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موضوع
تاریخ/...../.....
نویسنده: یازدهم سری B

$$f\left(f\left(\frac{p}{q}\right)\right) = ?$$

$$f(x) = \begin{cases} \cot \frac{\pi x}{p} & , x \leq 1 \\ \sqrt{x^2 + 1} & , x > 1 \end{cases} \quad (1)$$

$$f\left(\frac{p}{q}\right) = \cot \frac{\pi \times \frac{p}{q}}{p} = \cot \frac{p}{q} = \frac{1}{q} \pi$$

$$\sqrt{p} > 1$$

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

$$\cot \frac{1}{q} \pi = \frac{\sqrt{3} - 1}{\sqrt{3} + 1}$$

$$f\left(g\left(\frac{p}{q}\right)\right)$$

(الف) (2)

$$f\left(\frac{p}{q}\right) = \cot \frac{\pi}{q} = \frac{1}{p}$$

$$f\left(\frac{1}{p}\right) = \sqrt{\frac{p}{p}} = \frac{\sqrt{p}}{p} \quad (u = p)$$

$$f\left(g(\sqrt{p})\right) = ?$$

(ب)

$$\frac{\sqrt{p}}{1 - \sqrt{p}} \times \frac{1 + \sqrt{p}}{1 + \sqrt{p}} = \frac{\sqrt{p} + p}{1 - p} = -\sqrt{p} - p$$

$$\rightarrow 1, p$$

$$f(-\sqrt{p} - p) = [-p, p] = -p$$

$$p - 1, p$$

موضوع

تاریخ/...../.....

نویسنده: یازدهم دبیرستان

$$g(f(u)) = ?$$

(۳)

$$g\left(f\left(\frac{\pi}{4}\right)\right) = ?$$

(۲)

$$f\left(\frac{\pi}{4}\right) = \sin \frac{\pi}{4} = \frac{\sqrt{2}}{2}$$

$$g(u) = \frac{\sqrt{2}}{2} \sqrt{1 - \left(\frac{\sqrt{2}}{2}\right)^2}$$

$$\frac{\sqrt{2}}{2} \sqrt{1 - \frac{2}{4}} = \frac{\sqrt{2}}{2} \times \frac{\sqrt{2}}{2} = \left(\frac{1}{2}\right)$$

$$f(u) = \{(4, 5), (4, 5), (1, 12), (10, 12)\}$$

(۴)

$$g(u) = \{(4, 4), (1, 4), (4, 1), (1, 10)\}$$

$$f \circ g(u) = \{(4, 5), (4, 5), (1, 12), (4, 12), (1, 0)\}$$

(۵)

$$g \circ f(u) = \{(4, 4), (4, 1), (1, 10)\} \rightarrow \emptyset$$

$$f \circ f(u) = \emptyset$$

$$g \circ g(u) = \{(4, 1), (1, 10)\} \rightarrow \{(4, 1), (1, 4), (4, 10)\}$$

نویسنده: یازدهم دبیر ۵

موضوع:

$$f = f(1, 1)(2, 2)(3, 3)(4, 4)$$

(۵)

تاریخ:/...../.....

$$g = f(1, 2)(2, 1)(3, 4)(4, 3)$$

(۲)

$$(x, y) \in f \circ g \quad f(g(x)) \quad a = x$$

$$(x, y) \in g \circ f \quad g(f(x)) \quad b = y \quad (a, b) = (x, y)$$

$$f(f(x)) = x + 1$$

(۴)

$$g(x + 1) = x - 1 \quad g \circ f(-1) = ?$$

(۲)

$$g(f(-1)) = ?$$

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

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

$$g(-1) = ? \quad x(-1) - 1 = -1$$

$$x + 1 = -1$$

$$x = -2$$

$$f(x) = \sqrt{x + |x|} \rightarrow x = - \rightarrow f(x) = 0$$

$$x \neq 0 \quad f(x) = 0$$

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

$$x > 0 \quad f(x) = \sqrt{x}$$

(۲)

$$f \neq 0 \quad x(x - 1) \rightarrow x \neq 0, 1$$

موضوع: یازدهم دبیر ۵

۵۲

$$x = \sqrt{x} \quad x \neq 1$$

$$D_{g \circ f} = \{ (0, +\infty) - \{1\} \}$$

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$$t = \frac{2n+1}{n-1}$$

$$t(n-1) = 2n+1$$

$$n-1$$

$$t(n-1) = 2n+1$$

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9

$$f(t) = 2n+1$$

$$f(t) = 2 \left(\frac{2t+1}{t-1} \right) + 1 = \frac{4t+3}{t-1}$$

$$k(t-1) = 2t+1$$

$$k = \frac{2t+1}{t-1}$$

$$f(n) = \frac{2n-1}{n-1}$$

→

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

t

$$f(t) = t^2 - 2t$$

نویسند

$$f(n) = 2n - 2$$

پایه

دروس ارسى - لاله كور
 4000000 - 4000000

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$$g(1) = g(\sqrt{1}) = 0$$

1.10

$$g(\sqrt{n}) = 0$$

$$\sqrt{n} = 1 \rightarrow \sqrt{n} = 1 \quad n=1$$

$$\sqrt{n} = \sqrt{1} \rightarrow \sqrt{n} = \sqrt{1} \quad n=1$$

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موضوع تاريخ

اجمالى

$$\sqrt{1} = 1$$