5.11 $$\left(\frac{f}{g}\right)'(x) = \left(f \cdot \frac{1}{g}\right)'(x) = f'(x) \cdot \frac{1}{g}(x) + f(x) \cdot \left(\frac{1}{g}\right)'(x) = \frac{f'(x)}{g(x)} + f(x) \cdot \frac{-g'(x)}{g^2(x)}$$
$$= \frac{f'(x)\,g(x)}{g^2(x)} - \frac{f(x)\,g'(x)}{g^2(x)} = \frac{f'(x)\,g(x) - f(x)\,g'(x)}{g^2(x)}$$