

You should memorize all of the following.

Derivatives:

$f(x)$	$f'(x)$	$f(x)$	$f'(x)$
x^n	nx^{n-1} (Power Rule)	$\csc x$	$-\cot x \csc x$
e^x	e^x	$\cot x$	$-\csc^2 x$
e^{kx}	ke^{kx}	$\arctan x$	$\frac{1}{1+x^2}$
b^x	$b^x \ln(b)$	$\ln x$	$\frac{1}{x}$
$\sin x$	$\cos x$	$\log_b x$	$\frac{1}{x \ln(b)}$
$\cos x$	$-\sin x$		
$\tan x$	$\sec^2 x$		
$\sec x$	$\sec x \tan x$		

Also know: Product Rule, Chain Rule, Quotient Rule

Antiderivatives:

Function	Antiderivative
$x^n \ (n \neq -1)$	$\frac{1}{n+1} x^{n+1}$
$\frac{1}{x}$	$\ln x $
e^x	e^x
b^x	$\frac{1}{\ln b} b^x$
$\cos x$	$\sin x$
$\sin x$	$-\cos x$
$\sec^2 x$	$\tan x$
$\sec x \tan x$	$\sec x$
$\frac{1}{1+x^2}$	$\arctan x$