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Calculus ex03 **17 Apr. 2019**

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○4 ○4 ○4 ○4 ○4 ○4 ○4 ○4
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First name and last name

問 1 Find the derivative $f'(x)$ of $f(x) = 3x^4 + 3x^3 + 6x^2 + 4x + 2$.

○ $3x^4 + 3x^3 + 6x^2 + 4x + 2$ ○ $3x^4 + 6x^3 + 6x^2 + 4x$ ○ $12x^3 + 9x^2 + 14x + 4$
○ $12x^3 + 9x^2 + 12x + 6$ ○ $12x^3 + 9x^2 + 12x + 4$

問 2 Find the derivative $f'(x)$ of $f(x) = 5 - \frac{3}{x} + \frac{3}{x^2}$.

○ $5 - \frac{3}{x}$ ○ $\frac{3}{x^2} - \frac{6}{x^3}$ ○ $\frac{3}{x^2} - \frac{3}{x^3}$ ○ $-\frac{3}{x^2} + \frac{6}{x^3}$ ○ $-\frac{3}{x^2} + \frac{3}{x^3}$

問 3 Find the derivative $f'(x)$ of $f(x) = x^{\frac{7}{2}}$.

○ $\frac{7}{2}x^{\frac{5}{2}}$ ○ $\frac{5}{2}x^{\frac{5}{2}}$ ○ $\frac{5}{2}x^{\frac{5}{2}}$ ○ $\frac{7}{2}x^{\frac{7}{2}}$ ○ $\frac{9}{2}x^{\frac{5}{2}}$

問 4 Find the derivative $f'(x)$ of $f(x) = x^{\frac{7}{3}} - x^{-\frac{13}{4}}$.

○ $\frac{7}{3}x^{-\frac{4}{3}} + \frac{13}{4}x^{-\frac{9}{4}}$ ○ $\frac{7}{3}x^{\frac{4}{3}} + \frac{13}{4}x^{-\frac{17}{4}}$ ○ $\frac{7}{3}x^{\frac{7}{3}} + \frac{13}{4}x^{-\frac{9}{4}}$ ○ $\frac{4}{3}x^{\frac{7}{3}} + \frac{13}{4}x^{-\frac{9}{4}}$
○ $\frac{7}{3}x^{\frac{4}{3}} - \frac{13}{4}x^{-\frac{17}{4}}$ ○ $\frac{4}{3}x^{\frac{4}{3}} - \frac{13}{4}x^{\frac{9}{4}}$

問 5 Find the derivative $f'(x)$ of $f(x) = (x^2 + 1)(2x + 1)$.

○ $6x^2 + 2x + 2$ ○ $4x$ ○ $6x^2 + 2x$ ○ $6x^2 + 2x + 3$

問 6 Find the derivative $f'(x)$ of $f(x) = \frac{2}{2x^2+5x+7}$.

○ $\frac{8x+10}{2x^2+5x+7}$ ○ $\frac{8x+10}{(2x^2+5x+7)^2}$ ○ $-\frac{8x+10}{(2x^2+5x+7)^2}$ ○ $-\frac{8x+10}{2x^2+5x+7}$

問 7 Find the derivative $f'(x)$ of $f(x) = \frac{4x+7}{5x+8}$.

○ $\frac{4}{5x+8}$ ○ $\frac{4}{(5x+8)^2}$ ○ $\frac{5}{5x+8}$ ○ $\frac{-3}{(5x+8)^2}$ ○ $\frac{-3}{5x+8}$

問 8 Find the derivative $f'(x)$ of $f(x) = (6x + 5)^7$.

○ $7(6x + 5)^7$ ○ $42(6x + 5)^6$ ○ $7(6x + 5)^6$ ○ $42(6x + 5)^7$

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Calculus ex03 **17 Apr. 2019**

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問 1 Find the derivative $f'(x)$ of $f(x) = 7x^4 + 4x^3 + 3x^2 + 2x + 6$.

○ $28x^3 + 12x^2 + 6x + 2$ ○ $7x^4 + 4x^3 + 3x^2 + 2x + 6$ ○ $28x^3 + 12x^2 + 6x + 8$
○ $7x^4 + 8x^3 + 3x^2 + 2x$ ○ $28x^3 + 12x^2 + 8x + 2$

問 2 Find the derivative $f'(x)$ of $f(x) = 3 - \frac{4}{x} + \frac{1}{x^2}$.

○ $3 - \frac{4}{x}$ ○ $\frac{4}{x^2} - \frac{2}{x^3}$ ○ $-\frac{4}{x^2} + \frac{1}{x^3}$ ○ $-\frac{4}{x^2} + \frac{2}{x^3}$ ○ $\frac{4}{x^2} - \frac{1}{x^3}$

問 3 Find the derivative $f'(x)$ of $f(x) = x^{\frac{11}{3}}$.

○ $\frac{11}{3}x^{\frac{8}{3}}$ ○ $\frac{9}{3}x^{\frac{8}{3}}$ ○ $\frac{8}{3}x^{\frac{8}{3}}$ ○ $\frac{11}{3}x^{\frac{11}{3}}$ ○ $\frac{13}{3}x^{\frac{8}{3}}$

問 4 Find the derivative $f'(x)$ of $f(x) = x^{\frac{7}{3}} - x^{-\frac{7}{4}}$.

○ $\frac{7}{3}x^{\frac{4}{3}} + \frac{7}{4}x^{-\frac{11}{4}}$ ○ $\frac{4}{3}x^{\frac{7}{3}} + \frac{7}{4}x^{-\frac{3}{4}}$ ○ $\frac{7}{3}x^{-\frac{4}{3}} + \frac{7}{4}x^{-\frac{3}{4}}$ ○ $\frac{7}{3}x^{\frac{4}{3}} - \frac{7}{4}x^{-\frac{11}{4}}$
○ $\frac{7}{3}x^{\frac{7}{3}} + \frac{7}{4}x^{-\frac{3}{4}}$ ○ $\frac{4}{3}x^{\frac{4}{3}} - \frac{7}{4}x^{\frac{3}{4}}$

問 5 Find the derivative $f'(x)$ of $f(x) = (x^2 + 1)(2x + 3)$.

○ $6x^2 + 6x$ ○ $6x^2 + 6x + 3$ ○ $6x^2 + 6x + 2$ ○ $4x$

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

○ $-\frac{24x+30}{(2x^2+5x+6)^2}$ ○ $-\frac{24x+30}{2x^2+5x+6}$ ○ $\frac{24x+30}{2x^2+5x+6}$ ○ $\frac{24x+30}{(2x^2+5x+6)^2}$

問 7 Find the derivative $f'(x)$ of $f(x) = \frac{2x+5}{11x+8}$.

○ $\frac{-39}{11x+8}$ ○ $\frac{-31}{11x+8}$ ○ $\frac{2}{(11x+8)^2}$ ○ $\frac{2}{11x+8}$ ○ $\frac{-39}{(11x+8)^2}$

問 8 Find the derivative $f'(x)$ of $f(x) = (2x + 6)^7$.

○ $7(2x + 6)^6$ ○ $14(2x + 6)^7$ ○ $7(2x + 6)^7$ ○ $14(2x + 6)^6$

Calculus ex03 **17 Apr. 2019**

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問 1 Find the derivative $f'(x)$ of $f(x) = 6x^4 + 3x^3 + 5x^2 + 6x + 2$.

○ $6x^4 + 3x^3 + 5x^2 + 6x + 2$ ○ $24x^3 + 9x^2 + 12x + 6$ ○ $6x^4 + 6x^3 + 5x^2 + 6x$
○ $24x^3 + 9x^2 + 10x + 8$ ○ $24x^3 + 9x^2 + 10x + 6$

問 2 Find the derivative $f'(x)$ of $f(x) = 1 - \frac{1}{x} + \frac{1}{x^2}$.

○ $-\frac{1}{x^2} + \frac{2}{x^3}$ ○ $1 - \frac{1}{x}$ ○ $-\frac{1}{x^2} + \frac{1}{x^3}$ ○ $\frac{1}{x^2} - \frac{1}{x^3}$ ○ $\frac{1}{x^2} - \frac{2}{x^3}$

問 3 Find the derivative $f'(x)$ of $f(x) = x^{\frac{7}{3}}$.

○ $\frac{5}{3}x^{\frac{4}{3}}$ ○ $\frac{9}{3}x^{\frac{4}{3}}$ ○ $\frac{7}{3}x^{\frac{7}{3}}$ ○ $\frac{7}{3}x^{\frac{4}{3}}$ ○ $\frac{4}{3}x^{\frac{4}{3}}$

問 4 Find the derivative $f'(x)$ of $f(x) = x^{\frac{7}{3}} - x^{-\frac{13}{6}}$.

○ $\frac{4}{3}x^{\frac{4}{3}} - \frac{13}{6}x^{\frac{7}{6}}$ ○ $\frac{7}{3}x^{\frac{4}{3}} + \frac{13}{6}x^{-\frac{19}{6}}$ ○ $\frac{7}{3}x^{\frac{4}{3}} - \frac{13}{6}x^{-\frac{19}{6}}$ ○ $\frac{7}{3}x^{\frac{7}{3}} + \frac{13}{6}x^{-\frac{7}{6}}$
○ $\frac{4}{3}x^{\frac{7}{3}} + \frac{13}{6}x^{-\frac{7}{6}}$ ○ $\frac{7}{3}x^{-\frac{4}{3}} + \frac{13}{6}x^{-\frac{7}{6}}$

問 5 Find the derivative $f'(x)$ of $f(x) = (x^2 + 2)(3x + 6)$.

○ $9x^2 + 12x$ ○ $6x$ ○ $9x^2 + 12x + 7$ ○ $9x^2 + 12x + 6$

問 6 Find the derivative $f'(x)$ of $f(x) = \frac{2}{6x^2+7x+2}$.

○ $\frac{24x+14}{(6x^2+7x+2)^2}$ ○ $-\frac{24x+14}{6x^2+7x+2}$ ○ $\frac{24x+14}{6x^2+7x+2}$ ○ $-\frac{24x+14}{(6x^2+7x+2)^2}$

問 7 Find the derivative $f'(x)$ of $f(x) = \frac{8x+7}{5x+4}$.

○ $\frac{8}{(5x+4)^2}$ ○ $\frac{-3}{(5x+4)^2}$ ○ $\frac{8}{5x+4}$ ○ $\frac{1}{5x+4}$ ○ $\frac{-3}{5x+4}$

問 8 Find the derivative $f'(x)$ of $f(x) = (8x + 8)^9$.

○ $9(8x + 8)^9$ ○ $72(8x + 8)^9$ ○ $72(8x + 8)^8$ ○ $9(8x + 8)^8$

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問 1 Find the derivative $f'(x)$ of $f(x) = 6x^4 + 7x^3 + 2x^2 + 7x + 6$.

○ $6x^4 + 14x^3 + 2x^2 + 7x$ ○ $24x^3 + 21x^2 + 6x + 7$ ○ $24x^3 + 21x^2 + 4x + 13$
○ $6x^4 + 7x^3 + 2x^2 + 7x + 6$ ○ $24x^3 + 21x^2 + 4x + 7$

問 2 Find the derivative $f'(x)$ of $f(x) = 2 - \frac{3}{x} + \frac{2}{x^2}$.

○ $-\frac{3}{x^2} + \frac{2}{x^3}$ ○ $\frac{3}{x^2} - \frac{2}{x^3}$ ○ $-\frac{3}{x^2} + \frac{4}{x^3}$ ○ $2 - \frac{3}{x}$ ○ $\frac{3}{x^2} - \frac{4}{x^3}$

問 3 Find the derivative $f'(x)$ of $f(x) = x^{\frac{7}{2}}$.

○ $\frac{7}{2}x^{\frac{5}{2}}$ ○ $\frac{9}{2}x^{\frac{5}{2}}$ ○ $\frac{5}{2}x^{\frac{5}{2}}$ ○ $\frac{5}{2}x^{\frac{5}{2}}$ ○ $\frac{7}{2}x^{\frac{7}{2}}$

問 4 Find the derivative $f'(x)$ of $f(x) = x^{\frac{7}{2}} - x^{-\frac{7}{5}}$.

○ $\frac{7}{2}x^{\frac{5}{2}} - \frac{7}{5}x^{-\frac{12}{5}}$ ○ $\frac{5}{2}x^{\frac{5}{2}} - \frac{7}{5}x^{\frac{2}{5}}$ ○ $\frac{5}{2}x^{\frac{7}{2}} + \frac{7}{5}x^{-\frac{2}{5}}$ ○ $\frac{7}{2}x^{-\frac{5}{2}} + \frac{7}{5}x^{-\frac{2}{5}}$
○ $\frac{7}{2}x^{\frac{5}{2}} + \frac{7}{5}x^{-\frac{12}{5}}$ ○ $\frac{7}{2}x^{\frac{7}{2}} + \frac{7}{5}x^{-\frac{2}{5}}$

問 5 Find the derivative $f'(x)$ of $f(x) = (x^2 + 3)(5x + 3)$.

○ $15x^2 + 6x + 15$ ○ $15x^2 + 6x + 16$ ○ $15x^2 + 6x$ ○ $10x$

問 6 Find the derivative $f'(x)$ of $f(x) = \frac{6}{3x^2+4x+8}$.

○ $\frac{36x+24}{3x^2+4x+8}$ ○ $-\frac{36x+24}{(3x^2+4x+8)^2}$ ○ $-\frac{36x+24}{3x^2+4x+8}$ ○ $\frac{36x+24}{(3x^2+4x+8)^2}$

問 7 Find the derivative $f'(x)$ of $f(x) = \frac{8x+11}{5x+8}$.

○ $\frac{8}{5x+8}$ ○ $\frac{8}{(5x+8)^2}$ ○ $\frac{9}{(5x+8)^2}$ ○ $\frac{9}{5x+8}$ ○ $\frac{17}{5x+8}$

問 8 Find the derivative $f'(x)$ of $f(x) = (7x + 3)^9$.

○ $9(7x + 3)^9$ ○ $63(7x + 3)^8$ ○ $9(7x + 3)^8$ ○ $63(7x + 3)^9$

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Calculus ex03 **17 Apr. 2019**

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問 1 Find the derivative $f'(x)$ of $f(x) = 2x^4 + 2x^3 + 3x^2 + 4x + 7$.

○ $2x^4 + 4x^3 + 3x^2 + 4x$ ○ $2x^4 + 2x^3 + 3x^2 + 4x + 7$ ○ $8x^3 + 6x^2 + 6x + 11$
○ $8x^3 + 6x^2 + 6x + 4$ ○ $8x^3 + 6x^2 + 8x + 4$

問 2 Find the derivative $f'(x)$ of $f(x) = 1 - \frac{3}{x} + \frac{3}{x^2}$.

○ $\frac{3}{x^2} - \frac{6}{x^3}$ ○ $-\frac{3}{x^2} + \frac{3}{x^3}$ ○ $1 - \frac{3}{x}$ ○ $-\frac{3}{x^2} + \frac{6}{x^3}$ ○ $\frac{3}{x^2} - \frac{3}{x^3}$

問 3 Find the derivative $f'(x)$ of $f(x) = x^{\frac{11}{3}}$.

○ $\frac{9}{3}x^{\frac{8}{3}}$ ○ $\frac{8}{3}x^{\frac{8}{3}}$ ○ $\frac{13}{3}x^{\frac{8}{3}}$ ○ $\frac{11}{3}x^{\frac{8}{3}}$ ○ $\frac{11}{3}x^{\frac{11}{3}}$

問 4 Find the derivative $f'(x)$ of $f(x) = x^{\frac{7}{2}} - x^{-\frac{11}{4}}$.

○ $\frac{7}{2}x^{-\frac{5}{2}} + \frac{11}{4}x^{-\frac{7}{4}}$ ○ $\frac{5}{2}x^{\frac{7}{2}} + \frac{11}{4}x^{-\frac{7}{4}}$ ○ $\frac{7}{2}x^{\frac{7}{2}} + \frac{11}{4}x^{-\frac{7}{4}}$ ○ $\frac{7}{2}x^{\frac{5}{2}} + \frac{11}{4}x^{-\frac{15}{4}}$
○ $\frac{7}{2}x^{\frac{5}{2}} - \frac{11}{4}x^{-\frac{15}{4}}$ ○ $\frac{5}{2}x^{\frac{5}{2}} - \frac{11}{4}x^{\frac{7}{4}}$

問 5 Find the derivative $f'(x)$ of $f(x) = (x^2 + 3)(4x + 6)$.

○ $12x^2 + 12x + 13$ ○ $12x^2 + 12x$ ○ $8x$ ○ $12x^2 + 12x + 12$

問 6 Find the derivative $f'(x)$ of $f(x) = \frac{7}{7x^2+4x+8}$.

○ $\frac{98x+28}{7x^2+4x+8}$ ○ $-\frac{98x+28}{(7x^2+4x+8)^2}$ ○ $-\frac{98x+28}{7x^2+4x+8}$ ○ $\frac{98x+28}{(7x^2+4x+8)^2}$

問 7 Find the derivative $f'(x)$ of $f(x) = \frac{8x+5}{3x+8}$.

○ $\frac{49}{3x+8}$ ○ $\frac{57}{3x+8}$ ○ $\frac{8}{(3x+8)^2}$ ○ $\frac{8}{3x+8}$ ○ $\frac{49}{(3x+8)^2}$

問 8 Find the derivative $f'(x)$ of $f(x) = (5x + 9)^8$.

○ $40(5x + 9)^8$ ○ $8(5x + 9)^8$ ○ $8(5x + 9)^7$ ○ $40(5x + 9)^7$

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問 1 Find the derivative $f'(x)$ of $f(x) = 4x^4 + 5x^3 + 4x^2 + 6x + 7$.

○ $4x^4 + 5x^3 + 4x^2 + 6x + 7$ ○ $16x^3 + 15x^2 + 10x + 6$ ○ $16x^3 + 15x^2 + 8x + 13$
○ $16x^3 + 15x^2 + 8x + 6$ ○ $4x^4 + 10x^3 + 4x^2 + 6x$

問 2 Find the derivative $f'(x)$ of $f(x) = 3 - \frac{5}{x} + \frac{2}{x^2}$.

○ $3 - \frac{5}{x}$ ○ $-\frac{5}{x^2} + \frac{4}{x^3}$ ○ $-\frac{5}{x^2} + \frac{2}{x^3}$ ○ $\frac{5}{x^2} - \frac{2}{x^3}$ ○ $\frac{5}{x^2} - \frac{4}{x^3}$

問 3 Find the derivative $f'(x)$ of $f(x) = x^{\frac{5}{2}}$.

○ $\frac{5}{2}x^{\frac{5}{2}}$ ○ $\frac{3}{2}x^{\frac{3}{2}}$ ○ $\frac{3}{2}x^{\frac{3}{2}}$ ○ $\frac{5}{2}x^{\frac{3}{2}}$ ○ $\frac{7}{2}x^{\frac{3}{2}}$

問 4 Find the derivative $f'(x)$ of $f(x) = x^{\frac{13}{3}} - x^{-\frac{11}{6}}$.

○ $\frac{13}{3}x^{\frac{10}{3}} - \frac{11}{6}x^{-\frac{17}{6}}$ ○ $\frac{10}{3}x^{\frac{10}{3}} - \frac{11}{6}x^{\frac{5}{6}}$ ○ $\frac{13}{3}x^{-\frac{10}{3}} + \frac{11}{6}x^{-\frac{5}{6}}$
○ $\frac{13}{3}x^{\frac{10}{3}} + \frac{11}{6}x^{-\frac{17}{6}}$ ○ $\frac{10}{3}x^{\frac{13}{3}} + \frac{11}{6}x^{-\frac{5}{6}}$ ○ $\frac{13}{3}x^{\frac{13}{3}} + \frac{11}{6}x^{-\frac{5}{6}}$

問 5 Find the derivative $f'(x)$ of $f(x) = (x^2 + 4)(5x + 5)$.

○ $10x$ ○ $15x^2 + 10x + 20$ ○ $15x^2 + 10x$ ○ $15x^2 + 10x + 21$

問 6 Find the derivative $f'(x)$ of $f(x) = \frac{7}{4x^2+5x+5}$.

○ $-\frac{56x+35}{4x^2+5x+5}$ ○ $-\frac{56x+35}{(4x^2+5x+5)^2}$ ○ $\frac{56x+35}{4x^2+5x+5}$ ○ $\frac{56x+35}{(4x^2+5x+5)^2}$

問 7 Find the derivative $f'(x)$ of $f(x) = \frac{2x+3}{7x+2}$.

○ $\frac{2}{7x+2}$ ○ $\frac{-17}{(7x+2)^2}$ ○ $\frac{-15}{7x+2}$ ○ $\frac{2}{(7x+2)^2}$ ○ $\frac{-17}{7x+2}$

問 8 Find the derivative $f'(x)$ of $f(x) = (2x + 3)^7$.

○ $7(2x + 3)^6$ ○ $14(2x + 3)^7$ ○ $14(2x + 3)^6$ ○ $7(2x + 3)^7$

+7/1/54+

Calculus ex03 **17 Apr. 2019**

○0 ○0 ○0 ○0 ○0 ○0 ○0 ○0
○1 ○1 ○1 ○1 ○1 ○1 ○1 ○1
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○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
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⟵ Please encode your student number, and write your first and last names below.

First name and last name

問 1 Find the derivative $f'(x)$ of $f(x) = 7x^4 + 5x^3 + 2x^2 + 2x + 9$.

○ $28x^3 + 15x^2 + 4x + 2$ ○ $7x^4 + 10x^3 + 2x^2 + 2x$ ○ $28x^3 + 15x^2 + 4x + 11$
○ $28x^3 + 15x^2 + 6x + 2$ ○ $7x^4 + 5x^3 + 2x^2 + 2x + 9$

問 2 Find the derivative $f'(x)$ of $f(x) = 4 - \frac{3}{x} + \frac{4}{x^2}$.

○ $\frac{3}{x^2} - \frac{8}{x^3}$ ○ $\frac{3}{x^2} - \frac{4}{x^3}$ ○ $-\frac{3}{x^2} + \frac{4}{x^3}$ ○ $4 - \frac{3}{x}$ ○ $-\frac{3}{x^2} + \frac{8}{x^3}$

問 3 Find the derivative $f'(x)$ of $f(x) = x^{\frac{11}{2}}$.

○ $\frac{9}{2}x^{\frac{9}{2}}$ ○ $\frac{11}{2}x^{\frac{9}{2}}$ ○ $\frac{9}{2}x^{\frac{9}{2}}$ ○ $\frac{13}{2}x^{\frac{9}{2}}$ ○ $\frac{11}{2}x^{\frac{11}{2}}$

問 4 Find the derivative $f'(x)$ of $f(x) = x^{\frac{7}{3}} - x^{-\frac{13}{6}}$.

○ $\frac{7}{3}x^{-\frac{4}{3}} + \frac{13}{6}x^{-\frac{7}{6}}$ ○ $\frac{7}{3}x^{\frac{4}{3}} - \frac{13}{6}x^{-\frac{19}{6}}$ ○ $\frac{7}{3}x^{\frac{7}{3}} + \frac{13}{6}x^{-\frac{7}{6}}$ ○ $\frac{4}{3}x^{\frac{7}{3}} + \frac{13}{6}x^{-\frac{7}{6}}$
○ $\frac{7}{3}x^{\frac{4}{3}} + \frac{13}{6}x^{-\frac{19}{6}}$ ○ $\frac{4}{3}x^{\frac{4}{3}} - \frac{13}{6}x^{\frac{7}{6}}$

問 5 Find the derivative $f'(x)$ of $f(x) = (x^2 + 3)(4x + 4)$.

○ $8x$ ○ $12x^2 + 8x + 12$ ○ $12x^2 + 8x$ ○ $12x^2 + 8x + 13$

問 6 Find the derivative $f'(x)$ of $f(x) = \frac{9}{2x^2+5x+4}$.

○ $\frac{36x+45}{(2x^2+5x+4)^2}$ ○ $-\frac{36x+45}{(2x^2+5x+4)^2}$ ○ $-\frac{36x+45}{2x^2+5x+4}$ ○ $\frac{36x+45}{2x^2+5x+4}$

問 7 Find the derivative $f'(x)$ of $f(x) = \frac{8x+11}{11x+2}$.

○ $\frac{8}{(11x+2)^2}$ ○ $\frac{-103}{11x+2}$ ○ $\frac{-105}{11x+2}$ ○ $\frac{-105}{(11x+2)^2}$ ○ $\frac{8}{11x+2}$

問 8 Find the derivative $f'(x)$ of $f(x) = (9x + 8)^{12}$.

○ $108(9x + 8)^{12}$ ○ $12(9x + 8)^{11}$ ○ $12(9x + 8)^{12}$ ○ $108(9x + 8)^{11}$

+8/1/53+

Calculus ex03 **17 Apr. 2019**

○0 ○0 ○0 ○0 ○0 ○0 ○0 ○0
○1 ○1 ○1 ○1 ○1 ○1 ○1 ○1
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○3 ○3 ○3 ○3 ○3 ○3 ○3 ○3
○4 ○4 ○4 ○4 ○4 ○4 ○4 ○4
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First name and last name

問 1 Find the derivative $f'(x)$ of $f(x) = 7x^4 + 7x^3 + 7x^2 + 2x + 7$.

○ $28x^3 + 21x^2 + 14x + 9$ ○ $28x^3 + 21x^2 + 14x + 2$ ○ $28x^3 + 21x^2 + 16x + 2$
○ $7x^4 + 14x^3 + 7x^2 + 2x$ ○ $7x^4 + 7x^3 + 7x^2 + 2x + 7$

問 2 Find the derivative $f'(x)$ of $f(x) = 3 - \frac{2}{x} + \frac{5}{x^2}$.

○ $3 - \frac{2}{x}$ ○ $\frac{2}{x^2} - \frac{5}{x^3}$ ○ $-\frac{2}{x^2} + \frac{10}{x^3}$ ○ $-\frac{2}{x^2} + \frac{5}{x^3}$ ○ $\frac{2}{x^2} - \frac{10}{x^3}$

問 3 Find the derivative $f'(x)$ of $f(x) = x^{\frac{11}{2}}$.

○ $\frac{9}{2}x^{\frac{9}{2}}$ ○ $\frac{9}{2}x^{\frac{9}{2}}$ ○ $\frac{13}{2}x^{\frac{9}{2}}$ ○ $\frac{11}{2}x^{\frac{9}{2}}$ ○ $\frac{11}{2}x^{\frac{11}{2}}$

問 4 Find the derivative $f'(x)$ of $f(x) = x^{\frac{11}{2}} - x^{-\frac{7}{4}}$.

○ $\frac{9}{2}x^{\frac{9}{2}} - \frac{7}{4}x^{\frac{3}{4}}$ ○ $\frac{9}{2}x^{\frac{11}{2}} + \frac{7}{4}x^{-\frac{3}{4}}$ ○ $\frac{11}{2}x^{\frac{9}{2}} - \frac{7}{4}x^{-\frac{11}{4}}$ ○ $\frac{11}{2}x^{-\frac{9}{2}} + \frac{7}{4}x^{-\frac{3}{4}}$
○ $\frac{11}{2}x^{\frac{9}{2}} + \frac{7}{4}x^{-\frac{11}{4}}$ ○ $\frac{11}{2}x^{\frac{11}{2}} + \frac{7}{4}x^{-\frac{3}{4}}$

問 5 Find the derivative $f'(x)$ of $f(x) = (x^2 + 4)(1x + 2)$.

○ $2x$ ○ $3x^2 + 4x + 5$ ○ $3x^2 + 4x$ ○ $3x^2 + 4x + 4$

問 6 Find the derivative $f'(x)$ of $f(x) = \frac{7}{5x^2+7x+9}$.

○ $\frac{70x+49}{5x^2+7x+9}$ ○ $-\frac{70x+49}{5x^2+7x+9}$ ○ $-\frac{70x+49}{(5x^2+7x+9)^2}$ ○ $\frac{70x+49}{(5x^2+7x+9)^2}$

問 7 Find the derivative $f'(x)$ of $f(x) = \frac{8x+7}{5x+2}$.

○ $\frac{8}{5x+2}$ ○ $\frac{-19}{5x+2}$ ○ $\frac{-17}{5x+2}$ ○ $\frac{-19}{(5x+2)^2}$ ○ $\frac{8}{(5x+2)^2}$

問 8 Find the derivative $f'(x)$ of $f(x) = (5x + 3)^7$.

○ $35(5x + 3)^7$ ○ $35(5x + 3)^6$ ○ $7(5x + 3)^6$ ○ $7(5x + 3)^7$

Calculus ex03 **17 Apr. 2019**

○0 ○0 ○0 ○0 ○0 ○0 ○0 ○0
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○3 ○3 ○3 ○3 ○3 ○3 ○3 ○3
○4 ○4 ○4 ○4 ○4 ○4 ○4 ○4
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○9 ○9 ○9 ○9 ○9 ○9 ○9 ○9

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First name and last name

問 1 Find the derivative $f'(x)$ of $f(x) = 5x^4 + 3x^3 + 7x^2 + 4x + 3$.

○ $20x^3 + 9x^2 + 14x + 7$ ○ $20x^3 + 9x^2 + 16x + 4$ ○ $5x^4 + 6x^3 + 7x^2 + 4x$
○ $5x^4 + 3x^3 + 7x^2 + 4x + 3$ ○ $20x^3 + 9x^2 + 14x + 4$

問 2 Find the derivative $f'(x)$ of $f(x) = 5 - \frac{3}{x} + \frac{2}{x^2}$.

○ $\frac{3}{x^2} - \frac{4}{x^3}$ ○ $-\frac{3}{x^2} + \frac{2}{x^3}$ ○ $-\frac{3}{x^2} + \frac{4}{x^3}$ ○ $\frac{3}{x^2} - \frac{2}{x^3}$ ○ $5 - \frac{3}{x}$

問 3 Find the derivative $f'(x)$ of $f(x) = x^{\frac{11}{3}}$.

○ $\frac{9}{3}x^{\frac{8}{3}}$ ○ $\frac{13}{3}x^{\frac{8}{3}}$ ○ $\frac{8}{3}x^{\frac{8}{3}}$ ○ $\frac{11}{3}x^{\frac{11}{3}}$ ○ $\frac{11}{3}x^{\frac{8}{3}}$

問 4 Find the derivative $f'(x)$ of $f(x) = x^{\frac{11}{3}} - x^{-\frac{11}{5}}$.

○ $\frac{11}{3}x^{-\frac{8}{3}} + \frac{11}{5}x^{-\frac{6}{5}}$ ○ $\frac{11}{3}x^{\frac{8}{3}} - \frac{11}{5}x^{-\frac{16}{5}}$ ○ $\frac{11}{3}x^{\frac{8}{3}} + \frac{11}{5}x^{-\frac{16}{5}}$
○ $\frac{11}{3}x^{\frac{11}{3}} + \frac{11}{5}x^{-\frac{6}{5}}$ ○ $\frac{8}{3}x^{\frac{8}{3}} - \frac{11}{5}x^{\frac{6}{5}}$ ○ $\frac{8}{3}x^{\frac{11}{3}} + \frac{11}{5}x^{-\frac{6}{5}}$

問 5 Find the derivative $f'(x)$ of $f(x) = (x^2 + 5)(3x + 7)$.

○ $9x^2 + 14x$ ○ $6x$ ○ $9x^2 + 14x + 16$ ○ $9x^2 + 14x + 15$

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

○ $-\frac{12x+9}{2x^2+3x+2}$ ○ $\frac{12x+9}{(2x^2+3x+2)^2}$ ○ $-\frac{12x+9}{(2x^2+3x+2)^2}$ ○ $\frac{12x+9}{2x^2+3x+2}$

問 7 Find the derivative $f'(x)$ of $f(x) = \frac{4x+7}{11x+4}$.

○ $\frac{4}{(11x+4)^2}$ ○ $\frac{-61}{(11x+4)^2}$ ○ $\frac{4}{11x+4}$ ○ $\frac{-57}{11x+4}$ ○ $\frac{-61}{11x+4}$

問 8 Find the derivative $f'(x)$ of $f(x) = (6x + 6)^{11}$.

○ $66(6x + 6)^{10}$ ○ $11(6x + 6)^{11}$ ○ $66(6x + 6)^{11}$ ○ $11(6x + 6)^{10}$

+10/1/51+

Calculus ex03 **17 Apr. 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
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○9 ○9 ○9 ○9 ○9 ○9 ○9 ○9

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問 1 Find the derivative $f'(x)$ of $f(x) = 7x^4 + 7x^3 + 2x^2 + 7x + 5$.

○ $7x^4 + 7x^3 + 2x^2 + 7x + 5$ ○ $7x^4 + 14x^3 + 2x^2 + 7x$ ○ $28x^3 + 21x^2 + 4x + 12$
○ $28x^3 + 21x^2 + 6x + 7$ ○ $28x^3 + 21x^2 + 4x + 7$

問 2 Find the derivative $f'(x)$ of $f(x) = 2 - \frac{5}{x} + \frac{5}{x^2}$.

○ $\frac{5}{x^2} - \frac{5}{x^3}$ ○ $-\frac{5}{x^2} + \frac{10}{x^3}$ ○ $\frac{5}{x^2} - \frac{10}{x^3}$ ○ $2 - \frac{5}{x}$ ○ $-\frac{5}{x^2} + \frac{5}{x^3}$

問 3 Find the derivative $f'(x)$ of $f(x) = x^{\frac{11}{3}}$.

○ $\frac{11}{3}x^{\frac{11}{3}}$ ○ $\frac{11}{3}x^{\frac{8}{3}}$ ○ $\frac{9}{3}x^{\frac{8}{3}}$ ○ $\frac{13}{3}x^{\frac{8}{3}}$ ○ $\frac{8}{3}x^{\frac{8}{3}}$

問 4 Find the derivative $f'(x)$ of $f(x) = x^{\frac{11}{2}} - x^{-\frac{7}{6}}$.

○ $\frac{9}{2}x^{\frac{9}{2}} - \frac{7}{6}x^{\frac{1}{6}}$ ○ $\frac{11}{2}x^{-\frac{9}{2}} + \frac{7}{6}x^{-\frac{1}{6}}$ ○ $\frac{11}{2}x^{\frac{9}{2}} - \frac{7}{6}x^{-\frac{13}{6}}$ ○ $\frac{11}{2}x^{\frac{11}{2}} + \frac{7}{6}x^{-\frac{1}{6}}$
○ $\frac{9}{2}x^{\frac{11}{2}} + \frac{7}{6}x^{-\frac{1}{6}}$ ○ $\frac{11}{2}x^{\frac{9}{2}} + \frac{7}{6}x^{-\frac{13}{6}}$

問 5 Find the derivative $f'(x)$ of $f(x) = (x^2 + 3)(5x + 5)$.

○ $15x^2 + 10x + 15$ ○ $10x$ ○ $15x^2 + 10x + 16$ ○ $15x^2 + 10x$

問 6 Find the derivative $f'(x)$ of $f(x) = \frac{5}{9x^2+7x+3}$.

○ $-\frac{90x+35}{(9x^2+7x+3)^2}$ ○ $\frac{90x+35}{9x^2+7x+3}$ ○ $\frac{90x+35}{(9x^2+7x+3)^2}$ ○ $-\frac{90x+35}{9x^2+7x+3}$

問 7 Find the derivative $f'(x)$ of $f(x) = \frac{8x+11}{5x+8}$.

○ $\frac{8}{(5x+8)^2}$ ○ $\frac{17}{5x+8}$ ○ $\frac{9}{5x+8}$ ○ $\frac{8}{5x+8}$ ○ $\frac{9}{(5x+8)^2}$

問 8 Find the derivative $f'(x)$ of $f(x) = (3x + 2)^{11}$.

○ $33(3x + 2)^{10}$ ○ $11(3x + 2)^{11}$ ○ $11(3x + 2)^{10}$ ○ $33(3x + 2)^{11}$