نام و نام خانوادگی .... پاسخنامه تشریحی تکلیف شماره .... کلاس ....

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$(f(u))' = u' f'(u)$

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$\frac{8+\cos^3 x}{4-\cos^2 x}$ — $\frac{4(2+\cos x)}{2\cos x(2+\cos x)}$

$(f-2g)' = \left(\frac{\cos^3 - 4\cos x}{4-\cos^2 x}\right)' = \frac{\cos(\cos^2 - 4)}{4-\cos^2 x} = -(\cos x)'$

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$3/4$

$(-4x+3)\sqrt{ax} \mid (4x-3)\sqrt{ax} \to -4\sqrt{ax} + \frac{a(-4x+3)}{2\sqrt{ax}}$

$= 8\sqrt{\frac{3a}{4}} = 2\sqrt{6} \to a = 1/2$

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$y = -ax+2$

شیب $(y) = -a$

مقدار $(y) = -4a+2$

$f'(4) = -a = \frac{-3}{5}$

$\to -a - 4a + 2 = -1 \to -5a = -3$

$\to a = \frac{3}{5}$

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$y = \frac{1}{7}x + \frac{5}{7} \Rightarrow y' = \frac{1}{7}$

$\frac{a+3}{(3x+1)^2} = \frac{1}{7} \to 7a+21 = (3x+1)^2$

$\frac{ax-1}{3x+1} = \frac{1}{7}x + 5$

$\frac{3}{7}x^2 + \frac{1}{7}x + 15x + 5 = ax - 1$

$f(x)=0 \quad 8-24-b=0 \rightarrow b=-16$

$f'(x)=0 \rightarrow 3x^2+a=0 \rightarrow 12+a=-12$

$-16+12=-4 \qquad a=-12$

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$f'(x)=2x\cos x^2 \sin^{n-1}(x^2)$

$\lim_{x\to 0} \frac{\sin^n(x^2)\times 2x\cos x^2 \sin^{n-1}(x^2)}{(1-\cos x)^m} \rightarrow \frac{0}{0}$

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$f(x)=\frac{x+1}{x-1} \rightarrow yx-y=x+1 \rightarrow x(y-1)=y+1$

$\rightarrow \sqrt{x}=\frac{y+1}{y-1} \rightarrow y=\left(\frac{x+1}{x-1}\right)^2=\frac{(x+1)^2}{(x-1)^2}$

$y'=\frac{2(x+1)(x-1)^2-2(x-1)(x+1)^2}{(x-1)^4} \xrightarrow{x=2} \frac{2\times 2\times 1-2\times 1\times 9}{1} = 8-18=-10$

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آنتی مشتق: $\frac{f(b)-f(a)}{b-a}=8(-a+1)-1=11 \rightarrow a=-1/2$

$\rightarrow x=1$

$f'(x)=4(2x)(x^2+1)^3\times(-1/2+1)+-1/2(x^2+1)^4$

$\rightarrow f'(1)=4-5=-1$

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$\frac{f(b)-f(a)}{b-a}$ آنتی مشتق $\rightarrow \frac{\sin\frac{\pi}{2}\cos\pi-\sin\frac{\pi}{4}\cos\frac{\pi}{2}}{\frac{\pi}{2}-\frac{\pi}{4}}=\frac{-1}{\frac{\pi}{4}}$

$\sin^4 x-\cos^4 x=1\times\sin^2 x-\cos^2 x \rightarrow \frac{-4}{\pi}$

$=-\cos 2x$

$-\frac{\cos\frac{2\pi}{2}-\cos\frac{\pi}{2}}{\frac{\pi}{2}-\frac{\pi}{4}}=\frac{1}{\frac{\pi}{4}}=\frac{4}{\pi}$ شیب $\rightarrow -1$:

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