

Function	Series	Sum	Derived From
$\sin x$	$x - \frac{x^3}{3!} + \frac{x^5}{5!} + \dots$	$\sum_{k=0} \frac{(-1)^k x^{2k+1}}{(2k+1)!}$	raw
$\cos x$	$1 - \frac{x^2}{2!} + \frac{x^4}{4!} + \dots$	$\sum_{k=0} \frac{(-1)^k x^{2k}}{(2k)!}$	raw
e^x	$1 + x + \frac{x^2}{2!} + \frac{x^3}{3!} + \dots$	$\sum_{k=0} \frac{x^k}{k!}$	raw
$\frac{1}{1-x}$	$1 + x + x^2 + x^3 + \dots$	$\sum_{k=0} (-x)^k$	geometric series
$\ln x$	$(x-1)x - \frac{(x-1)x^2}{2!} + \frac{(x-1)x^3}{3!}$		