

# Summary of Functions

$f(x)$	How to deal with it	$\int f(x)dx$ (+constant)	Formula booklet?
$\sin x$			No
$\cos x$			No
$\tan x$			Yes
$\sin^2 x$			No
$\cos^2 x$			No
$\tan^2 x$			No
$\operatorname{cosec} x$			Yes
$\sec x$			Yes
$\cot x$			Yes

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$f(x)$	How to deal with it	$\int f(x)dx$ (+constant)	Formula booklet?
$\operatorname{cosec}^2 x$			No!
$\sec^2 x$			Yes (but memorise)
$\cot^2 x$			No
$\sin 2x \cos 2x$			No
$\frac{1}{x}$			No
$\ln x$			No
$\frac{x}{x+1}$			
$\frac{1}{x(x+1)}$			

$f(x)$	How to deal with it	$\int f(x)dx$ (+constant)
$\frac{4x}{x^2+1}$		
$\frac{x}{(x^2+1)^2}$		
$e^{2x+1}$		
$\frac{1}{1-3x}$		
$x\sqrt{2x+1}$		
$\sin^5 x \cos x$		