

scalar — Scalar mathematical functions

[Contents](#)
 [Description](#)
 [Remarks and examples](#)
 [Also see](#)

Contents

[M-5] Manual entry	Function	Purpose
<div style="border: 1px solid black; padding: 2px; display: inline-block;">Complex</div>		
Re()	Re() Im()	real part imaginary part
C()	C()	make complex
<div style="border: 1px solid black; padding: 2px; display: inline-block;">Sign related</div>		
abs()	abs()	absolute value (length if complex)
sign()	sign() quadrant()	sign function quadrant of value
dsign()	dsign()	FORTRAN-like DSIGN function
conj()	conj()	complex conjugate
<div style="border: 1px solid black; padding: 2px; display: inline-block;">Transcendental & square root</div>		
exp()	exp() ln(), log() log10()	exponentiation natural logarithm base-10 logarithm
sqrt()	sqrt()	square root
sin()	sin() cos() tan() asin() acos() atan() arg() atan2() sinh() cosh() tanh() asinh() acosh() atanh() pi()	sine cosine tangent arcsine arccosine arctangent arctangent of complex two-argument arctangent hyperbolic sine hyperbolic cosine hyperbolic tangent inverse-hyperbolic sine inverse-hyperbolic cosine inverse-hyperbolic tangent value of π

Factorial & gamma

factorial()	factorial() lnfactorial() gamma() lngamma() digamma() trigamma()	factorial natural logarithm of factorial gamma function natural logarithm of gamma function derivative of lngamma() second derivative of lngamma()
--------------------	---	---

Modulus & integer rounding

mod()	mod()	modulus
trunc()	trunc() floor() ceil() round()	truncate to integer round down to integer round up to integer round to closest integer or multiple

Dates

date()	clock() mdyhms() dhms() hms() hh() mm() ss() dofc() Cofc() Clock() Cmdyhms() Cdhms() Chms() hhC() mmC() ssC() dofC() date() mdy() yw() ym() yq() yh() cofd() Cofd()	%tc of string %tc of month, day, year, hour, minute, and second %tc of %td, hour, minute, and second %tc of hour, minute, and second hour of %tc minute of %tc second of %tc %td of %tc %tC of %tc %tC of string %tC of month, day, year, hour, minute, and second %tC of %td, hour, minute, and second %tC of hour, minute, and second hour of %tC minute of %tC second of %tC %td of %tC %td of string %td of month, day, and year %tw of year and week %tm of year and month %tq of year and quarter %th of year and half %tc of %td %tC of %td
---------------	---	--

date() , <i>continued</i>	dofb()	%td of %tb
	bofd()	%tb of %td
	month()	month of %td
	day()	day-of-month of %td
	year()	year of %td
	dow()	day-of-week of %td
	week()	week of %td
	quarter()	quarter of %td
	halfyear()	half-of-year of %td
	doy()	day-of-year of %td
	yearly()	%ty of string
	yofd()	%ty of %td
	dofy()	%td of %ty
	halfyearly()	%th of string
	hofd()	%th of %td
	dofh()	%td of %th
	quarterly()	%tq of string
	qofd()	%tq of %td
	dofq()	%td of %tq
	monthly()	%tm of string
	mofd()	%tm of %td
	dofm()	%td of %tm
	weekly()	%tw of string
	wofd()	%tw of %td
	dofw()	%td of %tw
	hours()	hours of milliseconds
	minutes()	minutes of milliseconds
	seconds()	seconds of milliseconds
	msofhours()	milliseconds of hours
	msofminutes()	milliseconds of minutes
	msofseconds()	milliseconds of seconds

Description

With a few exceptions, the above functions are what most people would consider scalar functions, although in fact all will work with matrices, in an element-by-element fashion.

Remarks and examples

For other mathematical functions, see

[M-4] matrix	Matrix functions
[M-4] mathematical	Important mathematical functions
[M-4] statistical	Statistical functions

Also see

[\[M-4\]](#) [intro](#) — Index and guide to functions