



Aufgabe A1

Leite ab und vereinfache.

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|--|--|---------------------------|
| a) $f(x) = (2x + 3)^2$ | b) $f(x) = \left(-\frac{1}{2}x + 4\right)^2$ | c) $f(x) = (3 - 9x)^2$ |
| d) $f(x) = \left(-2 - \frac{1}{3}x\right)^2$ | e) $f(x) = 5(2x^2 + 3)^2$ | f) $f(x) = 2(4 - 3x^2)^3$ |
| g) $f(x) = \frac{1}{2}(3x + 2)^6$ | h) $f(x) = \frac{1}{8}\left(\frac{1}{2} - 4x^2\right)^7$ | i) $f(x) = (a + bx)^2$ |

Aufgabe A2

Leite ab und vereinfache.

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|---|--|---------------------------------|
| a) $f(x) = (1 + 2x)^2$ | b) $f(x) = (3 - x)^3$ | c) $f(x) = (x + x^2)^2$ |
| d) $f(x) = (1 + x^3)^4$ | e) $g(x) = (x^3 - 2x)^4$ | f) $g(x) = (5x + x^2)^2$ |
| g) $f(t) = (t^3 - 4t^2)^2$ | h) $g(t) = (a^3 - t^3)^4$ | i) $f(x) = (2 - 3x + x^2)^3$ |
| j) $h(x) = \left(1 - x + \frac{1}{2}x^3\right)^2$ | k) $f(a) = \left(-\frac{1}{2}a^2 + a\sqrt{2}\right)^3$ | l) $f(x) = (x\sqrt{2} - x^2)^3$ |

Aufgabe A3

Leite ab und vereinfache.

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|--------------------------------------|---------------------------------|----------------------------------|
| a) $f(x) = (8x - 7)^{-1}$ | b) $f(x) = (12 - 3x)^{-1}$ | c) $f(x) = 2(5 - x)^{-1}$ |
| d) $f(x) = \frac{1}{4}(7 - 2x)^{-1}$ | e) $f(x) = (15x - 3)^{-2}$ | f) $f(x) = \frac{1}{(x-2)^2}$ |
| g) $f(x) = \frac{3}{(5-x)^2}$ | h) $f(x) = \frac{7}{(8-3x)^3}$ | i) $f(x) = \frac{1}{2(x-7)^3}$ |
| j) $f(x) = \frac{5}{(x^2-1)^2}$ | k) $f(x) = \frac{2}{(3-x^2)^3}$ | l) $f(x) = \frac{8}{(5-4x^2)^4}$ |

Aufgabe A4

Leite ab und vereinfache.

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|---|---------------------------------------|
| a) $f(x) = 5x^3 - \frac{3}{2}x^2 + 2x + 1$ | b) $f(x) = 6e^x - 2\sin(x)$ |
| c) $f(x) = 7e^{2x-3} + 4$ | d) $f(x) = 5\cos(4x - 3) + \sin(1,5)$ |
| e) $f(x) = \frac{1}{2}e^4 - 3x - 5\cos(\pi(x - 3))$ | f) $f(x) = (x - 3) \cdot e^{2x}$ |
| g) $f(x) = 8x\sin(3x)$ | h) $f(x) = \cos(x) \cdot e^{4x}$ |