

Ex 2.8.11

$$j) f(x) = \frac{1}{\sqrt[3]{x^2}} = \frac{1}{x^{2/3}} = x^{-2/3}$$

$$\begin{aligned} f'(x) &= -\frac{2}{3} x^{-\frac{2}{3}-1} = -\frac{2}{3} x^{-\frac{5}{3}} = -\frac{2}{3} \cdot \frac{1}{x^{5/3}} \\ &= -\frac{2}{3} \cdot \frac{1}{\sqrt[3]{x^5}} = -\frac{2}{\sqrt[3]{x^5}} \end{aligned}$$