Pochodne		Całki	
$f(x)$	$f'(x)$	$f(x)$	$\int f(x)\,dx$
C C-stała	0	0	C
x^α α-stała	$\alpha x^{\alpha-1}$	1	$x+C$
$\sqrt{x}$	$\frac{1}{2\sqrt{x}}$	x	$\frac{x^2}{2}+C$
$\frac{1}{x}$	$-\frac{1}{x^2}$	x^α $\alpha-$stała $\alpha\neq-1$	$\frac{x^{\alpha+1}}{\alpha+1}+C$
a^x $a-$stała $a>0,\ a\neq1$	$a^x\ln a$	$\frac{1}{x}$	$\ln\lvert x\rvert+C$
e^x	e^x	a^x $a-$stała $a>0,\ a\neq1$	$\frac{a^x}{\ln a}+C$
$\log_a x$ $a-$stała $a>0,\ a\neq1$	$\frac{1}{x\ln a}$	e^x	e^x+C
$\ln x$	$\frac{1}{x}$	$\sin x$	$-\cos x+C$
$\sin x$	$\cos x$	$\cos x$	$\sin x+C$
$\cos x$	$-\sin x$	$\frac{1}{\sqrt{1-x^2}}$	$\arcsin x+C$
$\operatorname{tg} x$	$\frac{1}{\cos^2 x}$	$\frac{1}{1+x^2}$	$\operatorname{arc\,tg} x+C$
$\operatorname{ctg} x$	$-\frac{1}{\sin^2 x}$		
$\arcsin x$	$\frac{1}{\sqrt{1-x^2}}$	$\frac{1}{\cos^2 x}$	$\operatorname{tg} x+C$
$\arccos x$	$-\frac{1}{\sqrt{1-x^2}}$	$\frac{-1}{\sin^2 x}$	$\operatorname{ctg} x+C$
$\operatorname{arc\,tg} x$	$\frac{1}{1+x^2}$		
$\operatorname{arc\,ctg} x$	$-\frac{1}{1+x^2}$	$\operatorname{tg} x$	$-\ln\lvert\cos x\rvert+C$
		$\operatorname{ctg} x$	$\ln\lvert\sin x\rvert+C$
$\sinh x$	$\cosh x$	$\ln x$	$x(\ln x-1)+C$
$\cosh x$	$\sinh x$	$\log_a x$	$\frac{x(\ln x-1)}{\ln a}+C$
$\operatorname{tgh} x$	$\frac{1}{\cosh^2 x}$		
$\operatorname{ctgh} x$	$-\frac{1}{\sinh^2 x}$		

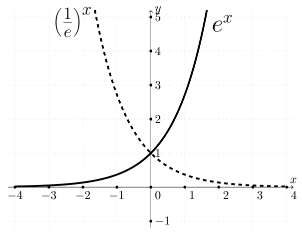
Styczna: $y-y_0=f'(x_0)(x-x_0)$

Normalna: $y-y_0=-\frac{1}{f'(x_0)}(x-x_0)$

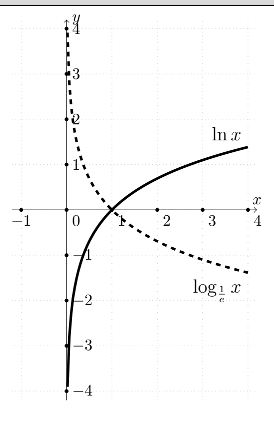
Kąt przecięcia krzywych: $\operatorname{tg}\alpha=\left|\frac{f'(x_0)-g'(x_0)}{1+f'(x_0)g'(x_0)}\right|$

Wzór Tylora: $f(x)=\sum_{k=0}^{n}\frac{(x-a)^k}{k!}f^{(k)}(a)+R_n(x,a)$

$$a^m\cdot a^n = a^{m+n}$$
$$\frac{a^m}{a^n} = a^{m-n}$$
$$(a^m)^n = a^{m\cdot n}$$
$$a^n\cdot b^n = (a\cdot b)^n$$
$$\frac{a^n}{b^n} = \left(\frac{a}{b}\right)^n$$
$$\sqrt[n]{a^m} = a^{\frac{m}{n}}$$
$$a^{-n} = \frac{1}{a^n}$$



$$x=a^{\log_a x}$$
$$\log_a(b^n)=n\log_a b$$
$$\log_a(b\cdot c)=\log_a b+\log_a c$$
$$\log_a\left(\frac{b}{c}\right)=\log_a b-\log_a c$$
$$\ln x=\log_e x$$
$$\log x=\log_{10} x$$
$$\log_a b=\frac{\log_c b}{\log_c a}$$
$$e=\lim_{n\to\infty}\left(1+\frac{1}{n}\right)^n$$
$$e=\sum_{n=0}^{\infty}\frac{1}{n!}=1+1+\frac{1}{2}+\frac{1}{6}+\frac{1}{24}+\ldots$$
$$e\approx 2,718281828459$$



Własności pochodnych	
$[k\,f(x)]'=k\,f'(x)$	$[f(x)\pm g(x)]'=f'(x)\pm g'(x)$

$$[f(x)\cdot g(x)]'=f'(x)\cdot g(x)+f(x)\cdot g'(x)$$
$$\left[\frac{f(x)}{g(x)}\right]'=\frac{f'(x)g(x)-f(x)g'(x)}{[g(x)]^2}$$
$$[f(g(x))]'=f'(g(x))\cdot g'(x)$$
$$\left[(f(x))^{(g(x))}\right]'=(f(x))^{(g(x))}\left(g'(x)\ln f(x)+\frac{g(x)}{f(x)}f'(x)\right)$$

Własności całek

$$\int k\,f(x)\,dx=k\int f(x)\,dx$$
$$\int(f(x)\pm g(x))\,dx=\int f(x)\,dx\pm\int g(x)\,dx$$
$$\int f(g(x))\,g'(x)\,dx=\left\{\begin{matrix}g(x)=t\\ g'(x)\,dx=dt\end{matrix}\right\}=\int f(t)\,dt$$
$$\int f(x)g'(x)\,dx=f(x)g(x)-\int f'(x)g(x)\,dx$$

Dodatkowe wzory całkowe

$\int\sin\alpha x\,dx=-\frac{1}{\alpha}\cos\alpha x+C$	$\int\cos\alpha x\,dx=\frac{1}{\alpha}\sin\alpha x+C$
$\int e^{\alpha x}dx=\frac{1}{\alpha}e^{\alpha x}+C$	
$\int\frac{dx}{x^2+a^2}\,dx=\frac{1}{a}\operatorname{arc\,tg}\frac{x}{a}+C$	$\int\frac{dx}{x^2-a^2}\,dx=\frac{1}{2a}\ln\frac{x-a}{x+a}+C$
$\int\frac{f'(x)}{f(x)}dx=\ln\lvert f(x)\rvert+C$	$\int\frac{dx}{\sqrt{a^2-x^2}}dx=\arcsin\frac{x}{a}+C$
$\int\frac{dx}{\sqrt{q+x^2}}dx=\ln\left(x+\sqrt{q+x^2}\right)+C$	

Podstawienie trygonometryczne

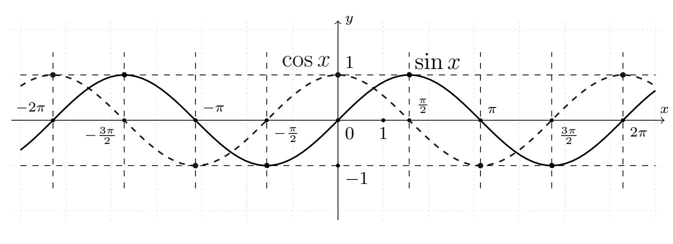
$t=\operatorname{tg}\frac{x}{2}$	$\sin x=\frac{2t}{1+t^2}$	$\cos x=\frac{1-t^2}{1+t^2}$
$\operatorname{tg} x=\frac{2t}{1-t^2}$	$\operatorname{ctg} x=\frac{1-t^2}{2t}$	$dx=\frac{2\,dt}{1+t^2}$

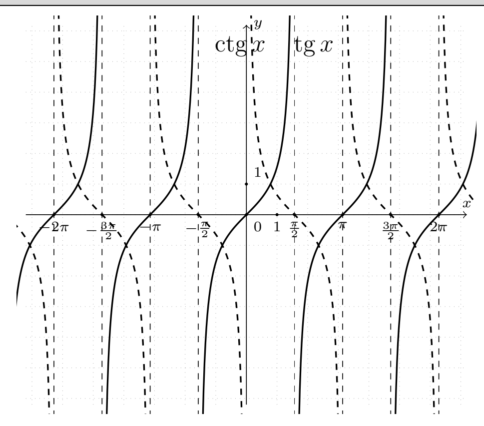
Trygonometria

$\sin^2 x+\cos^2 x=1$	$\operatorname{tg}\alpha=\frac{\sin\alpha}{\cos\alpha}$	$\operatorname{ctg}\alpha=\frac{1}{\operatorname{tg}\alpha}=\frac{\cos\alpha}{\sin\alpha}$
$\operatorname{tg}\alpha\cdot\operatorname{ctg}\alpha=1$	$\sin 2x=2\sin x\cos x$	$\cos 2x=\cos^2 x-\sin^2 x$

$$\sin\alpha\sin\beta=\frac{1}{2}(\cos(\alpha-\beta)-\cos(\alpha+\beta))$$
$$\cos\alpha\cos\beta=\frac{1}{2}(\cos(\alpha-\beta)+\cos(\alpha+\beta))$$
$$\sin\alpha\cos\beta=\frac{1}{2}(\sin(\alpha-\beta)-\sin(\alpha+\beta))$$
$$\sin(\alpha+\beta)=\sin\alpha\cos\beta+\cos\alpha\sin\beta$$
$$\cos(\alpha+\beta)=\cos\alpha\cos\beta-\sin\alpha\sin\beta$$

Część z podanych tutaj wzorów wymaga dodatkowych założeń lub działa w ograniczonym zakresie





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