

کتاب و تاج

«بنام خدا»

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آریانیان

$$\frac{x(a+1)}{15a+15} = \frac{15a}{15a+15} - \frac{1}{15a+15} \rightarrow 10a = -11$$

$$a = -\frac{11}{10} \rightarrow -1,1$$

$$\sqrt{2-\sqrt{3}} + \frac{1}{\sqrt{2-\sqrt{3}}} + 2 + \sqrt{2+\sqrt{3}} + \frac{1}{\sqrt{2+\sqrt{3}}} + 2 =$$

$$\frac{1}{\sqrt{2-\sqrt{3}}} \times \frac{\sqrt{2+\sqrt{3}}}{\sqrt{2+\sqrt{3}}} =$$

$$\frac{\sqrt{2+\sqrt{3}}}{\sqrt{(2-\sqrt{3})(2+\sqrt{3})}} =$$

$$\frac{\sqrt{2+\sqrt{3}}}{\sqrt{4-3}} =$$

$$\frac{\sqrt{2+\sqrt{3}}}{1} = \sqrt{2+\sqrt{3}}$$

$$\frac{1}{\sqrt{2+\sqrt{3}}} \times \frac{\sqrt{2-\sqrt{3}}}{\sqrt{2-\sqrt{3}}} =$$

$$\frac{\sqrt{2-\sqrt{3}}}{\sqrt{(2+\sqrt{3})(2-\sqrt{3})}} =$$

$$\frac{\sqrt{2-\sqrt{3}}}{\sqrt{4-3}} =$$

$$\frac{\sqrt{2-\sqrt{3}}}{1} = \sqrt{2-\sqrt{3}}$$

$$2(\sqrt{2-\sqrt{3}} + \sqrt{2+\sqrt{3}}) + 4$$

$$A =$$

$$A^2 = \sqrt{2-\sqrt{3}} + \sqrt{2+\sqrt{3}} + 2\sqrt{(2-\sqrt{3})(2+\sqrt{3})} = 4 \Rightarrow A = \sqrt{4}$$

$$2\sqrt{4} + 4$$

$$1f(x) - 3f(-x) = 5x^2 - 21 \xrightarrow{x^2} 4f(x) - 9f(-x) = 18x^2 - 21$$

$$2f(-x) - 3f(x) = 4x^2 + 21 \xrightarrow{x^2} 4f(-x) - 9f(x) = 12x^2 + 21$$

$$-5f(x) = 20x^2 + 21$$

$$f(x) = -4x^2 - \frac{21}{5}$$

$$(x+2)f(x) - 3xf(x+2) = 5x^2 - mx + 2m - 1$$

$$x=0 \rightarrow 2f(0) = 2m - 1 \xrightarrow{x=0} 10f(0) = 10m - 1$$

$$x=-2 \rightarrow 4f(0) = 10 + 2m + 2m - 1 \xrightarrow{x=-2} \begin{cases} 10f(0) = 10m - 1 \\ 11f(0) = 10m + 4 \end{cases}$$

$$11f(0) = 10m - 1$$

$$f(0) = \frac{10m - 1}{11}$$

$$f(x) + f\left(\frac{1}{x}\right) = \frac{3x^2 - 12x + 1}{x}$$

$$f(-1) + f(-1) = \frac{3+12+1}{-1} \rightarrow 2f(-1) = -16$$

$$f(-1) = -8$$

$$(f(x) = ax+b): ax+b + \frac{a}{x} + b = \frac{3x^2 - 12x + 1}{x} - 16$$

$$-2a + 2b = -16$$

$$-a + b = -8$$

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

$$D_f = 1-x \geq 0$$

$$x \leq 1$$

$$x=0$$

$$f(x) = -1$$

$$g(x) = -1$$

Küresel

$$D_g = (1-x) \geq 0$$

$$x \leq 1$$

$$D_f = x \geq 0$$

$$x=1$$

$$f(x) = 1$$

$$g(x) = 1$$

Küresel

$$D_g = x \geq 0$$

$$D_f = x \geq 0$$

$$f(x) = [A - \{A\}]$$

$$A = \sqrt{x}$$

$$0 \leq f(x) < 1$$

$$\{f(x)\} = 0$$



$$D_g = x \geq 0$$

$$x \geq |x|$$

$$g(x) = 0$$

$$x - |x| \xrightarrow{x \geq 0} 0$$

$$a) \quad \begin{matrix} f(1) = 1 \\ g(1) = 1 \end{matrix} \quad \frac{1+1}{1-1} = 2$$

$$b) \quad \begin{matrix} f(2) = 2 \\ g(2) = 2 \end{matrix}$$

$$\frac{2+2}{2-2} \quad \infty$$

$$c) \quad \begin{matrix} f(0) = 0 \\ g(0) = 1 \end{matrix} \quad 0 \cdot 1 = 0$$

$$a) \quad \begin{matrix} 2x-1=2 \\ x=1 \end{matrix}$$

$$\begin{matrix} 2x-1=-2 \\ x=-\frac{1}{2} \end{matrix}$$

$$b) \quad \begin{matrix} |x|=2 \\ x=\pm 2 \end{matrix}$$

$$|x|=1 \quad x$$

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

$$\begin{matrix} |x|=-2 \quad x \\ |x|=2 \\ x=\pm 2 \end{matrix}$$

$$(2,1), (-2,1), (0,0), (1,1), (-1,1)$$

$$\begin{matrix} 2x-1=0 \\ x=\frac{1}{2} \end{matrix}$$

$$(1,1), (0,0), (\frac{1}{2},0), (\frac{1}{2},2), (\frac{1}{2},-1) = g(x)$$

$$h(x)$$