Calculus ex04 **Apr. 24 2019**

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Question 1 Find the derivative $f'(x)$ of $f(x) = \left(-3\,x^2 - 5\right)^8$.

○ $-24\,x\,\left(-3\,x^2-5\right)^7$ ○ $48\,x\,\left(-3\,x^2-5\right)^7$ ○ $8\,\left(-3\,x^2-5\right)^7$
○ $24\,x\,\left(-3\,x^2-5\right)^7$ ● $-48\,x\,\left(-3\,x^2-5\right)^7$

Question 2 Find the derivative $f'(x)$ of $f(x) = \sqrt{x^2-1}$.

○ 1 ● $\frac{x}{\sqrt{x^2-1}}$ ○ $\sqrt{2x}$ ○ $\frac{2\,x}{\sqrt{x^2-1}}$ ○ $-\frac{2\,x}{\sqrt{x^2-1}}$

Question 3 Find the derivative $f'(x)$ of $f(x) = \sin\left(9\,x-6\right)$.

● $9\,\cos\left(9\,x-6\right)$ ○ $-9\,\cos\left(9\,x-6\right)$ ○ $-18\,\cos\left(9\,x-6\right)$ ○ $\cos\left(9\,x-6\right)$
○ $18\,\cos\left(9\,x-6\right)$

Question 4 Find the derivative $f'(x)$ of $f(x) = \tan\left(5\,x+4\right)$.

○ $-\frac{5}{\cos^2(5\,x+4)}$ ● $\frac{5}{\cos^2(5\,x+4)}$ ○ $\frac{10}{\cos^2(5\,x+4)}$ ○ $\frac{1}{\cos^2(5\,x+4)}$
○ $-\frac{10}{\cos^2(5\,x+4)}$

Question 5 Find the derivative $f'(x)$ of $f(x) = \cos\left(8\,x\right)\sin\left(2\,x\right)$.

○ $-16\,\cos\left(2\,x\right)\sin\left(8\,x\right)$
● $2\,\cos\left(8\,x\right)\cos\left(2\,x\right) - 8\,\sin\left(8\,x\right)\sin\left(2\,x\right)$
○ $2\,\cos\left(8\,x\right)\cos\left(2\,x\right) + 8\,\sin\left(8\,x\right)\sin\left(2\,x\right)$
○ $16\,\cos\left(2\,x\right)\sin\left(8\,x\right)$
○ $-2\,\cos\left(8\,x\right)\cos\left(2\,x\right) - 8\,\sin\left(8\,x\right)\sin\left(2\,x\right)$

Question 6 Find the derivative $f'(x)$ of $f(x) = e^{(2\,x+9)}$.

○ $e^{(2\,x+9)}$ ○ $(2\,x+9)e^{(2\,x+8)}$ ● $2\,e^{(2\,x+9)}$ ○ $(2\,x+9)e^{(2\,x+9)}$

Question 7 Find the derivative $f'(x)$ of $f(x) = \log\left(4\,x+7\right)$.

○ $\frac{1}{4\,x+7}$ ● $\frac{4}{4\,x+7}$ ○ $\log\left(4\,x+7\right)$ ○ $\left(4\,x+7\right)\log\left(4\,x+6\right)$

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Question 1 Find the derivative $f'(x)$ of $f(x) = \left(8 - 4\,x^2\right)^5$.

○ $40\,x\,\left(8 - 4\,x^2\right)^4$ ○ $5\,\left(8 - 4\,x^2\right)^4$ ● $-40\,x\,\left(8 - 4\,x^2\right)^4$
○ $-20\,x\,\left(8 - 4\,x^2\right)^4$ ○ $20\,x\,\left(8 - 4\,x^2\right)^4$

Question 2 Find the derivative $f'(x)$ of $f(x) = \sqrt{x^2 + 1}$.

● $\frac{x}{\sqrt{x^2+1}}$ ○ $\frac{2\,x}{\sqrt{x^2+1}}$ ○ $-\frac{2\,x}{\sqrt{x^2+1}}$ ○ $\sqrt{2x}$ ○ 1

Question 3 Find the derivative $f'(x)$ of $f(x) = \cos\left(2\,x - 8\right)$.

○ $-\sin\left(2\,x - 8\right)$ ● $-2\,\sin\left(2\,x - 8\right)$ ○ $-4\,\sin\left(2\,x - 8\right)$ ○ $2\,\sin\left(2\,x - 8\right)$
○ $4\,\sin\left(2\,x - 8\right)$

Question 4 Find the derivative $f'(x)$ of $f(x) = \tan\left(5\,x + 9\right)$.

● $\frac{5}{\cos^2(5\,x+9)}$ ○ $-\frac{10}{\cos^2(5\,x+9)}$ ○ $-\frac{5}{\cos^2(5\,x+9)}$ ○ $\frac{1}{\cos^2(5\,x+9)}$
○ $\frac{10}{\cos^2(5\,x+9)}$

Question 5 Find the derivative $f'(x)$ of $f(x) = \cos\left(7\,x\right)\sin\left(3\,x\right)$.

○ $-3\,\cos\left(7\,x\right)\cos\left(3\,x\right) - 7\,\sin\left(7\,x\right)\sin\left(3\,x\right)$
○ $3\,\cos\left(7\,x\right)\cos\left(3\,x\right) + 7\,\sin\left(7\,x\right)\sin\left(3\,x\right)$
○ $-21\,\cos\left(3\,x\right)\sin\left(7\,x\right)$
○ $21\,\cos\left(3\,x\right)\sin\left(7\,x\right)$
● $3\,\cos\left(7\,x\right)\cos\left(3\,x\right) - 7\,\sin\left(7\,x\right)\sin\left(3\,x\right)$

Question 6 Find the derivative $f'(x)$ of $f(x) = e^{(3\,x+4)}$.

○ $e^{(3\,x+4)}$ ○ $(3\,x+4)e^{(3\,x+3)}$ ○ $(3\,x+4)e^{(3\,x+4)}$ ● $3\,e^{(3\,x+4)}$

Question 7 Find the derivative $f'(x)$ of $f(x) = \log\left(2\,x + 6\right)$.

● $\frac{1}{x+3}$ ○ $\log\left(2\,x+6\right)$ ○ $2\,(x+3)\log\left(2\,x+5\right)$ ○ $\frac{1}{2\,(x+3)}$

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Question 1 Find the derivative $f'(x)$ of $f(x) = \left(-2\,x^2 - 7\right)^6$.

● $-24\,x\,\left(-2\,x^2 - 7\right)^5$ ○ $24\,x\,\left(-2\,x^2 - 7\right)^5$ ○ $6\,\left(-2\,x^2 - 7\right)^5$
○ $12\,x\,\left(-2\,x^2 - 7\right)^5$ ○ $-12\,x\,\left(-2\,x^2 - 7\right)^5$

Question 2 Find the derivative $f'(x)$ of $f(x) = \sqrt{x^2 - 1}$.

○ $\sqrt{2x}$ ○ $\frac{2\,x}{\sqrt{x^2-1}}$ ○ $-\frac{2\,x}{\sqrt{x^2-1}}$ ○ 1 ● $\frac{x}{\sqrt{x^2-1}}$

Question 3 Find the derivative $f'(x)$ of $f(x) = \sin\left(9\,x - 3\right)$.

○ $-9\,\cos\left(9\,x - 3\right)$ ○ $\cos\left(9\,x - 3\right)$ ○ $-18\,\cos\left(9\,x - 3\right)$ ○ $18\,\cos\left(9\,x - 3\right)$
● $9\,\cos\left(9\,x - 3\right)$

Question 4 Find the derivative $f'(x)$ of $f(x) = \tan\left(4\,x + 2\right)$.

○ $-\frac{4}{\cos^2(4\,x+2)}$ ○ $\frac{1}{\cos^2(4\,x+2)}$ ○ $\frac{8}{\cos^2(4\,x+2)}$ ○ $-\frac{8}{\cos^2(4\,x+2)}$
● $\frac{4}{\cos^2(4\,x+2)}$

Question 5 Find the derivative $f'(x)$ of $f(x) = \cos\left(9\,x\right)\sin\left(3\,x\right)$.

○ $-3\,\cos\left(9\,x\right)\cos\left(3\,x\right) - 9\,\sin\left(9\,x\right)\sin\left(3\,x\right)$
○ $3\,\cos\left(9\,x\right)\cos\left(3\,x\right) + 9\,\sin\left(9\,x\right)\sin\left(3\,x\right)$
○ $27\,\cos\left(3\,x\right)\sin\left(9\,x\right)$
● $3\,\cos\left(9\,x\right)\cos\left(3\,x\right) - 9\,\sin\left(9\,x\right)\sin\left(3\,x\right)$
○ $-27\,\cos\left(3\,x\right)\sin\left(9\,x\right)$

Question 6 Find the derivative $f'(x)$ of $f(x) = e^{(5\,x+2)}$.

○ $e^{(5\,x+2)}$ ○ $(5\,x+2)e^{(5\,x+1)}$ ○ $(5\,x+2)e^{(5\,x+2)}$ ● $5\,e^{(5\,x+2)}$

Question 7 Find the derivative $f'(x)$ of $f(x) = \log\left(2\,x + 7\right)$.

○ $\log\left(2\,x + 7\right)$ ○ $\left(2\,x + 7\right)\log\left(2\,x + 6\right)$ ○ $\frac{1}{2\,x+7}$ ● $\frac{2}{2\,x+7}$

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Question 1 Find the derivative $f'(x)$ of $f(x) = \left(-2\,x^2 - 9\right)^2$.

○ $2\,\left(-2\,x^2 - 9\right)$ ○ $-4\,x\,\left(-2\,x^2 - 9\right)$ ○ $8\,x\,\left(-2\,x^2 - 9\right)$
● $-8\,x\,\left(-2\,x^2 - 9\right)$ ○ $4\,x\,\left(-2\,x^2 - 9\right)$

Question 2 Find the derivative $f'(x)$ of $f(x) = \sqrt{x^2 + 1}$.

● $\frac{x}{\sqrt{x^2+1}}$ ○ 1 ○ $-\frac{2\,x}{\sqrt{x^2+1}}$ ○ $\frac{2\,x}{\sqrt{x^2+1}}$ ○ $\sqrt{2x}$

Question 3 Find the derivative $f'(x)$ of $f(x) = \cos\left(9\,x + 9\right)$.

○ $-18\,\sin\left(9\,x + 9\right)$ ○ $18\,\sin\left(9\,x + 9\right)$ ○ $-\sin\left(9\,x + 9\right)$
● $-9\,\sin\left(9\,x + 9\right)$ ○ $9\,\sin\left(9\,x + 9\right)$

Question 4 Find the derivative $f'(x)$ of $f(x) = \tan\left(4\,x + 4\right)$.

○ $-\frac{8}{\cos^2(4\,x+4)}$ ○ $\frac{1}{\cos^2(4\,x+4)}$ ○ $\frac{8}{\cos^2(4\,x+4)}$ ○ $-\frac{4}{\cos^2(4\,x+4)}$
● $\frac{4}{\cos^2(4\,x+4)}$

Question 5 Find the derivative $f'(x)$ of $f(x) = \cos\left(8\,x\right)\sin\left(3\,x\right)$.

○ $3\,\cos\left(8\,x\right)\cos\left(3\,x\right) + 8\,\sin\left(8\,x\right)\sin\left(3\,x\right)$
○ $-3\,\cos\left(8\,x\right)\cos\left(3\,x\right) - 8\,\sin\left(8\,x\right)\sin\left(3\,x\right)$
○ $-24\,\cos\left(3\,x\right)\sin\left(8\,x\right)$
○ $24\,\cos\left(3\,x\right)\sin\left(8\,x\right)$
● $3\,\cos\left(8\,x\right)\cos\left(3\,x\right) - 8\,\sin\left(8\,x\right)\sin\left(3\,x\right)$

Question 6 Find the derivative $f'(x)$ of $f(x) = e^{(2\,x+2)}$.

○ $e^{(2\,x+2)}$ ○ $2\,(x+1)e^{(2\,x+1)}$ ○ $2\,(x+1)e^{(2\,x+2)}$ ● $2\,e^{(2\,x+2)}$

Question 7 Find the derivative $f'(x)$ of $f(x) = \log\left(4\,x + 9\right)$.

○ $\log\left(4\,x + 9\right)$ ○ $\left(4\,x + 9\right)\log\left(4\,x + 8\right)$ ○ $\frac{1}{4\,x+9}$ ● $\frac{4}{4\,x+9}$

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Question 1 Find the derivative $f'(x)$ of $f(x) = \left(-2\,x^2 - 8\right)^2$.

○ $8\,x\,\left(-2\,x^2 - 8\right)$ ○ $2\,\left(-2\,x^2 - 8\right)$ ● $-8\,x\,\left(-2\,x^2 - 8\right)$
○ $4\,x\,\left(-2\,x^2 - 8\right)$ ○ $-4\,x\,\left(-2\,x^2 - 8\right)$

Question 2 Find the derivative $f'(x)$ of $f(x) = \sqrt{x^2 + 1}$.

○ $-\frac{2\,x}{\sqrt{x^2+1}}$ ○ $\sqrt{2x}$ ● $\frac{x}{\sqrt{x^2+1}}$ ○ $\frac{2\,x}{\sqrt{x^2+1}}$ ○ 1

Question 3 Find the derivative $f'(x)$ of $f(x) = \cos\left(3\,x + 2\right)$.

○ $3\,\sin\left(3\,x + 2\right)$ ○ $-6\,\sin\left(3\,x + 2\right)$ ○ $6\,\sin\left(3\,x + 2\right)$ ○ $-\sin\left(3\,x + 2\right)$
● $-3\,\sin\left(3\,x + 2\right)$

Question 4 Find the derivative $f'(x)$ of $f(x) = \tan\left(9\,x + 8\right)$.

○ $-\frac{18}{\cos^2(9\,x+8)}$ ○ $\frac{1}{\cos^2(9\,x+8)}$ ● $\frac{9}{\cos^2(9\,x+8)}$ ○ $-\frac{9}{\cos^2(9\,x+8)}$
○ $\frac{18}{\cos^2(9\,x+8)}$

Question 5 Find the derivative $f'(x)$ of $f(x) = \cos\left(9\,x\right)\sin\left(x\right)$.

○ $-\cos\left(9\,x\right)\cos\left(x\right) - 9\,\sin\left(9\,x\right)\sin\left(x\right)$
○ $-9\,\cos\left(x\right)\sin\left(9\,x\right)$
○ $\cos\left(9\,x\right)\cos\left(x\right) + 9\,\sin\left(9\,x\right)\sin\left(x\right)$
● $\cos\left(9\,x\right)\cos\left(x\right) - 9\,\sin\left(9\,x\right)\sin\left(x\right)$
○ $9\,\cos\left(x\right)\sin\left(9\,x\right)$

Question 6 Find the derivative $f'(x)$ of $f(x) = e^{(2\,x+4)}$.

○ $2\,(x+2)e^{(2\,x+4)}$ ○ $2\,(x+2)e^{(2\,x+3)}$ ○ $e^{(2\,x+4)}$ ● $2\,e^{(2\,x+4)}$

Question 7 Find the derivative $f'(x)$ of $f(x) = \log\left(4\,x + 7\right)$.

○ $(4\,x+7)\log\left(4\,x+6\right)$ ● $\frac{4}{4\,x+7}$ ○ $\log\left(4\,x+7\right)$ ○ $\frac{1}{4\,x+7}$

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Question 1 Find the derivative $f'(x)$ of $f(x) = \left(-3\,x^2 - 7\right)^5$.

○ $5\,\left(-3\,x^2 - 7\right)^4$ ○ $15\,x\,\left(-3\,x^2 - 7\right)^4$ ○ $30\,x\,\left(-3\,x^2 - 7\right)^4$
● $-30\,x\,\left(-3\,x^2 - 7\right)^4$ ○ $-15\,x\,\left(-3\,x^2 - 7\right)^4$

Question 2 Find the derivative $f'(x)$ of $f(x) = \sqrt{x^2 - 1}$.

● $\frac{x}{\sqrt{x^2-1}}$ ○ $\frac{2\,x}{\sqrt{x^2-1}}$ ○ $\sqrt{2x}$ ○ $-\frac{2\,x}{\sqrt{x^2-1}}$ ○ 1

Question 3 Find the derivative $f'(x)$ of $f(x) = \sin\left(7\,x + 4\right)$.

● $7\,\cos\left(7\,x + 4\right)$ ○ $-14\,\cos\left(7\,x + 4\right)$ ○ $-7\,\cos\left(7\,x + 4\right)$
○ $14\,\cos\left(7\,x + 4\right)$ ○ $\cos\left(7\,x + 4\right)$

Question 4 Find the derivative $f'(x)$ of $f(x) = \tan\left(4\,x + 5\right)$.

○ $\frac{8}{\cos^2(4\,x+5)}$ ○ $\frac{1}{\cos^2(4\,x+5)}$ ● $\frac{4}{\cos^2(4\,x+5)}$ ○ $-\frac{8}{\cos^2(4\,x+5)}$
○ $-\frac{4}{\cos^2(4\,x+5)}$

Question 5 Find the derivative $f'(x)$ of $f(x) = \cos\left(7\,x\right)\sin\left(x\right)$.

● $\cos\left(7\,x\right)\cos\left(x\right) - 7\,\sin\left(7\,x\right)\sin\left(x\right)$
○ $\cos\left(7\,x\right)\cos\left(x\right) + 7\,\sin\left(7\,x\right)\sin\left(x\right)$
○ $-\cos\left(7\,x\right)\cos\left(x\right) - 7\,\sin\left(7\,x\right)\sin\left(x\right)$
○ $-7\,\cos\left(x\right)\sin\left(7\,x\right)$
○ $7\,\cos\left(x\right)\sin\left(7\,x\right)$

Question 6 Find the derivative $f'(x)$ of $f(x) = e^{(5\,x+4)}$.

○ $(5\,x + 4)e^{(5\,x+4)}$ ○ $(5\,x + 4)e^{(5\,x+3)}$ ○ $e^{(5\,x+4)}$ ● $5\,e^{(5\,x+4)}$

Question 7 Find the derivative $f'(x)$ of $f(x) = \log\left(3\,x + 9\right)$.

○ $\frac{1}{3\,(x+3)}$ ○ $3\,(x + 3)\log\left(3\,x + 8\right)$ ○ $\log\left(3\,x + 9\right)$ ● $\frac{1}{x+3}$

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○9 ○9 ○9 ○9 ○9 ○9 ○9 ○9

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Question 1 Find the derivative $f'(x)$ of $f(x) = \left(-3\,x^2 - 6\right)^6$.

○ $36\,x\,\left(-3\,x^2 - 6\right)^5$ ○ $-18\,x\,\left(-3\,x^2 - 6\right)^5$ ● $-36\,x\,\left(-3\,x^2 - 6\right)^5$
○ $6\,\left(-3\,x^2 - 6\right)^5$ ○ $18\,x\,\left(-3\,x^2 - 6\right)^5$

Question 2 Find the derivative $f'(x)$ of $f(x) = \sqrt{x^2 + 1}$.

● $\frac{x}{\sqrt{x^2+1}}$ ○ 1 ○ $\frac{2\,x}{\sqrt{x^2+1}}$ ○ $\sqrt{2x}$ ○ $-\frac{2\,x}{\sqrt{x^2+1}}$

Question 3 Find the derivative $f'(x)$ of $f(x) = \cos\left(5\,x + 8\right)$.

○ $-\sin\left(5\,x + 8\right)$ ○ $5\,\sin\left(5\,x + 8\right)$ ○ $10\,\sin\left(5\,x + 8\right)$ ● $-5\,\sin\left(5\,x + 8\right)$
○ $-10\,\sin\left(5\,x + 8\right)$

Question 4 Find the derivative $f'(x)$ of $f(x) = \tan\left(8\,x - 9\right)$.

○ $-\frac{16}{\cos^2(8\,x-9)}$ ○ $-\frac{8}{\cos^2(8\,x-9)}$ ● $\frac{8}{\cos^2(8\,x-9)}$ ○ $\frac{1}{\cos^2(8\,x-9)}$
○ $\frac{16}{\cos^2(8\,x-9)}$

Question 5 Find the derivative $f'(x)$ of $f(x) = \cos\left(6\,x\right)\sin\left(2\,x\right)$.

○ $-12\,\cos\left(2\,x\right)\sin\left(6\,x\right)$
○ $2\,\cos\left(6\,x\right)\cos\left(2\,x\right) + 6\,\sin\left(6\,x\right)\sin\left(2\,x\right)$
● $2\,\cos\left(6\,x\right)\cos\left(2\,x\right) - 6\,\sin\left(6\,x\right)\sin\left(2\,x\right)$
○ $12\,\cos\left(2\,x\right)\sin\left(6\,x\right)$
○ $-2\,\cos\left(6\,x\right)\cos\left(2\,x\right) - 6\,\sin\left(6\,x\right)\sin\left(2\,x\right)$

Question 6 Find the derivative $f'(x)$ of $f(x) = e^{(3\,x+7)}$.

○ $(3\,x + 7)e^{(3\,x+7)}$ ○ $(3\,x + 7)e^{(3\,x+6)}$ ● $3\,e^{(3\,x+7)}$ ○ $e^{(3\,x+7)}$

Question 7 Find the derivative $f'(x)$ of $f(x) = \log\left(2\,x + 7\right)$.

○ $\frac{1}{2\,x+7}$ ● $\frac{2}{2\,x+7}$ ○ $(2\,x + 7)\log\left(2\,x + 6\right)$ ○ $\log\left(2\,x + 7\right)$

+8/1/53+

Calculus ex04 **Apr. 24 2019**

○0 ○0 ○0 ○0 ○0 ○0 ○0 ○0
○1 ○1 ○1 ○1 ○1 ○1 ○1 ○1
○2 ○2 ○2 ○2 ○2 ○2 ○2 ○2
○3 ○3 ○3 ○3 ○3 ○3 ○3 ○3
○4 ○4 ○4 ○4 ○4 ○4 ○4 ○4
○5 ○5 ○5 ○5 ○5 ○5 ○5 ○5
○6 ○6 ○6 ○6 ○6 ○6 ○6 ○6
○7 ○7 ○7 ○7 ○7 ○7 ○7 ○7
○8 ○8 ○8 ○8 ○8 ○8 ○8 ○8
○9 ○9 ○9 ○9 ○9 ○9 ○9 ○9

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Question 1 Find the derivative $f'(x)$ of $f(x) = \left(-3\,x^2 - 6\right)^7$.

○ $-21\,x\,\left(-3\,x^2-6\right)^6$ ● $-42\,x\,\left(-3\,x^2-6\right)^6$ ○ $21\,x\,\left(-3\,x^2-6\right)^6$
○ $7\,\left(-3\,x^2-6\right)^6$ ○ $42\,x\,\left(-3\,x^2-6\right)^6$

Question 2 Find the derivative $f'(x)$ of $f(x) = \sqrt{x^2-1}$.

○ 1 ○ $-\frac{2\,x}{\sqrt{x^2-1}}$ ● $\frac{x}{\sqrt{x^2-1}}$ ○ $\sqrt{2x}$ ○ $\frac{2\,x}{\sqrt{x^2-1}}$

Question 3 Find the derivative $f'(x)$ of $f(x) = \cos\left(3\,x-8\right)$.

○ $-\sin\left(3\,x-8\right)$ ● $-3\,\sin\left(3\,x-8\right)$ ○ $-6\,\sin\left(3\,x-8\right)$ ○ $3\,\sin\left(3\,x-8\right)$
○ $6\,\sin\left(3\,x-8\right)$

Question 4 Find the derivative $f'(x)$ of $f(x) = \tan\left(6\,x+3\right)$.

○ $-\frac{12}{\cos^2(6\,x+3)}$ ○ $\frac{1}{\cos^2(6\,x+3)}$ ○ $\frac{12}{\cos^2(6\,x+3)}$ ● $\frac{6}{\cos^2(6\,x+3)}$
○ $-\frac{6}{\cos^2(6\,x+3)}$

Question 5 Find the derivative $f'(x)$ of $f(x) = \cos\left(8\,x\right)\sin\left(2\,x\right)$.

● $2\,\cos\left(8\,x\right)\cos\left(2\,x\right) - 8\,\sin\left(8\,x\right)\sin\left(2\,x\right)$
○ $-2\,\cos\left(8\,x\right)\cos\left(2\,x\right) - 8\,\sin\left(8\,x\right)\sin\left(2\,x\right)$
○ $-16\,\cos\left(2\,x\right)\sin\left(8\,x\right)$
○ $2\,\cos\left(8\,x\right)\cos\left(2\,x\right) + 8\,\sin\left(8\,x\right)\sin\left(2\,x\right)$
○ $16\,\cos\left(2\,x\right)\sin\left(8\,x\right)$

Question 6 Find the derivative $f'(x)$ of $f(x) = e^{(3\,x+2)}$.

● $3\,e^{(3\,x+2)}$ ○ $e^{(3\,x+2)}$ ○ $(3\,x+2)e^{(3\,x+1)}$ ○ $(3\,x+2)e^{(3\,x+2)}$

Question 7 Find the derivative $f'(x)$ of $f(x) = \log\left(2\,x+9\right)$.

○ $\log\left(2\,x+9\right)$ ○ $\frac{1}{2\,x+9}$ ● $\frac{2}{2\,x+9}$ ○ $\left(2\,x+9\right)\log\left(2\,x+8\right)$

Calculus ex04 **Apr. 24 2019**

○0 ○0 ○0 ○0 ○0 ○0 ○0 ○0
○1 ○1 ○1 ○1 ○1 ○1 ○1 ○1
○2 ○2 ○2 ○2 ○2 ○2 ○2 ○2
○3 ○3 ○3 ○3 ○3 ○3 ○3 ○3
○4 ○4 ○4 ○4 ○4 ○4 ○4 ○4
○5 ○5 ○5 ○5 ○5 ○5 ○5 ○5
○6 ○6 ○6 ○6 ○6 ○6 ○6 ○6
○7 ○7 ○7 ○7 ○7 ○7 ○7 ○7
○8 ○8 ○8 ○8 ○8 ○8 ○8 ○8
○9 ○9 ○9 ○9 ○9 ○9 ○9 ○9

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Question 1 Find the derivative $f'(x)$ of $f(x) = \left(-3\,x^2 - 5\right)^4$.

○ $4\,\left(-3\,x^2 - 5\right)^3$ ○ $24\,x\,\left(-3\,x^2 - 5\right)^3$ ○ $-12\,x\,\left(-3\,x^2 - 5\right)^3$
● $-24\,x\,\left(-3\,x^2 - 5\right)^3$ ○ $12\,x\,\left(-3\,x^2 - 5\right)^3$

Question 2 Find the derivative $f'(x)$ of $f(x) = \sqrt{x^2 - 1}$.

○ $\frac{2\,x}{\sqrt{x^2-1}}$ ● $\frac{x}{\sqrt{x^2-1}}$ ○ 1 ○ $-\frac{2\,x}{\sqrt{x^2-1}}$ ○ $\sqrt{2x}$

Question 3 Find the derivative $f'(x)$ of $f(x) = \sin\left(4\,x - 7\right)$.

○ $-8\,\cos\left(4\,x - 7\right)$ ○ $\cos\left(4\,x - 7\right)$ ○ $8\,\cos\left(4\,x - 7\right)$ ○ $-4\,\cos\left(4\,x - 7\right)$
● $4\,\cos\left(4\,x - 7\right)$

Question 4 Find the derivative $f'(x)$ of $f(x) = \tan\left(2\,x - 8\right)$.

○ $\frac{1}{\cos^2(2\,x-8)}$ ○ $\frac{4}{\cos^2(2\,x-8)}$ ● $\frac{2}{\cos^2(2\,x-8)}$ ○ $-\frac{4}{\cos^2(2\,x-8)}$
○ $-\frac{2}{\cos^2(2\,x-8)}$

Question 5 Find the derivative $f'(x)$ of $f(x) = \cos\left(5\,x\right)\sin\left(2\,x\right)$.

○ $10\,\cos\left(2\,x\right)\sin\left(5\,x\right)$
○ $-10\,\cos\left(2\,x\right)\sin\left(5\,x\right)$
○ $2\,\cos\left(5\,x\right)\cos\left(2\,x\right) + 5\,\sin\left(5\,x\right)\sin\left(2\,x\right)$
● $2\,\cos\left(5\,x\right)\cos\left(2\,x\right) - 5\,\sin\left(5\,x\right)\sin\left(2\,x\right)$
○ $-2\,\cos\left(5\,x\right)\cos\left(2\,x\right) - 5\,\sin\left(5\,x\right)\sin\left(2\,x\right)$

Question 6 Find the derivative $f'(x)$ of $f(x) = e^{(5\,x+2)}$.

○ $(5\,x + 2)e^{(5\,x+2)}$ ● $5\,e^{(5\,x+2)}$ ○ $(5\,x + 2)e^{(5\,x+1)}$ ○ $e^{(5\,x+2)}$

Question 7 Find the derivative $f'(x)$ of $f(x) = \log\left(5\,x + 8\right)$.

● $\frac{5}{5\,x+8}$ ○ $\log\left(5\,x + 8\right)$ ○ $\frac{1}{5\,x+8}$ ○ $\left(5\,x + 8\right)\log\left(5\,x + 7\right)$

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Calculus ex04 **Apr. 24 2019**

○0 ○0 ○0 ○0 ○0 ○0 ○0 ○0
○1 ○1 ○1 ○1 ○1 ○1 ○1 ○1
○2 ○2 ○2 ○2 ○2 ○2 ○2 ○2
○3 ○3 ○3 ○3 ○3 ○3 ○3 ○3
○4 ○4 ○4 ○4 ○4 ○4 ○4 ○4
○5 ○5 ○5 ○5 ○5 ○5 ○5 ○5
○6 ○6 ○6 ○6 ○6 ○6 ○6 ○6
○7 ○7 ○7 ○7 ○7 ○7 ○7 ○7
○8 ○8 ○8 ○8 ○8 ○8 ○8 ○8
○9 ○9 ○9 ○9 ○9 ○9 ○9 ○9

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Question 1 Find the derivative $f'(x)$ of $f(x) = \left(8 - 2\,x^2\right)^4$.

○ $16\,x\,\left(8 - 2\,x^2\right)^3$ ○ $-8\,x\,\left(8 - 2\,x^2\right)^3$ ○ $4\,\left(8 - 2\,x^2\right)^3$
● $-16\,x\,\left(8 - 2\,x^2\right)^3$ ○ $8\,x\,\left(8 - 2\,x^2\right)^3$

Question 2 Find the derivative $f'(x)$ of $f(x) = \sqrt{x^2 + 1}$.

● $\frac{x}{\sqrt{x^2+1}}$ ○ $\sqrt{2x}$ ○ 1 ○ $-\frac{2\,x}{\sqrt{x^2+1}}$ ○ $\frac{2\,x}{\sqrt{x^2+1}}$

Question 3 Find the derivative $f'(x)$ of $f(x) = \cos\left(5\,x + 2\right)$.

○ $10\,\sin\left(5\,x + 2\right)$ ○ $-\sin\left(5\,x + 2\right)$ ● $-5\,\sin\left(5\,x + 2\right)$
○ $-10\,\sin\left(5\,x + 2\right)$ ○ $5\,\sin\left(5\,x + 2\right)$

Question 4 Find the derivative $f'(x)$ of $f(x) = \tan\left(6\,x + 7\right)$.

● $\frac{6}{\cos^2(6\,x+7)}$ ○ $-\frac{6}{\cos^2(6\,x+7)}$ ○ $\frac{1}{\cos^2(6\,x+7)}$ ○ $\frac{12}{\cos^2(6\,x+7)}$
○ $-\frac{12}{\cos^2(6\,x+7)}$

Question 5 Find the derivative $f'(x)$ of $f(x) = \cos\left(5\,x\right)\sin\left(2\,x\right)$.

● $2\,\cos\left(5\,x\right)\cos\left(2\,x\right) - 5\,\sin\left(5\,x\right)\sin\left(2\,x\right)$
○ $-10\,\cos\left(2\,x\right)\sin\left(5\,x\right)$
○ $2\,\cos\left(5\,x\right)\cos\left(2\,x\right) + 5\,\sin\left(5\,x\right)\sin\left(2\,x\right)$
○ $-2\,\cos\left(5\,x\right)\cos\left(2\,x\right) - 5\,\sin\left(5\,x\right)\sin\left(2\,x\right)$
○ $10\,\cos\left(2\,x\right)\sin\left(5\,x\right)$

Question 6 Find the derivative $f'(x)$ of $f(x) = e^{(3\,x+7)}$.

● $3\,e^{(3\,x+7)}$ ○ $(3\,x + 7)e^{(3\,x+6)}$ ○ $e^{(3\,x+7)}$ ○ $(3\,x + 7)e^{(3\,x+7)}$

Question 7 Find the derivative $f'(x)$ of $f(x) = \log\left(5\,x + 6\right)$.

○ $(5\,x + 6)\log\left(5\,x + 5\right)$ ○ $\frac{1}{5\,x+6}$ ○ $\log\left(5\,x + 6\right)$ ● $\frac{5}{5\,x+6}$