+1/1/60+

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

⟵ Please encode your student number, and write your first and last names below.

First name and last name

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 $f(x) = \log\left(4\,x+7\right)$.

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

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

⟵ Please encode your student number, and write your first and last names below.

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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 $f(x) = \log\left(2\,x + 6\right)$.

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

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 $f(x) = \left(-2\,x^2 - 7\right)^6$.

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

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 $f(x) = \sin(9\,x-3)$.

$-9\cos(9\,x-3)$ $\cos(9\,x-3)$ $-18\cos(9\,x-3)$ $18\cos(9\,x-3)$
$9\cos(9\,x-3)$

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

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

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

- $-3\cos(9\,x)\cos(3\,x) - 9\sin(9\,x)\sin(3\,x)$
- $3\cos(9\,x)\cos(3\,x) + 9\sin(9\,x)\sin(3\,x)$
- $27\cos(3\,x)\sin(9\,x)$
- $3\cos(9\,x)\cos(3\,x) - 9\sin(9\,x)\sin(3\,x)$
- $-27\cos(3\,x)\sin(9\,x)$

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 $f(x) = \log(2\,x+7)$.

$\log(2\,x+7)$ $(2\,x+7)\log(2\,x+6)$ $\frac{1}{2\,x+7}$ $\frac{2}{2\,x+7}$

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

⟵ Please encode your student number, and write your first and last names below.

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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 $f(x) = \cos(9\,x + 9)$.

$-18\sin(9\,x + 9)$ $18\sin(9\,x + 9)$ $-\sin(9\,x + 9)$
$-9\sin(9\,x + 9)$ $9\sin(9\,x + 9)$

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

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

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

$3\cos(8\,x)\cos(3\,x) + 8\sin(8\,x)\sin(3\,x)$
$-3\cos(8\,x)\cos(3\,x) - 8\sin(8\,x)\sin(3\,x)$
$-24\cos(3\,x)\sin(8\,x)$
$24\cos(3\,x)\sin(8\,x)$
$3\cos(8\,x)\cos(3\,x) - 8\sin(8\,x)\sin(3\,x)$

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 $f(x) = \log(4\,x + 9)$.

$\log(4\,x + 9)$ $(4\,x + 9)\log(4\,x + 8)$ $\frac{1}{4\,x+9}$ $\frac{4}{4\,x+9}$

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 $f(x) = \left(-2\,x^2 - 8\right)^2$.

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

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 $f(x) = \log\left(4\,x + 7\right)$.

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

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 $f(x) = \left(-3\,x^2 - 7\right)^5$.

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

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 $f(x) = \sin(7\,x+4)$.

$7\cos(7\,x+4)$ $-14\cos(7\,x+4)$ $-7\cos(7\,x+4)$
$14\cos(7\,x+4)$ $\cos(7\,x+4)$

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

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

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

- $\cos(7\,x)\cos(x) - 7\sin(7\,x)\sin(x)$
- $\cos(7\,x)\cos(x) + 7\sin(7\,x)\sin(x)$
- $-\cos(7\,x)\cos(x) - 7\sin(7\,x)\sin(x)$
- $-7\cos(x)\sin(7\,x)$
- $7\cos(x)\sin(7\,x)$

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 $f(x) = \log(3\,x+9)$.

$\frac{1}{3\,(x+3)}$ $3\,(x+3)\log(3\,x+8)$ $\log(3\,x+9)$ $\frac{1}{x+3}$

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 $f(x) = \left(-3\,x^2 - 6\right)^6$.

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

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 $f(x) = \log\left(2\,x+7\right)$.

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

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
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◯2 ◯2 ◯2 ◯2 ◯2 ◯2 ◯2 ◯2
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◯5 ◯5 ◯5 ◯5 ◯5 ◯5 ◯5 ◯5
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◯7 ◯7 ◯7 ◯7 ◯7 ◯7 ◯7 ◯7
◯8 ◯8 ◯8 ◯8 ◯8 ◯8 ◯8 ◯8
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First name and last name

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**

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○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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First name and last name

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 $f(x) = \log\left(5\,x + 6\right)$.

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