Trig Identities

Function(s)	Alternate form
tan(x)	sin(x)/cos(x)
sec(x)	1/cos(x)
csc(x)	1/sin(x)
cot(x)	1/tan(x)
$\sin^2(x)+\cos^2(x)$	1
$\tan^2(x)+1$	sec^2
$\cot^2+1$	csc^2
sinh(x)	$(1/2)(e^x-e^{-x})$
cosh(x)	$(1/2)(e^x+e^{-x})$
tanh(x)	sinh(x)/cosh(x)
sech(x)	1/cosh(x)
csch(x)	1/sinh(x)
coth(x)	1/tanh(x)
$\cosh^2(x)-\sinh^2(x)$	1
$1-\tanh^2(x)$	$\text{sech}^2(x)$
$\coth^2(x)-1$	$\text{csch}^2(x)$

Identities With π

Function	Alternate Form
sin(π/2-x)	cos(x)
cos(π/2-x)	sin(x)
tan(π/2-x)	cot(x)
sec(π/2-x)	-sec(x)
csc(π/2-x)	csc(x)
cot(π/2-x)	tan(x)
sin(π-x)	sin(x)
cos(π-x)	-cos(x)
tan(π-x)	-tan(x)
sec(π-x)	-sec(x)
csc(π-x)	csc(x)
cot(π-x)	-cot(x)
sin(3π/2-x)	-cos(x)
cos(3π/2-x)	-sin(x)
tan(3π/2-x)	cot(x)
sec(3π/2-x)	-csc(x)
csc(3π/2-x)	-sec(x)
cot(3π/2-x)	tan(x)
trg(2π-x)	trg(-x)

Angle Identities

Function	Alternate Form
sin(-x)	-sin(x)
cos(-x)	cos(x)
tan(-x)	-tan(x)
sec(-x)	sec(x)
csc(-x)	-csc(x)
cot(-x)	-cot(x)
sin(π/2-x)	cos(x)
cos(π/2-x)	sin(x)
tan(π/2-x)	
sin(π/2-x)	
sin(π/2-x)	
sin(π/2-x)	