Table of Derivatives and Differentiation Technique

$f(x)$	$f'(x)$
c	0
x^n	nx^{n-1}
e^x	e^x
$\ln(x)$	$\frac{1}{x}$
a^x	$a^x \ln(a)$
$\log_a(x)$	$\dfrac{1}{x\ln(a)}$

$f(x)$	$f'(x)$
$\sin(x)$	$\cos(x)$
$\cos(x)$	$-\sin(x)$
$\tan(x)$	$\sec^2(x)$
$\cot(x)$	$-\csc^2(x)$
$\sec(x)$	$\sec(x)\tan(x)$
$\csc(x)$	$-\csc(x)\cot(x)$
$\sin^{-1}(x)$	$\dfrac{1}{\sqrt{1-x^2}}$
$\tan^{-1}(x)$	$\dfrac{1}{1+x^2}$

And for general functions:

$f(x)$	$f'(x)$	
cf	cf'	
$f \pm g$	$f' \pm g'$	Sum Rule
$f \cdot g$	$f'g + fg'$	Product Rule
$1/g$	$-\dfrac{g'}{g^2}$	Reciprocal Rule
f/g	$\dfrac{f'g - fg'}{g^2}$	Quotient Rule
$f(g(x))$	$f'(g(x))g'(x)$	Chain Rule
$y = f(x)^{g(x)}$	$\ln(y) = g(x)\ln(f(x))$	Logarithmic Diff
Eqn in x, y		Implicit Diff

NOTE: We don't actually need the general exponential and the general log, since:

$$a^x = e^{\ln(a)\cdot x} \qquad \log_a(x) = \frac{1}{\ln(a)}\ln(x)$$