



Calculus ex03

17 Apr. 2019

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First name and last name

-
- 1 Find the derivative $f'(x)$ of $f(x) = 3x^4 + 3x^3 + 6x^2 + 4x + 2$.
- ☐ $3x^4 + 3x^3 + 6x^2 + 4x + 2$ ☐ $3x^4 + 6x^3 + 6x^2 + 4x$ ☐ $12x^3 + 9x^2 + 14x + 4$
☐ $12x^3 + 9x^2 + 12x + 6$ ☐ $12x^3 + 9x^2 + 12x + 4$
- 2 Find the derivative $f'(x)$ of $f(x) = 5 - \frac{3}{x} + \frac{3}{x^2}$.
- ☐ $5 - \frac{3}{x}$ ☐ $\frac{3}{x^2} - \frac{6}{x^3}$ ☐ $\frac{3}{x^2} - \frac{3}{x^3}$ ☐ $-\frac{3}{x^2} + \frac{6}{x^3}$ ☐ $-\frac{3}{x^2} + \frac{3}{x^3}$
- 3 Find the derivative $f'(x)$ of $f(x) = x^{\frac{7}{2}}$.
- ☐ $\frac{7}{2}x^{\frac{5}{2}}$ ☐ $\frac{5}{2}x^{\frac{5}{2}}$ ☐ $\frac{5}{2}x^{\frac{5}{2}}$ ☐ $\frac{7}{2}x^{\frac{7}{2}}$ ☐ $\frac{9}{2}x^{\frac{5}{2}}$
- 4 Find the derivative $f'(x)$ of $f(x) = x^{\frac{7}{3}} - x^{-\frac{13}{4}}$.
- ☐ $\frac{7}{3}x^{-\frac{4}{3}} + \frac{13}{4}x^{-\frac{9}{4}}$ ☐ $\frac{7}{3}x^{\frac{4}{3}} + \frac{13}{4}x^{-\frac{17}{4}}$ ☐ $\frac{7}{3}x^{\frac{7}{3}} + \frac{13}{4}x^{-\frac{9}{4}}$ ☐ $\frac{4}{3}x^{\frac{7}{3}} + \frac{13}{4}x^{-\frac{9}{4}}$
☐ $\frac{7}{3}x^{\frac{4}{3}} - \frac{13}{4}x^{-\frac{17}{4}}$ ☐ $\frac{4}{3}x^{\frac{4}{3}} - \frac{13}{4}x^{\frac{9}{4}}$
- 5 Find the derivative $f'(x)$ of $f(x) = (x^2 + 1)(2x + 1)$.
- ☐ $6x^2 + 2x + 2$ ☐ $4x$ ☐ $6x^2 + 2x$ ☐ $6x^2 + 2x + 3$
- 6 Find the derivative $f'(x)$ of $f(x) = \frac{2}{2x^2 + 5x + 7}$.
- ☐ $\frac{8x+10}{2x^2+5x+7}$ ☐ $\frac{8x+10}{(2x^2+5x+7)^2}$ ☐ $-\frac{8x+10}{(2x^2+5x+7)^2}$ ☐ $-\frac{8x+10}{2x^2+5x+7}$
- 7 Find the derivative $f'(x)$ of $f(x) = \frac{4x+7}{5x+8}$.
- ☐ $\frac{4}{5x+8}$ ☐ $\frac{4}{(5x+8)^2}$ ☐ $\frac{5}{5x+8}$ ☐ $\frac{-3}{(5x+8)^2}$ ☐ $\frac{-3}{5x+8}$
- 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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-
- 1 Find the derivative $f'(x)$ of $f(x) = 7x^4 + 4x^3 + 3x^2 + 2x + 6$.
- ☐ $28x^3 + 12x^2 + 6x + 2$ ☐ $7x^4 + 4x^3 + 3x^2 + 2x + 6$ ☐ $28x^3 + 12x^2 + 6x + 8$
☐ $7x^4 + 8x^3 + 3x^2 + 2x$ ☐ $28x^3 + 12x^2 + 8x + 2$
- 2 Find the derivative $f'(x)$ of $f(x) = 3 - \frac{4}{x} + \frac{1}{x^2}$.
- ☐ $3 - \frac{4}{x}$ ☐ $\frac{4}{x^2} - \frac{2}{x^3}$ ☐ $-\frac{4}{x^2} + \frac{1}{x^3}$ ☐ $-\frac{4}{x^2} + \frac{2}{x^3}$ ☐ $\frac{4}{x^2} - \frac{1}{x^3}$
- 3 Find the derivative $f'(x)$ of $f(x) = x^{\frac{11}{3}}$.
- ☐ $\frac{11}{3}x^{\frac{8}{3}}$ ☐ $\frac{9}{3}x^{\frac{8}{3}}$ ☐ $\frac{8}{3}x^{\frac{8}{3}}$ ☐ $\frac{11}{3}x^{\frac{11}{3}}$ ☐ $\frac{13}{3}x^{\frac{8}{3}}$
- 4 Find the derivative $f'(x)$ of $f(x) = x^{\frac{7}{3}} - x^{-\frac{7}{4}}$.
- ☐ $\frac{7}{3}x^{\frac{4}{3}} + \frac{7}{4}x^{-\frac{11}{4}}$ ☐ $\frac{4}{3}x^{\frac{7}{3}} + \frac{7}{4}x^{-\frac{3}{4}}$ ☐ $\frac{7}{3}x^{-\frac{4}{3}} + \frac{7}{4}x^{-\frac{3}{4}}$ ☐ $\frac{7}{3}x^{\frac{4}{3}} - \frac{7}{4}x^{-\frac{11}{4}}$
☐ $\frac{7}{3}x^{\frac{7}{3}} + \frac{7}{4}x^{-\frac{3}{4}}$ ☐ $\frac{4}{3}x^{\frac{4}{3}} - \frac{7}{4}x^{\frac{3}{4}}$
- 5 Find the derivative $f'(x)$ of $f(x) = (x^2 + 1)(2x + 3)$.
- ☐ $6x^2 + 6x$ ☐ $6x^2 + 6x + 3$ ☐ $6x^2 + 6x + 2$ ☐ $4x$
- 6 Find the derivative $f'(x)$ of $f(x) = \frac{6}{2x^2 + 5x + 6}$.
- ☐ $-\frac{24x+30}{(2x^2+5x+6)^2}$ ☐ $-\frac{24x+30}{2x^2+5x+6}$ ☐ $\frac{24x+30}{2x^2+5x+6}$ ☐ $\frac{24x+30}{(2x^2+5x+6)^2}$
- 7 Find the derivative $f'(x)$ of $f(x) = \frac{2x+5}{11x+8}$.
- ☐ $\frac{-39}{11x+8}$ ☐ $\frac{-31}{11x+8}$ ☐ $\frac{2}{(11x+8)^2}$ ☐ $\frac{2}{11x+8}$ ☐ $\frac{-39}{(11x+8)^2}$
- 8 Find the derivative $f'(x)$ of $f(x) = (2x + 6)^7$.
- ☐ $7(2x + 6)^6$ ☐ $14(2x + 6)^7$ ☐ $7(2x + 6)^7$ ☐ $14(2x + 6)^6$



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First name and last name

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- 1 Find the derivative $f'(x)$ of $f(x) = 6x^4 + 3x^3 + 5x^2 + 6x + 2$.
- ☐ $6x^4 + 3x^3 + 5x^2 + 6x + 2$ ☐ $24x^3 + 9x^2 + 12x + 6$ ☐ $6x^4 + 6x^3 + 5x^2 + 6x$
☐ $24x^3 + 9x^2 + 10x + 8$ ☐ $24x^3 + 9x^2 + 10x + 6$
- 2 Find the derivative $f'(x)$ of $f(x) = 1 - \frac{1}{x} + \frac{1}{x^2}$.
- ☐ $-\frac{1}{x^2} + \frac{2}{x^3}$ ☐ $1 - \frac{1}{x}$ ☐ $-\frac{1}{x^2} + \frac{1}{x^3}$ ☐ $\frac{1}{x^2} - \frac{1}{x^3}$ ☐ $\frac{1}{x^2} - \frac{2}{x^3}$
- 3 Find the derivative $f'(x)$ of $f(x) = x^{\frac{7}{3}}$.
- ☐ $\frac{5}{3}x^{\frac{4}{3}}$ ☐ $\frac{9}{3}x^{\frac{4}{3}}$ ☐ $\frac{7}{3}x^{\frac{7}{3}}$ ☐ $\frac{7}{3}x^{\frac{4}{3}}$ ☐ $\frac{4}{3}x^{\frac{4}{3}}$
- 4 Find the derivative $f'(x)$ of $f(x) = x^{\frac{7}{3}} - x^{-\frac{13}{6}}$.
- ☐ $\frac{4}{3}x^{\frac{4}{3}} - \frac{13}{6}x^{-\frac{7}{6}}$ ☐ $\frac{7}{3}x^{\frac{4}{3}} + \frac{13}{6}x^{-\frac{19}{6}}$ ☐ $\frac{7}{3}x^{\frac{4}{3}} - \frac{13}{6}x^{-\frac{19}{6}}$ ☐ $\frac{7}{3}x^{\frac{7}{3}} + \frac{13}{6}x^{-\frac{7}{6}}$
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- 5 Find the derivative $f'(x)$ of $f(x) = (x^2 + 2)(3x + 6)$.
- ☐ $9x^2 + 12x$ ☐ $6x$ ☐ $9x^2 + 12x + 7$ ☐ $9x^2 + 12x + 6$
- 6 Find the derivative $f'(x)$ of $f(x) = \frac{2}{6x^2 + 7x + 2}$.
- ☐ $\frac{24x + 14}{(6x^2 + 7x + 2)^2}$ ☐ $-\frac{24x + 14}{6x^2 + 7x + 2}$ ☐ $\frac{24x + 14}{6x^2 + 7x + 2}$ ☐ $-\frac{24x + 14}{(6x^2 + 7x + 2)^2}$
- 7 Find the derivative $f'(x)$ of $f(x) = \frac{8x + 7}{5x + 4}$.
- ☐ $\frac{8}{(5x + 4)^2}$ ☐ $\frac{-3}{(5x + 4)^2}$ ☐ $\frac{8}{5x + 4}$ ☐ $\frac{1}{5x + 4}$ ☐ $\frac{-3}{5x + 4}$
- 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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First name and last name

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- 1 Find the derivative $f'(x)$ of $f(x) = 6x^4 + 7x^3 + 2x^2 + 7x + 6$.
- ☐ $6x^4 + 14x^3 + 2x^2 + 7x$ ☐ $24x^3 + 21x^2 + 6x + 7$ ☐ $24x^3 + 21x^2 + 4x + 13$
☐ $6x^4 + 7x^3 + 2x^2 + 7x + 6$ ☐ $24x^3 + 21x^2 + 4x + 7$
- 2 Find the derivative $f'(x)$ of $f(x) = 2 - \frac{3}{x} + \frac{2}{x^2}$.
- ☐ $-\frac{3}{x^2} + \frac{2}{x^3}$ ☐ $\frac{3}{x^2} - \frac{2}{x^3}$ ☐ $-\frac{3}{x^2} + \frac{4}{x^3}$ ☐ $2 - \frac{3}{x}$ ☐ $\frac{3}{x^2} - \frac{4}{x^3}$
- 3 Find the derivative $f'(x)$ of $f(x) = x^{\frac{7}{2}}$.
- ☐ $\frac{7}{2}x^{\frac{5}{2}}$ ☐ $\frac{9}{2}x^{\frac{5}{2}}$ ☐ $\frac{5}{2}x^{\frac{5}{2}}$ ☐ $\frac{5}{2}x^{\frac{5}{2}}$ ☐ $\frac{7}{2}x^{\frac{7}{2}}$
- 4 Find the derivative $f'(x)$ of $f(x) = x^{\frac{7}{2}} - x^{-\frac{7}{5}}$.
- ☐ $\frac{7}{2}x^{\frac{5}{2}} - \frac{7}{5}x^{-\frac{12}{5}}$ ☐ $\frac{5}{2}x^{\frac{5}{2}} - \frac{7}{5}x^{\frac{2}{5}}$ ☐ $\frac{5}{2}x^{\frac{7}{2}} + \frac{7}{5}x^{-\frac{2}{5}}$ ☐ $\frac{7}{2}x^{-\frac{5}{2}} + \frac{7}{5}x^{-\frac{2}{5}}$
☐ $\frac{7}{2}x^{\frac{5}{2}} + \frac{7}{5}x^{-\frac{12}{5}}$ ☐ $\frac{7}{2}x^{\frac{7}{2}} + \frac{7}{5}x^{-\frac{2}{5}}$
- 5 Find the derivative $f'(x)$ of $f(x) = (x^2 + 3)(5x + 3)$.
- ☐ $15x^2 + 6x + 15$ ☐ $15x^2 + 6x + 16$ ☐ $15x^2 + 6x$ ☐ $10x$
- 6 Find the derivative $f'(x)$ of $f(x) = \frac{6}{3x^2 + 4x + 8}$.
- ☐ $\frac{36x + 24}{3x^2 + 4x + 8}$ ☐ $-\frac{36x + 24}{(3x^2 + 4x + 8)^2}$ ☐ $-\frac{36x + 24}{3x^2 + 4x + 8}$ ☐ $\frac{36x + 24}{(3x^2 + 4x + 8)^2}$
- 7 Find the derivative $f'(x)$ of $f(x) = \frac{8x + 11}{5x + 8}$.
- ☐ $\frac{8}{5x + 8}$ ☐ $\frac{8}{(5x + 8)^2}$ ☐ $\frac{9}{(5x + 8)^2}$ ☐ $\frac{9}{5x + 8}$ ☐ $\frac{17}{5x + 8}$
- 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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- 1 Find the derivative $f'(x)$ of $f(x) = 2x^4 + 2x^3 + 3x^2 + 4x + 7$.
- ☐ $2x^4 + 4x^3 + 3x^2 + 4x$ ☐ $2x^4 + 2x^3 + 3x^2 + 4x + 7$ ☐ $8x^3 + 6x^2 + 6x + 11$
☐ $8x^3 + 6x^2 + 6x + 4$ ☐ $8x^3 + 6x^2 + 8x + 4$
- 2 Find the derivative $f'(x)$ of $f(x) = 1 - \frac{3}{x} + \frac{3}{x^2}$.
- ☐ $\frac{3}{x^2} - \frac{6}{x^3}$ ☐ $-\frac{3}{x^2} + \frac{3}{x^3}$ ☐ $1 - \frac{3}{x}$ ☐ $-\frac{3}{x^2} + \frac{6}{x^3}$ ☐ $\frac{3}{x^2} - \frac{3}{x^3}$
- 3 Find the derivative $f'(x)$ of $f(x) = x^{\frac{11}{3}}$.
- ☐ $\frac{9}{3}x^{\frac{8}{3}}$ ☐ $\frac{8}{3}x^{\frac{8}{3}}$ ☐ $\frac{13}{3}x^{\frac{8}{3}}$ ☐ $\frac{11}{3}x^{\frac{8}{3}}$ ☐ $\frac{11}{3}x^{\frac{11}{3}}$
- 4 Find the derivative $f'(x)$ of $f(x) = x^{\frac{7}{2}} - x^{-\frac{11}{4}}$.
- ☐ $\frac{7}{2}x^{-\frac{5}{2}} + \frac{11}{4}x^{-\frac{7}{4}}$ ☐ $\frac{5}{2}x^{\frac{7}{2}} + \frac{11}{4}x^{-\frac{7}{4}}$ ☐ $\frac{7}{2}x^{\frac{7}{2}} + \frac{11}{4}x^{-\frac{7}{4}}$ ☐ $\frac{7}{2}x^{\frac{5}{2}} + \frac{11}{4}x^{-\frac{15}{4}}$
☐ $\frac{7}{2}x^{\frac{5}{2}} - \frac{11}{4}x^{-\frac{15}{4}}$ ☐ $\frac{5}{2}x^{\frac{5}{2}} - \frac{11}{4}x^{\frac{7}{4}}$
- 5 Find the derivative $f'(x)$ of $f(x) = (x^2 + 3)(4x + 6)$.
- ☐ $12x^2 + 12x + 13$ ☐ $12x^2 + 12x$ ☐ $8x$ ☐ $12x^2 + 12x + 12$
- 6 Find the derivative $f'(x)$ of $f(x) = \frac{7}{7x^2 + 4x + 8}$.
- ☐ $\frac{98x + 28}{7x^2 + 4x + 8}$ ☐ $-\frac{98x + 28}{(7x^2 + 4x + 8)^2}$ ☐ $-\frac{98x + 28}{7x^2 + 4x + 8}$ ☐ $\frac{98x + 28}{(7x^2 + 4x + 8)^2}$
- 7 Find the derivative $f'(x)$ of $f(x) = \frac{8x + 5}{3x + 8}$.
- ☐ $\frac{49}{3x + 8}$ ☐ $\frac{57}{3x + 8}$ ☐ $\frac{8}{(3x + 8)^2}$ ☐ $\frac{8}{3x + 8}$ ☐ $\frac{49}{(3x + 8)^2}$
- 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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- ☐ $4x^4 + 5x^3 + 4x^2 + 6x + 7$ ☐ $16x^3 + 15x^2 + 10x + 6$ ☐ $16x^3 + 15x^2 + 8x + 13$
☐ $16x^3 + 15x^2 + 8x + 6$ ☐ $4x^4 + 10x^3 + 4x^2 + 6x$
- 2 Find the derivative $f'(x)$ of $f(x) = 3 - \frac{5}{x} + \frac{2}{x^2}$.
- ☐ $3 - \frac{5}{x}$ ☐ $-\frac{5}{x^2} + \frac{4}{x^3}$ ☐ $-\frac{5}{x^2} + \frac{2}{x^3}$ ☐ $\frac{5}{x^2} - \frac{2}{x^3}$ ☐ $\frac{5}{x^2} - \frac{4}{x^3}$
- 3 Find the derivative $f'(x)$ of $f(x) = x^{\frac{5}{2}}$.
- ☐ $\frac{5}{2}x^{\frac{5}{2}}$ ☐ $\frac{3}{2}x^{\frac{3}{2}}$ ☐ $\frac{3}{2}x^{\frac{3}{2}}$ ☐ $\frac{5}{2}x^{\frac{3}{2}}$ ☐ $\frac{7}{2}x^{\frac{3}{2}}$
- 4 Find the derivative $f'(x)$ of $f(x) = x^{\frac{13}{3}} - x^{-\frac{11}{6}}$.
- ☐ $\frac{13}{3}x^{\frac{10}{3}} - \frac{11}{6}x^{-\frac{17}{6}}$ ☐ $\frac{10}{3}x^{\frac{10}{3}} - \frac{11}{6}x^{\frac{5}{6}}$ ☐ $\frac{13}{3}x^{-\frac{10}{3}} + \frac{11}{6}x^{-\frac{5}{6}}$
☐ $\frac{13}{3}x^{\frac{10}{3}} + \frac{11}{6}x^{-\frac{17}{6}}$ ☐ $\frac{10}{3}x^{\frac{13}{3}} + \frac{11}{6}x^{-\frac{5}{6}}$ ☐ $\frac{13}{3}x^{\frac{13}{3}} + \frac{11}{6}x^{-\frac{5}{6}}$
- 5 Find the derivative $f'(x)$ of $f(x) = (x^2 + 4)(5x + 5)$.
- ☐ $10x$ ☐ $15x^2 + 10x + 20$ ☐ $15x^2 + 10x$ ☐ $15x^2 + 10x + 21$
- 6 Find the derivative $f'(x)$ of $f(x) = \frac{7}{4x^2 + 5x + 5}$.
- ☐ $-\frac{56x+35}{4x^2+5x+5}$ ☐ $-\frac{56x+35}{(4x^2+5x+5)^2}$ ☐ $\frac{56x+35}{4x^2+5x+5}$ ☐ $\frac{56x+35}{(4x^2+5x+5)^2}$
- 7 Find the derivative $f'(x)$ of $f(x) = \frac{2x+3}{7x+2}$.
- ☐ $\frac{2}{7x+2}$ ☐ $\frac{-17}{(7x+2)^2}$ ☐ $\frac{-15}{7x+2}$ ☐ $\frac{2}{(7x+2)^2}$ ☐ $\frac{-17}{7x+2}$
- 8 Find the derivative $f'(x)$ of $f(x) = (2x + 3)^7$.
- ☐ $7(2x + 3)^6$ ☐ $14(2x + 3)^7$ ☐ $14(2x + 3)^6$ ☐ $7(2x + 3)^7$



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17 Apr. 2019

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First name and last name

-
- 1 Find the derivative $f'(x)$ of $f(x) = 7x^4 + 5x^3 + 2x^2 + 2x + 9$.
- ☐ $28x^3 + 15x^2 + 4x + 2$ ☐ $7x^4 + 10x^3 + 2x^2 + 2x$ ☐ $28x^3 + 15x^2 + 4x + 11$
☐ $28x^3 + 15x^2 + 6x + 2$ ☐ $7x^4 + 5x^3 + 2x^2 + 2x + 9$
- 2 Find the derivative $f'(x)$ of $f(x) = 4 - \frac{3}{x} + \frac{4}{x^2}$.
- ☐ $\frac{3}{x^2} - \frac{8}{x^3}$ ☐ $\frac{3}{x^2} - \frac{4}{x^3}$ ☐ $-\frac{3}{x^2} + \frac{4}{x^3}$ ☐ $4 - \frac{3}{x}$ ☐ $-\frac{3}{x^2} + \frac{8}{x^3}$
- 3 Find the derivative $f'(x)$ of $f(x) = x^{\frac{11}{2}}$.
- ☐ $\frac{9}{2}x^{\frac{9}{2}}$ ☐ $\frac{11}{2}x^{\frac{9}{2}}$ ☐ $\frac{9}{2}x^{\frac{9}{2}}$ ☐ $\frac{13}{2}x^{\frac{9}{2}}$ ☐ $\frac{11}{2}x^{\frac{11}{2}}$
- 4 Find the derivative $f'(x)$ of $f(x) = x^{\frac{7}{3}} - x^{-\frac{13}{6}}$.
- ☐ $\frac{7}{3}x^{-\frac{4}{3}} + \frac{13}{6}x^{-\frac{7}{6}}$ ☐ $\frac{7}{3}x^{\frac{4}{3}} - \frac{13}{6}x^{-\frac{19}{6}}$ ☐ $\frac{7}{3}x^{\frac{7}{3}} + \frac{13}{6}x^{-\frac{7}{6}}$ ☐ $\frac{4}{3}x^{\frac{7}{3}} + \frac{13}{6}x^{-\frac{7}{6}}$
☐ $\frac{7}{3}x^{\frac{4}{3}} + \frac{13}{6}x^{-\frac{19}{6}}$ ☐ $\frac{4}{3}x^{\frac{4}{3}} - \frac{13}{6}x^{\frac{7}{6}}$
- 5 Find the derivative $f'(x)$ of $f(x) = (x^2 + 3)(4x + 4)$.
- ☐ $8x$ ☐ $12x^2 + 8x + 12$ ☐ $12x^2 + 8x$ ☐ $12x^2 + 8x + 13$
- 6 Find the derivative $f'(x)$ of $f(x) = \frac{9}{2x^2 + 5x + 4}$.
- ☐ $\frac{36x + 45}{(2x^2 + 5x + 4)^2}$ ☐ $-\frac{36x + 45}{(2x^2 + 5x + 4)^2}$ ☐ $-\frac{36x + 45}{2x^2 + 5x + 4}$ ☐ $\frac{36x + 45}{2x^2 + 5x + 4}$
- 7 Find the derivative $f'(x)$ of $f(x) = \frac{8x + 11}{11x + 2}$.
- ☐ $\frac{8}{(11x + 2)^2}$ ☐ $\frac{-103}{11x + 2}$ ☐ $\frac{-105}{11x + 2}$ ☐ $\frac{-105}{(11x + 2)^2}$ ☐ $\frac{8}{11x + 2}$
- 8 Find the derivative $f'(x)$ of $f(x) = (9x + 8)^{12}$.
- ☐ $108(9x + 8)^{12}$ ☐ $12(9x + 8)^{11}$ ☐ $12(9x + 8)^{12}$ ☐ $108(9x + 8)^{11}$



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17 Apr. 2019

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First name and last name

-
- 1 Find the derivative $f'(x)$ of $f(x) = 7x^4 + 7x^3 + 7x^2 + 2x + 7$.
- ☐ $28x^3 + 21x^2 + 14x + 9$ ☐ $28x^3 + 21x^2 + 14x + 2$ ☐ $28x^3 + 21x^2 + 16x + 2$
☐ $7x^4 + 14x^3 + 7x^2 + 2x$ ☐ $7x^4 + 7x^3 + 7x^2 + 2x + 7$
- 2 Find the derivative $f'(x)$ of $f(x) = 3 - \frac{2}{x} + \frac{5}{x^2}$.
- ☐ $3 - \frac{2}{x}$ ☐ $\frac{2}{x^2} - \frac{5}{x^3}$ ☐ $-\frac{2}{x^2} + \frac{10}{x^3}$ ☐ $-\frac{2}{x^2} + \frac{5}{x^3}$ ☐ $\frac{2}{x^2} - \frac{10}{x^3}$
- 3 Find the derivative $f'(x)$ of $f(x) = x^{\frac{11}{2}}$.
- ☐ $\frac{9}{2}x^{\frac{9}{2}}$ ☐ $\frac{9}{2}x^{\frac{9}{2}}$ ☐ $\frac{13}{2}x^{\frac{9}{2}}$ ☐ $\frac{11}{2}x^{\frac{9}{2}}$ ☐ $\frac{11}{2}x^{\frac{11}{2}}$
- 4 Find the derivative $f'(x)$ of $f(x) = x^{\frac{11}{2}} - x^{-\frac{7}{4}}$.
- ☐ $\frac{9}{2}x^{\frac{9}{2}} - \frac{7}{4}x^{\frac{3}{4}}$ ☐ $\frac{9}{2}x^{\frac{11}{2}} + \frac{7}{4}x^{-\frac{3}{4}}$ ☐ $\frac{11}{2}x^{\frac{9}{2}} - \frac{7}{4}x^{-\frac{11}{4}}$ ☐ $\frac{11}{2}x^{-\frac{9}{2}} + \frac{7}{4}x^{-\frac{3}{4}}$
☐ $\frac{11}{2}x^{\frac{9}{2}} + \frac{7}{4}x^{-\frac{11}{4}}$ ☐ $\frac{11}{2}x^{\frac{11}{2}} + \frac{7}{4}x^{-\frac{3}{4}}$
- 5 Find the derivative $f'(x)$ of $f(x) = (x^2 + 4)(1x + 2)$.
- ☐ $2x$ ☐ $3x^2 + 4x + 5$ ☐ $3x^2 + 4x$ ☐ $3x^2 + 4x + 4$
- 6 Find the derivative $f'(x)$ of $f(x) = \frac{7}{5x^2 + 7x + 9}$.
- ☐ $\frac{70x + 49}{5x^2 + 7x + 9}$ ☐ $-\frac{70x + 49}{5x^2 + 7x + 9}$ ☐ $-\frac{70x + 49}{(5x^2 + 7x + 9)^2}$ ☐ $\frac{70x + 49}{(5x^2 + 7x + 9)^2}$
- 7 Find the derivative $f'(x)$ of $f(x) = \frac{8x + 7}{5x + 2}$.
- ☐ $\frac{8}{5x + 2}$ ☐ $\frac{-19}{5x + 2}$ ☐ $\frac{-17}{5x + 2}$ ☐ $\frac{-19}{(5x + 2)^2}$ ☐ $\frac{8}{(5x + 2)^2}$
- 8 Find the derivative $f'(x)$ of $f(x) = (5x + 3)^7$.
- ☐ $35(5x + 3)^7$ ☐ $35(5x + 3)^6$ ☐ $7(5x + 3)^6$ ☐ $7(5x + 3)^7$



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- 1 Find the derivative $f'(x)$ of $f(x) = 5x^4 + 3x^3 + 7x^2 + 4x + 3$.
- ☐ $20x^3 + 9x^2 + 14x + 7$ ☐ $20x^3 + 9x^2 + 16x + 4$ ☐ $5x^4 + 6x^3 + 7x^2 + 4x$
☐ $5x^4 + 3x^3 + 7x^2 + 4x + 3$ ☐ $20x^3 + 9x^2 + 14x + 4$
- 2 Find the derivative $f'(x)$ of $f(x) = 5 - \frac{3}{x} + \frac{2}{x^2}$.
- ☐ $\frac{3}{x^2} - \frac{4}{x^3}$ ☐ $-\frac{3}{x^2} + \frac{2}{x^3}$ ☐ $-\frac{3}{x^2} + \frac{4}{x^3}$ ☐ $\frac{3}{x^2} - \frac{2}{x^3}$ ☐ $5 - \frac{3}{x}$
- 3 Find the derivative $f'(x)$ of $f(x) = x^{\frac{11}{3}}$.
- ☐ $\frac{9}{3}x^{\frac{8}{3}}$ ☐ $\frac{13}{3}x^{\frac{8}{3}}$ ☐ $\frac{8}{3}x^{\frac{8}{3}}$ ☐ $\frac{11}{3}x^{\frac{11}{3}}$ ☐ $\frac{11}{3}x^{\frac{8}{3}}$
- 4 Find the derivative $f'(x)$ of $f(x) = x^{\frac{11}{3}} - x^{-\frac{11}{5}}$.
- ☐ $\frac{11}{3}x^{-\frac{8}{3}} + \frac{11}{5}x^{-\frac{6}{5}}$ ☐ $\frac{11}{3}x^{\frac{8}{3}} - \frac{11}{5}x^{-\frac{16}{5}}$ ☐ $\frac{11}{3}x^{\frac{8}{3}} + \frac{11}{5}x^{-\frac{16}{5}}$
☐ $\frac{11}{3}x^{\frac{11}{3}} + \frac{11}{5}x^{-\frac{6}{5}}$ ☐ $\frac{8}{3}x^{\frac{8}{3}} - \frac{11}{5}x^{\frac{6}{5}}$ ☐ $\frac{8}{3}x^{\frac{11}{3}} + \frac{11}{5}x^{-\frac{6}{5}}$
- 5 Find the derivative $f'(x)$ of $f(x) = (x^2 + 5)(3x + 7)$.
- ☐ $9x^2 + 14x$ ☐ $6x$ ☐ $9x^2 + 14x + 16$ ☐ $9x^2 + 14x + 15$
- 6 Find the derivative $f'(x)$ of $f(x) = \frac{3}{2x^2 + 3x + 2}$.
- ☐ $-\frac{12x+9}{2x^2+3x+2}$ ☐ $\frac{12x+9}{(2x^2+3x+2)^2}$ ☐ $-\frac{12x+9}{(2x^2+3x+2)^2}$ ☐ $\frac{12x+9}{2x^2+3x+2}$
- 7 Find the derivative $f'(x)$ of $f(x) = \frac{4x+7}{11x+4}$.
- ☐ $\frac{4}{(11x+4)^2}$ ☐ $\frac{-61}{(11x+4)^2}$ ☐ $\frac{4}{11x+4}$ ☐ $\frac{-57}{11x+4}$ ☐ $\frac{-61}{11x+4}$
- 8 Find the derivative $f'(x)$ of $f(x) = (6x + 6)^{11}$.
- ☐ $66(6x + 6)^{10}$ ☐ $11(6x + 6)^{11}$ ☐ $66(6x + 6)^{11}$ ☐ $11(6x + 6)^{10}$



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- 1 Find the derivative $f'(x)$ of $f(x) = 7x^4 + 7x^3 + 2x^2 + 7x + 5$.
☐ $7x^4 + 7x^3 + 2x^2 + 7x + 5$ ☐ $7x^4 + 14x^3 + 2x^2 + 7x$ ☐ $28x^3 + 21x^2 + 4x + 12$
☐ $28x^3 + 21x^2 + 6x + 7$ ☐ $28x^3 + 21x^2 + 4x + 7$
- 2 Find the derivative $f'(x)$ of $f(x) = 2 - \frac{5}{x} + \frac{5}{x^2}$.
☐ $\frac{5}{x^2} - \frac{5}{x^3}$ ☐ $-\frac{5}{x^2} + \frac{10}{x^3}$ ☐ $\frac{5}{x^2} - \frac{10}{x^3}$ ☐ $2 - \frac{5}{x}$ ☐ $-\frac{5}{x^2} + \frac{5}{x^3}$
- 3 Find the derivative $f'(x)$ of $f(x) = x^{\frac{11}{3}}$.
☐ $\frac{11}{3}x^{\frac{11}{3}}$ ☐ $\frac{11}{3}x^{\frac{8}{3}}$ ☐ $\frac{9}{3}x^{\frac{8}{3}}$ ☐ $\frac{13}{3}x^{\frac{8}{3}}$ ☐ $\frac{8}{3}x^{\frac{8}{3}}$
- 4 Find the derivative $f'(x)$ of $f(x) = x^{\frac{11}{2}} - x^{-\frac{7}{6}}$.
☐ $\frac{9}{2}x^{\frac{9}{2}} - \frac{7}{6}x^{\frac{1}{6}}$ ☐ $\frac{11}{2}x^{-\frac{9}{2}} + \frac{7}{6}x^{-\frac{1}{6}}$ ☐ $\frac{11}{2}x^{\frac{9}{2}} - \frac{7}{6}x^{-\frac{13}{6}}$ ☐ $\frac{11}{2}x^{\frac{11}{2}} + \frac{7}{6}x^{-\frac{1}{6}}$
☐ $\frac{9}{2}x^{\frac{11}{2}} + \frac{7}{6}x^{-\frac{1}{6}}$ ☐ $\frac{11}{2}x^{\frac{9}{2}} + \frac{7}{6}x^{-\frac{13}{6}}$
- 5 Find the derivative $f'(x)$ of $f(x) = (x^2 + 3)(5x + 5)$.
☐ $15x^2 + 10x + 15$ ☐ $10x$ ☐ $15x^2 + 10x + 16$ ☐ $15x^2 + 10x$
- 6 Find the derivative $f'(x)$ of $f(x) = \frac{5}{9x^2 + 7x + 3}$.
☐ $-\frac{90x+35}{(9x^2+7x+3)^2}$ ☐ $\frac{90x+35}{9x^2+7x+3}$ ☐ $\frac{90x+35}{(9x^2+7x+3)^2}$ ☐ $-\frac{90x+35}{9x^2+7x+3}$
- 7 Find the derivative $f'(x)$ of $f(x) = \frac{8x+11}{5x+8}$.
☐ $\frac{8}{(5x+8)^2}$ ☐ $\frac{17}{5x+8}$ ☐ $\frac{9}{5x+8}$ ☐ $\frac{8}{5x+8}$ ☐ $\frac{9}{(5x+8)^2}$
- 8 Find the derivative $f'(x)$ of $f(x) = (3x + 2)^{11}$.
☐ $33(3x + 2)^{10}$ ☐ $11(3x + 2)^{11}$ ☐ $11(3x + 2)^{10}$ ☐ $33(3x + 2)^{11}$