

حل المسألة

$$f(a) + f(-1) = a$$

سؤال

$$\left[\begin{array}{l} \omega > 1 \\ \omega < 1 \end{array} \right] \rightarrow \left[\begin{array}{l} \omega a + 1(-1) = \omega a - 1 \\ \omega a + 1(-1) = \omega a - 1 \end{array} \right]$$

$$(a+1)(v) = (a+1)(v) = \sqrt{a+1}$$

$$(va+v) + (v^2a - \varepsilon) = a \quad \log a + v = a$$

$$a = -1 \quad a = -\frac{1}{v}$$

(حل المسألة)

$$f(r + \sqrt{r}) = \frac{(r + \sqrt{r}) + 1}{\sqrt{r + \sqrt{r}}} = \frac{r + \sqrt{r}}{\sqrt{r + \sqrt{r}}}$$

$$\sqrt{r + \sqrt{r}} = \frac{\sqrt{r} + 1}{\sqrt{r}}$$

$$f(r + \sqrt{r}) = \frac{\sqrt{r}(\sqrt{r} + 1)}{\sqrt{r}} = \sqrt{r} \times \sqrt{r} = \sqrt{r}$$

$$\frac{\sqrt{r} + 1}{\sqrt{r}}$$

$$f(r - \sqrt{r}) = \sqrt{r} \rightarrow \sqrt{r} + \sqrt{r} = 2\sqrt{r}$$

دفتر الامتحان

سوال (۳)

$$f(x) - 3f(-x) = (x^2 - 2)^{x^2}$$

$$2f(-x) - 3f(x) = 1(-x)^2 - (-x) = x^2 + x$$

$$4f(x) - 4f(-x) = 4x^2 - 2x$$

$$-4f(x) + 4f(-x) = 4x^2 + 3x$$

$$-8f(x) = 10x^2 + x \rightarrow f(x) = \frac{10x^2 + x}{-8} = -\frac{5}{4}x^2 - \frac{1}{8}x$$

$$f(x+1) \text{ فاندركا ليد } (1)$$

$$[(x+1) - 3x]f(x+1) = (x^2 - m)x + 3m$$

$$\hookrightarrow x = -1$$

$$(-1(-1) + 1)f(0) = f(-1)^2 - m(-1) + 3m - 1$$

$$(1+1)f(0) = 1 + 2m + 3m - 1$$

$$4f(0) = 4m + 1 \rightarrow f(0) = \frac{4m + 1}{4}$$

$$f(x) = ax + b$$

$$f\left(\frac{1}{x}\right) = \frac{a}{x} + b$$

$$(ax+b) + \left(\frac{a}{x} + b\right) = ax + \frac{a}{x} + 1b = \frac{ax^2 + 1bx + a}{x}$$

$$\frac{3x^2 - 12x + 13}{x}$$

$$a = 3: x^2 \text{ مربوب}$$

$$b = -12: x \text{ ضرب}$$

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

$$f(-1) = 3(-1) - 4 = -3 - 4 = -7$$

$$f(x) = (x-1)\sqrt{1-x}, g(x) = -\sqrt{1-x}$$

سوال (4)

$$1-x > 0 \rightarrow x < 1 \rightarrow D_f = (-\infty, 1]$$

$$(1-x)^3 > 0 \rightarrow 1-x > 0 \rightarrow x < 1 \rightarrow D_g = (-\infty, 1)$$

دامنه ما لبر

$$g(x) = -\sqrt{(1-x)^2(1-x)} = -\sqrt{(1-x)^2} \cdot \sqrt{1-x}$$

ریشه ضابطه:

$$\sqrt{(1-x)^2} = |1-x| \rightarrow x < 1$$

$$g(x) = -(1-x)\sqrt{1-x} = (x-1)\sqrt{1-x}$$

در تابع تابع مساوی اند

$$f(x) = x\sqrt{x} \rightarrow x \geq 0 \rightarrow D = [0, +\infty)$$

(سوال ۷)

$$g(x) = \sqrt{x^3} \quad x^3 \geq 0 \quad x \geq 0 \quad D_g = [0, +\infty)$$

دامنه مایل

$$g(x) = \sqrt{x^2 \cdot x} = \sqrt{x^2} \cdot \sqrt{x} = |x| \sqrt{x} \quad x \geq 0$$

$$|x| = x$$

$$g(x) = x\sqrt{x}$$

در تابع هم صدای اند

$$x - |x| \geq 0 \rightarrow x \geq |x| \quad x \geq 0$$

(سوال ۸)

$$D_g = [0, +\infty)$$

دامنه f:

$$x \geq 0$$

$$D_f = [0, +\infty)$$

دامنه مایل

$$x \geq 0 \quad |x| = x$$

بررسی صاف

$$g(x) = \sqrt{x} - x = \sqrt{0} = 0 \quad g(x) = 0$$

$$f(x) = \sqrt{x} - [\sqrt{x}] \quad f(x) = 0$$

کسری شصت درصد

همه دستار

در تابع بررسی



Senobar

سوال ۹

$$\frac{f(1) + g(1)}{f(1) - g(1)} = \frac{2 + 1}{2 - 1} = \frac{3}{1} = 3$$

الف) ۱) $\left(\frac{f+g}{f-g}\right)$

ب) ۲) $\left(\frac{f+g}{f-g}\right)$

$$\frac{f(2) + g(2)}{f(2) - g(2)} = \frac{3 + 3}{3 - 2} = \frac{6}{1} = 6$$

ج) ۳) $(f \cdot g)(-1)$

اگر مستطاد باشد $f(0)g(-1)$

۱- در دافنه و حفیر رندار رس تعریف شد

$$0 \times 1 = 0$$

سوال ۱۰) $g(x) = f(3x-1)$

$$3x - 1 = 3 \quad 3x = 4 \quad x = \frac{4}{3}$$

$$3x - 1 = 2 \quad 3x = 3 \quad x = 1$$

$$3x - 1 = -1 \quad 3x = 0 \quad x = 0$$

$$3x - 1 = 0 \quad 3x = 1 \quad x = \frac{1}{3}$$

$$3x - 1 = -2 \quad 3x = -1 \quad x = -\frac{1}{3}$$

$$g\left(\frac{4}{3}\right) = f(3) \quad g(1) = f(2) \quad g(0) = f(-1) \quad g\left(\frac{1}{3}\right) = f(0) \quad g\left(-\frac{1}{3}\right) = f(-2)$$

$$x = -3 \quad |x| = 3 \rightarrow x = 3$$

ب) $h(x) = f(|x|)$

$$x = -2 \quad |x| = 2 \rightarrow x = 2$$

$$|x| = -1 \quad \text{غیر ممکن}$$

$$|x| = 0 \quad x = 0$$

$$|x| = -2 \quad \text{غیر ممکن}$$

$$h = \{(3, -1), (-3, -1), (2, -1), (-2, -1)\}$$

(a, a)

Genobar