

$f(x)$	$f'(x)$	$\int f(x)dx$
$k$	$0$	$kx$
$x^n$	$nx^{n-1}$	$\frac{1}{n+1}x^{n+1} \quad (n \neq -1)$
$x^{-1}$		$\ln( x )$
$\sin(x)$	$\cos(x)$	$-\cos(x)$
$\cos(x)$	$-\sin(x)$	$\sin(x)$
$e^{kx}$	$ke^{kx}$	$\frac{1}{k}e^{kx}$
$b^x$	$\ln(b)b^x$	$\frac{1}{\ln(b)}b^x$
$\ln(x)$	$\frac{1}{x}$	
$cf(x)$	$cf'(x)$	$c \int f(x)dx$
$f(x) + g(x)$	$f'(x) + g'(x)$	$\int f(x)dx + \int g(x)dx$
$f(g(x))$	$f'(g(x))g'(x)$	
$f(x)g(x)$	$f'(x)g(x) + f(x)g'(x)$	
$\frac{f(x)}{g(x)}$	$\frac{f'(x)g(x) - f(x)g'(x)}{g(x)^2}$	

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$\int_a^b f(x)dx = F(b) - F(a)$$

$$\int f(g(x))g'(x)dx = \int f(u)du, \quad u = g(x), \quad du = g'(x)dx$$

$$\int u \, dv = u \, v - \int v \, du$$

$$V = \int_a^b \pi(f(x))^2 dx$$

All integrals listed here do not include the arbitrary constant of integration.