AP Calculus Name:_____

Differentiation Rules Benchmark #10 Period:_____ Date:_____

1.	c is a constant $\frac{d}{dx}\left[c \cdot k(x)\right]$	
2.	$\frac{d}{dx}\left[w(x) \pm v(x)\right]$	
3.	$\frac{d}{dx}\left[m(x) \cdot b(x)\right]$	
4.	$\frac{d}{dx}\left[\frac{r(x)}{f(x)}\right]$	
5.	$\frac{d}{dx}\left[g(g(x))\right]$	
6.	$\frac{d}{dx}\left[3\pi^2\right]$	
7.	$\frac{d}{dx}\left[\left(\ln(x)+3x\right)^3\right]$	
8.	$\frac{d}{dx}\left[x\right]$	
9.	$\frac{d}{dx}\left[\left\|\sec(x)\right\|\right]$	
10.	$\frac{d}{dx}\left[\sin(-x)\right]$	
11.	$\frac{d}{dx}\left[\cos\left(3e^x\right)\right]$	
12.	$\frac{d}{dx}\left[\tan(\ln(x))\right]$	
13.	$\frac{d}{dx}\left[\csc\left(3x^2+x\right)\right]$	

14.	$\frac{d}{dx}\left[\sec\left(\frac{2}{x^2}\right)\right]$	
15.	$\frac{d}{dx}\left[\cot\left(5^x\right)\right]$	
16.	$\frac{d}{dx}\left[\ln\left(-\cos\left(x\right)\right)\right]$	
17.	$\frac{d}{dx}\left[e^{2\tan(x)+4}\right]$	
18.	$\frac{d}{dx}\left[\log_3\left(\ln\left(x\right)\right)\right]$	
19.	$\frac{d}{dx}\left[2\cdot 3^{x^2-\sin(x)}\right]$	
20.	$\frac{d}{dx}\left[\arcsin\left(x^{-1}\right)\right]$	
21.	$\frac{d}{dx}\left[\arctan\left(2x^3\right)\right]$	
22.	$\frac{d}{dx}\left[\operatorname{arcsec}\left(e^x\right)\right]$	
23.	$\frac{d}{dx}\left[\arccos\left(\tan\left(x\right)\right)\right]$	
24.	$\frac{d}{dx}\left[\operatorname{arccot}\left(6x\right)\right]$	
25.	$\frac{d}{dx}\left[\operatorname{arccsc}\left(1-x\right)\right]$	
26.	$\left(f^{-1}\right)'(3)$	