Integrals of Inverse Trig Functions

TABLE 4.2 Antiderivative formulas, k a nonzero constant

	Function	General antiderivative		Function	General antiderivative
1.	x^n	$\dfrac{1}{n+1}x^{n+1} + C, \quad n \neq -1$	8.	e^{kx}	$\dfrac{1}{k}e^{kx} + C$
2.	$\sin kx$	$-\dfrac{1}{k}\cos kx + C$	9.	$\dfrac{1}{x}$	$\ln|x| + C, \quad x \neq 0$
3.	$\cos kx$	$\dfrac{1}{k}\sin kx + C$	10.	$\dfrac{1}{\sqrt{1 - k^2x^2}}$	$\dfrac{1}{k}\sin^{-1} kx + C$
4.	$\sec^2 kx$	$\dfrac{1}{k}\tan kx + C$	11.	$\dfrac{1}{1 + k^2x^2}$	$\dfrac{1}{k}\tan^{-1} kx + C$
5.	$\csc^2 kx$	$-\dfrac{1}{k}\cot kx + C$	12.	$\dfrac{1}{x\sqrt{k^2x^2 - 1}}$	$\sec^{-1} kx + C, \quad kx > 1$
6.	$\sec kx \tan kx$	$\dfrac{1}{k}\sec kx + C$	13.	a^{kx}	$\left(\dfrac{1}{k \ln a}\right)a^{kx} + C, \quad a > 0, \ a \neq 1$
7.	$\csc kx \cot kx$	$-\dfrac{1}{k}\csc kx + C$			