

$$15. \int (\theta - \csc \theta \cot \theta) d\theta$$

$$= \frac{\theta^2}{2} + \csc \theta + C$$

$$13. \int (\sin x + \sinh x) dx$$

$$\text{II. } \int \frac{x^3 - 2\sqrt{x}}{x} dx$$

$$= \int \frac{x^3}{x} - \frac{2\sqrt{x}}{x} dx$$

$$= \int x^2 - \frac{2}{\sqrt{x}} dx = \int x^2 - 2x^{-\frac{1}{2}} dx$$

$$= \frac{x^3}{3} - 2 \frac{x^{\frac{1}{2}}}{\frac{1}{2}} + C = \frac{x^3}{3} - 4x^{\frac{1}{2}} + C$$

$$17. \int (1 + \tan^2 \alpha) d\alpha$$

$$= \int \sec^2 \alpha d\alpha = \tan \alpha + C$$

$$\int x^n dx = \frac{x^{n+1}}{n+1} + c$$

$$\int f(x) dx = F(x)$$

$f(x)$	$F(x)$	$+c$
$\sin x$	$-\cos x$	\downarrow
$\cos x$	$\sin x$	
$\sec^2 x$	$\tan x$	
$\sec x \tan x$	$\sec x$	
$-\csc^2 x$	$\cot x$	
$-\csc x \cot x$	$\csc x$	
$\frac{1}{1+x^2}$	$\arctan x$	
$\frac{1}{\sqrt{1-x^2}}$	$\arcsin x$	
e^x	e^x	
k	kx	
$\frac{1}{x}$	$\ln x$	