

## Differentiation Rules Benchmark # 8

1.	$\frac{d}{dx}[\sin(2^x)]$	
2.	$\frac{d}{dx}\left[\frac{g(x)}{h(x)}\right]$	
3.	$\frac{d}{dx}[\ln(5x)]$	
4.	$\frac{d}{dx}[\operatorname{arccot}(2x)]$	
5.	$f(x) = 10x^3 + x + 5$ $(f^{-1})'(2)$	SETUP ONLY!! You don't need to solve for the value.
6.	$\frac{d}{dx}[2e^5]$	
7.	$\frac{d}{dx}[k(x) \cdot m(x)]$	
8.	$\frac{d}{dx}[\cos(\sin(x))]$	
9.	$\frac{d}{dx}[e^{x-1}]$	
10.	$k$ is a constant $\frac{d}{dx}[k \cdot g(x)]$	
11.	$\frac{d}{dx}[\sec(x^{-1})]$	
12.	$\frac{d}{dx}[(2x^2 + 3)^3]$	

13.	$\frac{d}{dx}[\cot(2x)]$	
14.	$\frac{d}{dx}[\operatorname{arccsc}(-x)]$	
15.	$\frac{d}{dx}[x]$	
16.	$\frac{d}{dx}[ -x^2 ]$	
17.	$\frac{d}{dx}[3^{x^2+2x+1}]$	
18.	$\frac{d}{dx}[\arctan(-x)]$	
19.	$\frac{d}{dx}[\log_4(e^x + 4)]$	
20.	$\frac{d}{dx}[k(x) \mp m(x)]$	
21.	$\frac{d}{dx}[\arccos(\tan(x))]$	
22.	$\frac{d}{dx}[\arcsin(\ln(x))]$	
23.	$\frac{d}{dx}[\tan(x^2)]$	
24.	$\frac{d}{dx}[\operatorname{arcsec}(5x)]$	
25.	$\frac{d}{dx}[\csc(\ln(x))]$	
26.	$\frac{d}{dx}[k(m(x))]$	