## Exploiting Derivative Rules

Every differentiation rule $F^{\prime}(x)=f(x)$ corresponds to a rule for finding the anti-derivative $F(x)$ of some function $f$.
a) Find an anti-derivative rule that is the inverse of the sum rule $(f+g)^{\prime}(x)=$ $f^{\prime}(x)+g^{\prime}(x)$.
b) Find an anti-derivative rule that is the inverse of the product rule $(f \cdot g)^{\prime}(x)=$ $f(x) g^{\prime}(x)+f^{\prime}(x) g(x)$.

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