REVIEW: DERIVATIVE AND INTEGRATION RULES

The left column is for differentiation rules. The right column is for the corresponding integration rule *if such a rule exists*.

Differentiation Rules	Integration Rules
(a) $\dfrac{d}{dx}\left(\tan(x)\right) =$	
(b) $\dfrac{d}{dx}\left(k \cdot g(x)\right) =$ k is a constant	
(c) $\dfrac{d}{dx}\left(e^x\right) =$	
(d) $\dfrac{d}{dx}\left(x^k\right) =$	
(e) $\dfrac{d}{dx}\left(\ln(x)\right) =$	
(f) $\dfrac{d}{dx}\left(x^k\right) =$ $k \neq -1$	
(g) $\dfrac{d}{dx}\left(\sin(x)\right) =$	
(h) $\dfrac{d}{dx}\left(\cos(x)\right) =$	
(i) $\dfrac{d}{dx}\left(\sec(x)\right) =$	

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Differentiation Rules	Integration Rules
(j) $\dfrac{d}{dx}\left(\arcsin(x)\right) =$	
(k) $\dfrac{d}{dx}\left(c\right) =$ c is a constant	
(l) $\dfrac{d}{dx}\left(\arctan(x)\right) =$	
(m) $\dfrac{d}{dx}\left(f(x) \cdot g(x)\right) =$	
(n) $\dfrac{d}{dx}\left(\dfrac{f(x)}{g(x)}\right) =$	
(o) $\dfrac{d}{dx}\left(f(g(x))\right) =$	
(p) $\dfrac{d}{dx}\left(f(x) + g(x)\right) =$	
(q) $\dfrac{d}{dx}\left(\csc(x)\right) =$	
(r) $\dfrac{d}{dx}\left(\cot(x)\right) =$	
(s) $\dfrac{d}{dx}\left(2^x\right) =$	