{4}) = x^2 - 4 = 1$$

$$\sqrt{x - \sqrt{4}} + \sqrt{x + \sqrt{4}} =$$

$$\sqrt{x - \sqrt{4}} + \sqrt{x + \sqrt{4}} + x(\sqrt{x - \sqrt{4}})(\sqrt{x + \sqrt{4}}) = \sqrt{4}$$

$$\frac{1}{\sqrt{x + \sqrt{4}}} + \frac{1}{\sqrt{x - \sqrt{4}}} + x = \frac{\sqrt{x - \sqrt{4}} + \sqrt{x + \sqrt{4}}}{1} \rightarrow \sqrt{4} + x \rightarrow x + 2\sqrt{4}$$

$$3x f(-n) - 2f(n) = 5n^2 + n$$

$$4f(-n) - 9f(n) = 12n^2 + 12n$$

$$2x - 3f(-n) + 2f(n) = 5n^2 - n \rightarrow -4f(-n) + f(n) = 11n^2 - 2n$$

$$-5f(n) = 5 \cdot n^2 + n$$

$$f(n) = -n^2 - \frac{n}{5}$$

$$n = 0 \rightarrow 2f(0) = 5m - 1 \rightarrow f(0) = \frac{5m - 1}{2}$$

$$n = -2 \rightarrow 4f(0) = 14 + 2m + 3m - 1 \rightarrow f(0) = \frac{5m + 14}{5}$$

$$f(0) \rightarrow \frac{5m - 1}{2} = \frac{5m + 14}{5}$$

$$\frac{25m - 5}{10} - 1 \rightarrow \frac{25m}{10} \times \frac{1}{5} = \frac{25}{50}$$

$$\frac{25}{50} \rightarrow 5m - 5 = 5m + 14 \rightarrow 5m = 19 \rightarrow m = \frac{19}{5}$$

$$f(-1) + f(-1) = \frac{1+1+1}{-1} \rightarrow 2f(-1) = -1/1 = -9 \quad (5)$$

$$f(-1) = -9 \quad \checkmark$$

$$f(x) \xrightarrow{D} 1-x > 0 \rightarrow (1, 1) \quad \nabla D f(x) = D f(g) \quad \checkmark \quad (6)$$

$$g(x) \xrightarrow{D} (1-x)^2 > 0 \rightarrow 1-x > 0 \rightarrow (1, 1)$$

تابع ها بر هم برابری
 $\checkmark \quad F(x) = g(x) \quad \checkmark$

$$f(x) \xrightarrow{D} x > 0 \quad \nabla D_F = D_g \quad (7)$$

$$g(x) \rightarrow x^3 > 0 \rightarrow x > 0$$

$$f(x) \xrightarrow{D} x > 0 \quad g = \sqrt{x^3} \rightarrow \sqrt{x^2 \cdot x} = |x| \sqrt{x} = x \sqrt{x} \quad \checkmark$$

$$g(x) \xrightarrow{D} x - |x| > 0 \rightarrow x > |x| \rightarrow x > 0 \quad D_F = D_g \quad \checkmark$$

تابع ها بر هم برابری
 $\checkmark$

$$15 \quad \text{الف) } (1, 3) \rightarrow (3) \quad (8)$$

$$\text{ب) } \rightarrow \frac{3+1}{3-3} \quad \text{دن} \quad \checkmark$$

$$\text{ج) } \rightarrow f(\cdot) \times g(\cdot) = 00 \quad \checkmark$$

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$$\text{الف) } g(1) = f\left(\frac{3n-1}{1}\right) \rightarrow (1, 1) \quad g\left(\frac{1}{1}\right) = f(3n-1) \rightarrow (1, 3n-1)$$

$$g(0) = f\left(\frac{3n-1}{-1}\right) \rightarrow (0, 4) \quad g\left(-\frac{1}{1}\right) = f(3n-1) \rightarrow (-1, 3n-1)$$

$$g\left(\frac{1}{1}\right) = f\left(\frac{3n-1}{1}\right) \rightarrow (1, 3n-1) \quad \checkmark$$

MAHAN

Date: _____

Subject: _____

ب) $h(n) = F(|n|) \rightarrow |n| = 0, 2, 3 \rightarrow n = 0, 2, 3, -2$ 1.

$\rightarrow h(n) =$ $h(n) = \{(0, 4), (2, 1), (-2, 1), (3, -1), (-3, -1)\}$

پایان

$$f(n) = \begin{cases} (a+1)(n+1) & ; n > 1 \\ ra + rn & ; n \leq 1 \end{cases}$$

$$rf(n) = f(-r) + a$$

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(1)

$$r[(a+1)(n+1)] = ra + r(-r) + a \rightarrow 1ra + 1r = ra - r \rightarrow 1a = -1n \rightarrow \boxed{a = -1n}$$