

$\varphi$	0	$\frac{\pi}{6}$	$\frac{\pi}{4}$	$\frac{\pi}{3}$	$\frac{\pi}{2}$	$\frac{2\pi}{3}$	$\frac{3\pi}{4}$	$\frac{5\pi}{6}$	$\pi$	$\frac{7\pi}{6}$	$\frac{5\pi}{4}$	$\frac{4\pi}{3}$	$\frac{3\pi}{2}$	$\frac{5\pi}{3}$	$\frac{7\pi}{4}$	$\frac{11\pi}{6}$
$\cos \varphi$	1	$\frac{\sqrt{3}}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{1}{2}$	0	$-\frac{1}{2}$	$-\frac{\sqrt{2}}{2}$	$-\frac{\sqrt{3}}{2}$	-1	$-\frac{\sqrt{3}}{2}$	$-\frac{\sqrt{2}}{2}$	$-\frac{1}{2}$	0	$\frac{1}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{\sqrt{3}}{2}$
$\sin \varphi$	0	$\frac{1}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{\sqrt{3}}{2}$	1	$\frac{\sqrt{3}}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{1}{2}$	0	$-\frac{1}{2}$	$-\frac{\sqrt{2}}{2}$	$-\frac{\sqrt{3}}{2}$	-1	$-\frac{\sqrt{3}}{2}$	$-\frac{\sqrt{2}}{2}$	$-\frac{1}{2}$

$$\operatorname{tg} x = \frac{\sin x}{\cos x}, \quad \operatorname{ctg} x = \frac{\cos x}{\sin x}, \quad \sin(x + 2k\pi) = \sin x, \quad \cos(x + 2k\pi) = \cos x,$$

$\operatorname{tg}(x + k\pi) = \operatorname{tg} x$ ,  $\operatorname{ctg}(x + k\pi) = \operatorname{ctg} x$ , gdzie  $k$  jest liczbą całkowitą;

$$\sin^2 x + \cos^2 x = 1, \quad \sin 2x = 2 \sin x \cos x, \quad \cos 2x = \cos^2 x - \sin^2 x.$$

POCHODNE FUNKCJI
$(c)' = 0$
$(x^\alpha)' = \alpha x^{\alpha-1}$
$(e^x)' = e^x$
$(a^x)' = a^x \ln a$
$(\ln x)' = \frac{1}{x}$
$(\log_a x)' = \frac{1}{x \ln a}$
$(\sin x)' = \cos x$
$(\cos x)' = -\sin x$
$(\operatorname{tg} x)' = \frac{1}{\cos^2 x}$
$(\operatorname{ctg} x)' = -\frac{1}{\sin^2 x}$
$(\operatorname{arc} \sin x)' = \frac{1}{\sqrt{1-x^2}}$
$(\operatorname{arc} \cos x)' = -\frac{1}{\sqrt{1-x^2}}$
$(\operatorname{arc} \operatorname{tg} x)' = \frac{1}{1+x^2}$
$(\operatorname{arc} \operatorname{ctg} x)' = -\frac{1}{1+x^2}$
$(\operatorname{sh} x)' = \operatorname{ch} x$
$(\operatorname{ch} x)' = \operatorname{sh} x$
$(\operatorname{th} x)' = \frac{1}{\operatorname{ch}^2 x}$
$(\operatorname{cth} x)' = -\frac{1}{\operatorname{sh}^2 x}$

WZORY CAŁKOWE
$\int 0 dx = C$
$\int dx = x + C$
$\int x^\alpha dx = \frac{x^{\alpha+1}}{\alpha+1} + C \quad \text{dla } \alpha \neq -1$
$\int \frac{1}{x} dx = \ln  x  + C$
$\int e^x dx = e^x + C$
$\int a^x dx = \frac{a^x}{\ln a} + C$
$\int \sin x dx = -\cos x + C$
$\int \cos x dx = \sin x + C$
$\int \frac{1}{\sin^2 x} dx = -\operatorname{ctg} x + C$
$\int \frac{1}{\cos^2 x} dx = \operatorname{tg} x + C$
$\int \frac{1}{1+x^2} dx = \operatorname{arc} \operatorname{tg} x + C$
$\int \frac{1}{\sqrt{1-x^2}} dx = \operatorname{arc} \sin x + C$
$\int \operatorname{sh} x dx = \operatorname{ch} x + C$
$\int \operatorname{ch} x dx = \operatorname{sh} x + C$
$\int \frac{1}{\operatorname{sh}^2 x} dx = -\operatorname{cth} x + C$
$\int \frac{1}{\operatorname{ch}^2 x} dx = \operatorname{th} x + C$
$\int \frac{1}{\sqrt{x^2+k}} dx = \ln  x + \sqrt{x^2+k}  + C,$
$\int \sqrt{x^2+k} dx = \frac{x}{2} \sqrt{x^2+k} + \frac{k}{2} \ln  x + \sqrt{x^2+k}  + C$
$\int \sqrt{a^2-x^2} dx = \frac{x}{2} \sqrt{a^2-x^2} + \frac{a^2}{2} \operatorname{arc} \sin \frac{x}{ a } + C$