

۱۹ آفرین

صالح صائمی

نام آنگ جان را قدرت آموخت

دوازدهم - تیر
تکلیف شماره ۲۲

$$g'(u) = (2 \tan u (1 + \tan^2 u) - \sqrt{2} \sin u) f'(\tan^2 u + \sqrt{2} \cos u) \rightarrow \textcircled{1}$$

$$g'\left(\frac{\pi}{4}\right) = f'(2) \times (2 \times 2 - 1) = \frac{\sqrt{2}}{2} \checkmark$$

$$f(u) = \frac{(\cos u + 2)(\cos^2 u + 4 - 2 \cos u)}{(2 - \cos u)(\cos u + 2)} = \frac{\cos^2 u - 2 \cos u + 4}{2 - \cos u} \rightarrow f - 2g = \frac{\cos^2 u - 2 \cos u}{2 - \cos u} \textcircled{2}$$

$$= \frac{-\cos u (2 - \cos u)}{2 - \cos u} = -\cos u \rightarrow f'(u) - 2g'(u) = \sin u \rightarrow f'\left(\frac{\pi}{4}\right) - 2g'\left(\frac{\pi}{4}\right) = \sin \frac{\pi}{4} = \frac{1}{\sqrt{2}}$$

$$f(x) \begin{cases} x \rightarrow \frac{\pi}{4}^+ \rightarrow (x - \frac{\pi}{4}) \sqrt{\tan x} \rightarrow f'\left(\frac{\pi}{4}^+\right) = \sqrt{\frac{\tan x}{4}} + (0^+) \frac{1}{\sqrt{\tan x}} \\ x \rightarrow \frac{\pi}{4}^- \rightarrow (-x + \frac{\pi}{4}) \sqrt{\tan x} \rightarrow f'\left(\frac{\pi}{4}^-\right) = -\sqrt{\frac{\tan x}{4}} + (0^-) \frac{1}{\sqrt{\tan x}} \end{cases}$$

$$\rightarrow f'_+\left(\frac{\pi}{4}\right) - f'_-\left(\frac{\pi}{4}\right) = 2\sqrt{2} \times \frac{\sqrt{\tan x}}{4} = \sqrt{2} \times \frac{1}{\sqrt{2}} \rightarrow a = \frac{1}{2}$$

$$\begin{cases} f(\frac{\pi}{4}) = 2 - \sqrt{2} \\ f'(\frac{\pi}{4}) = -a \end{cases} \Rightarrow 2 - \sqrt{2} - a = -1 \rightarrow a = \frac{3}{2} \Rightarrow f'(\frac{\pi}{4}) = -\frac{3}{2}$$

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$$\frac{1}{n} \ln$$

9

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1

← لیسٹ = -1

$$\frac{a_n - 1}{r_{n+1}} = \frac{n}{V} + \frac{a}{V} \rightarrow Van - V = r_n^r + n + 10n + a$$

a

$$r_n^r + n(14 - Va) + 12 = 0 \xrightarrow{\Delta z = 0} (14 - Va)^r - 12^r = (14 - Va - 12)(14 - Va + 12)$$

$$a = \frac{f}{V}$$

$$a = f$$

$$a = f \rightarrow r_n^r - 12n + 12 \rightarrow n = 2 \checkmark$$

$$a = \frac{f}{V} \rightarrow r_n^r + 12n + 12 \rightarrow n = -2 \text{ x جاكول}$$