

$$f(x) = \frac{x^3 - 1}{2x^2}$$

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$$Z = x^3 - 1 \quad N = 2x^2$$

$$Z' = 3x^2 \quad N' = 4x$$

$$\begin{aligned} f'(x) &= \frac{3x^2 \cdot 2x^2 - (x^3 - 1) \cdot 4x}{(2x^2)^2} \\ &= \frac{6x^4 - 4x^4 + 4x}{4x^4} \\ &= \frac{2x^4 + 4x}{4x^4} \\ &= \frac{2x(x^3 + 2)}{4x^4} \\ &= \frac{x^3 + 2}{2x^3} \end{aligned}$$