Graphs of Elementary Functions

someonesdad1@gmail.com 31 Dec 2008

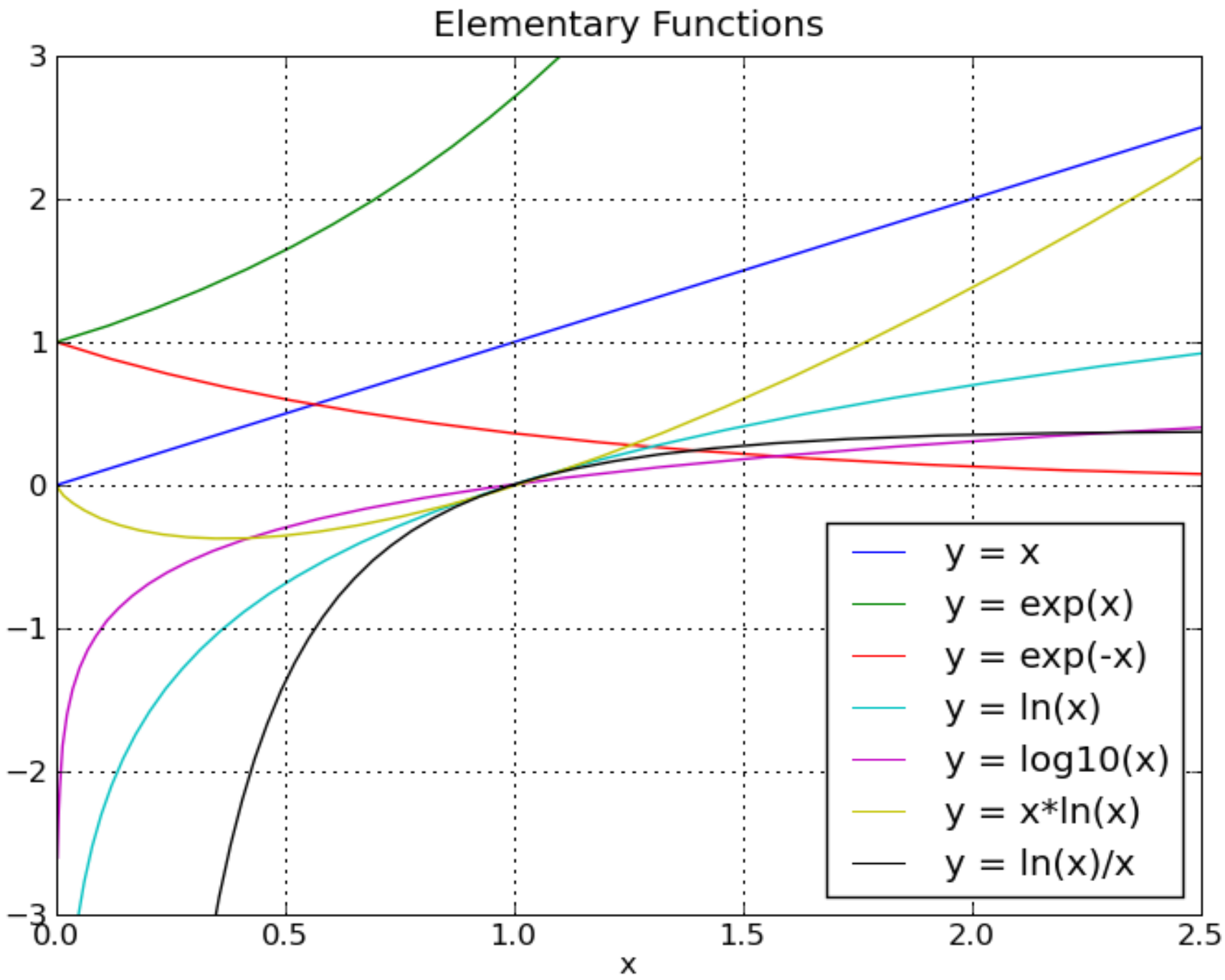
Occasionally it would be handy to have graphs of the elementary functions so one could examine their behavior. A usual example is one is working on a problem and wonders about the slope of the function near a certain point. Usually only a rough idea is needed and a picture is what's wanted, rather than messing about with an analytical expression. Thus, I generated the graphs in this document using a python script.

I checked some of the values against the tables in the 26th edition of the CRC Math tables.

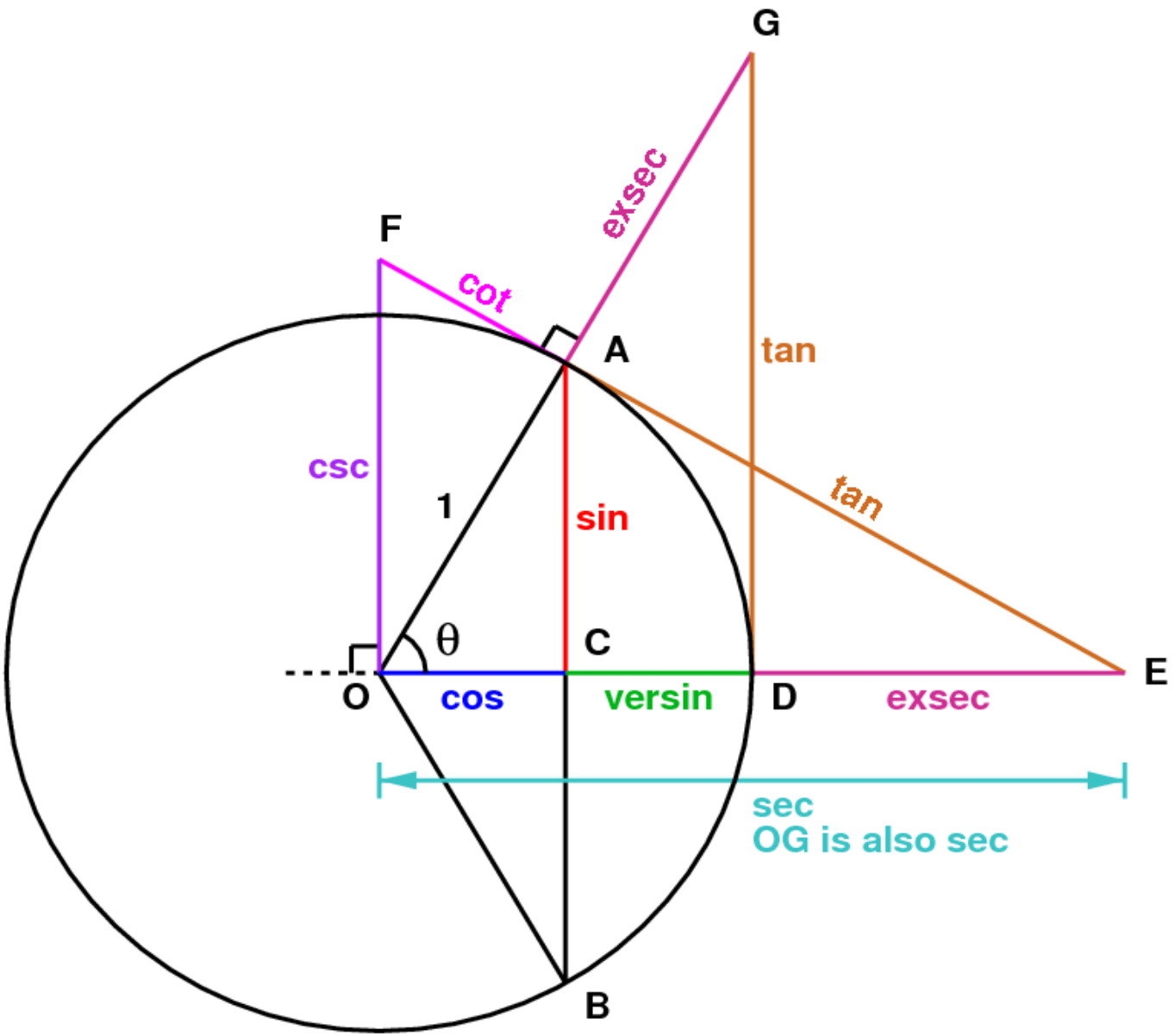
Contents

Elementary functions....2
Trig functions on unit circle....3
Trig functions, degrees....4
Trig functions, radians....5
Inverse trig functions, degrees....6
Inverse trig functions, radians....7
Versed sine, haversine, degrees....8
Hyperbolic trig functions 1....10
Hyperbolic trig functions 2....11
Inverse hyperbolic trig functions 1....12
Inverse hyperbolic trig functions 2....13
Gudermannian function (relates trig and hyperbolic trig functions without complex numbers)....14
Gamma function 1-10....15
Gamma function to 100....16
Normal distribution CDF....17
Bessel functions of integral order....18
Incomplete elliptic integrals of the first kind, degrees....19
Incomplete elliptic integrals of the first kind, radians....20
Incomplete elliptic integrals of the second kind, degrees....21
Incomplete elliptic integrals of the first kind, radians....22

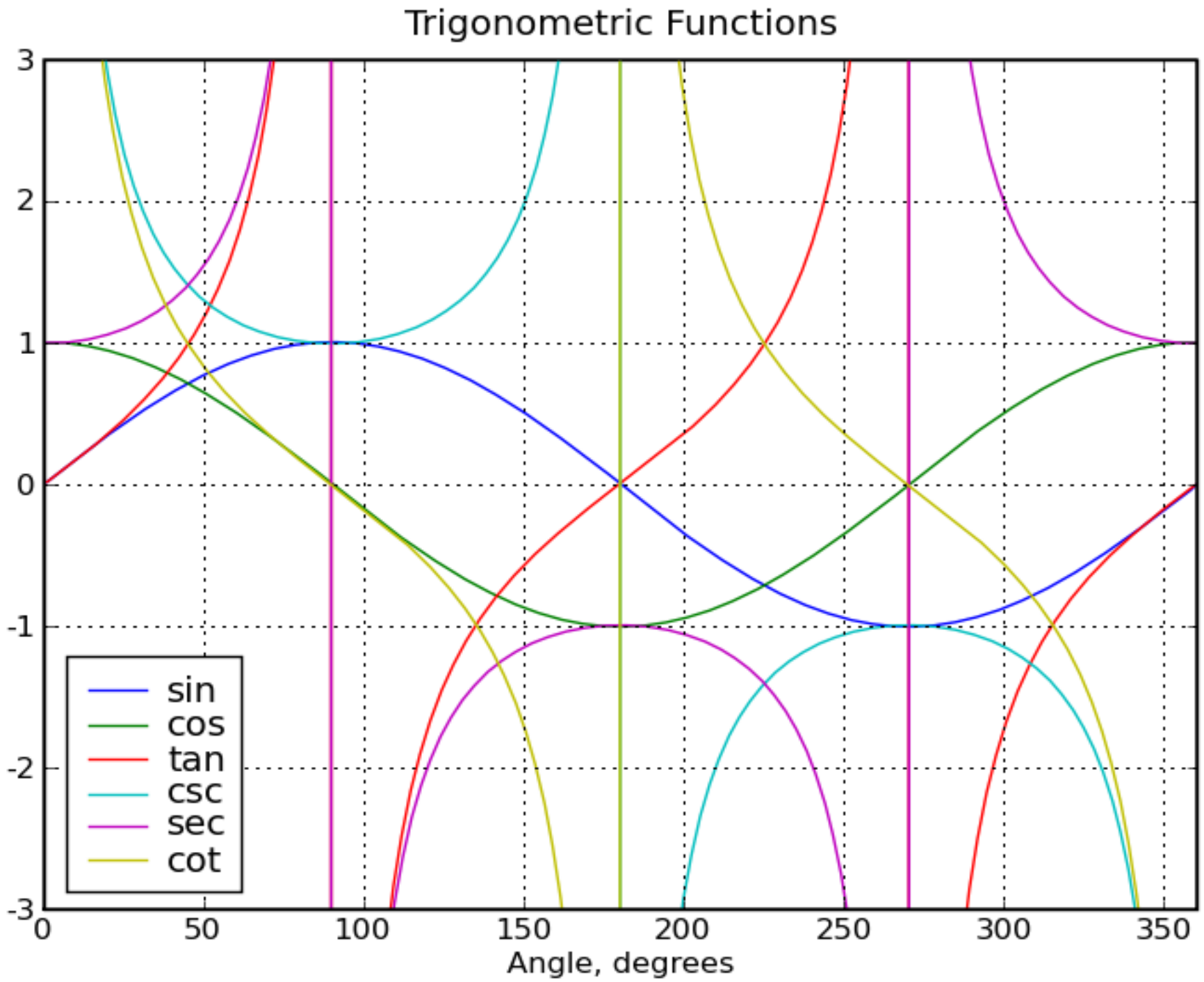
Elementary functions



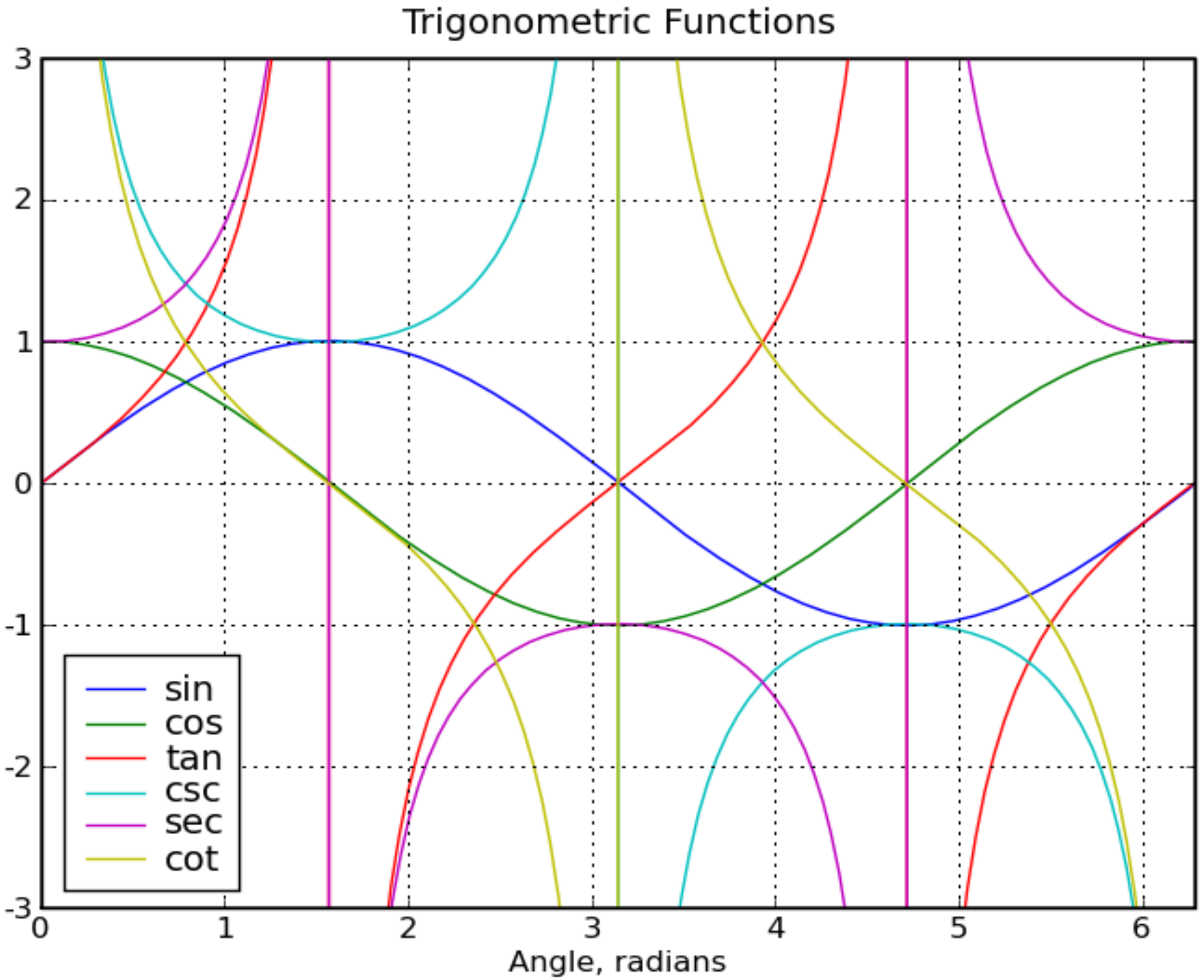
Trig functions on unit circle



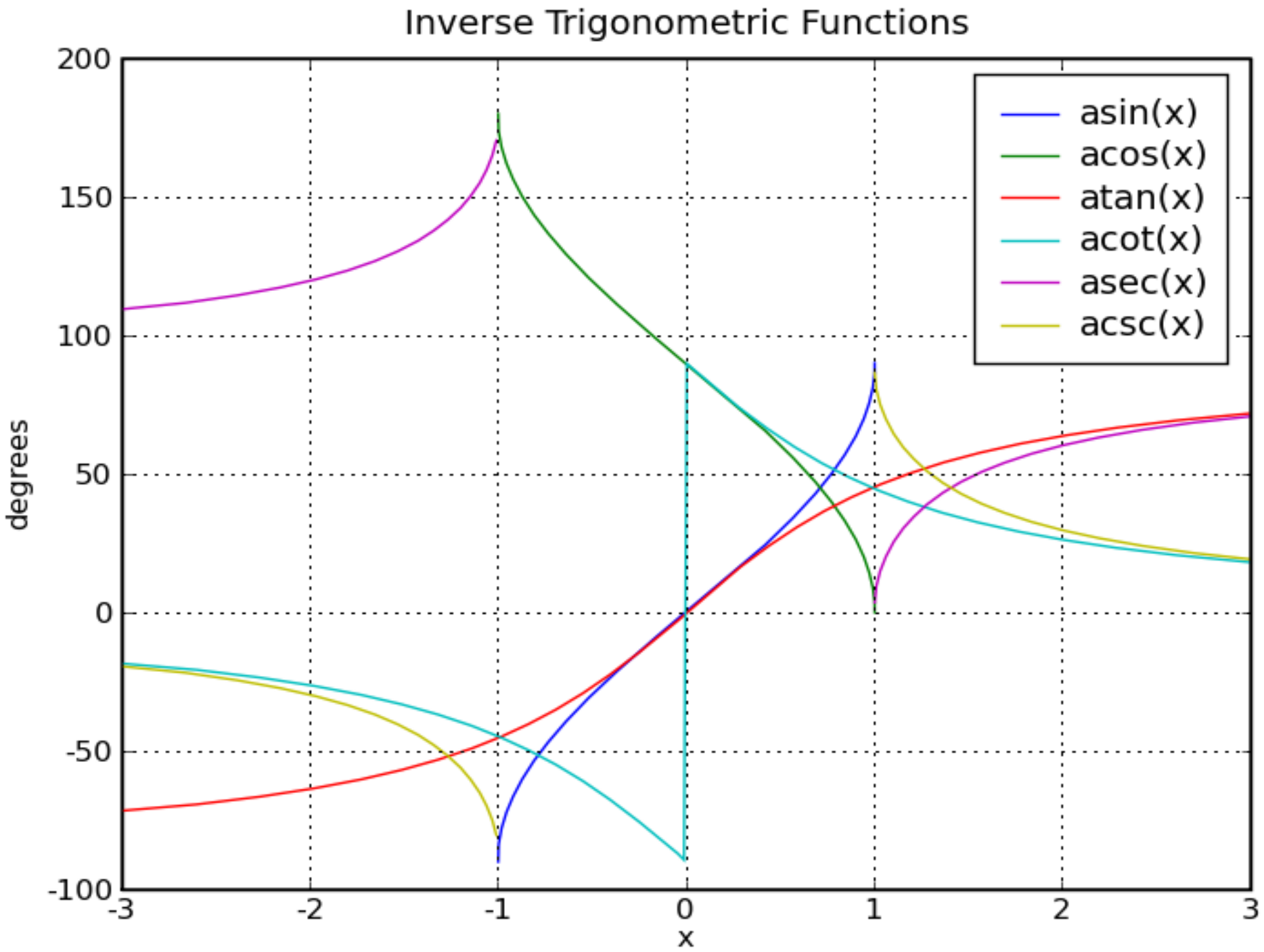
Trig functions, degrees



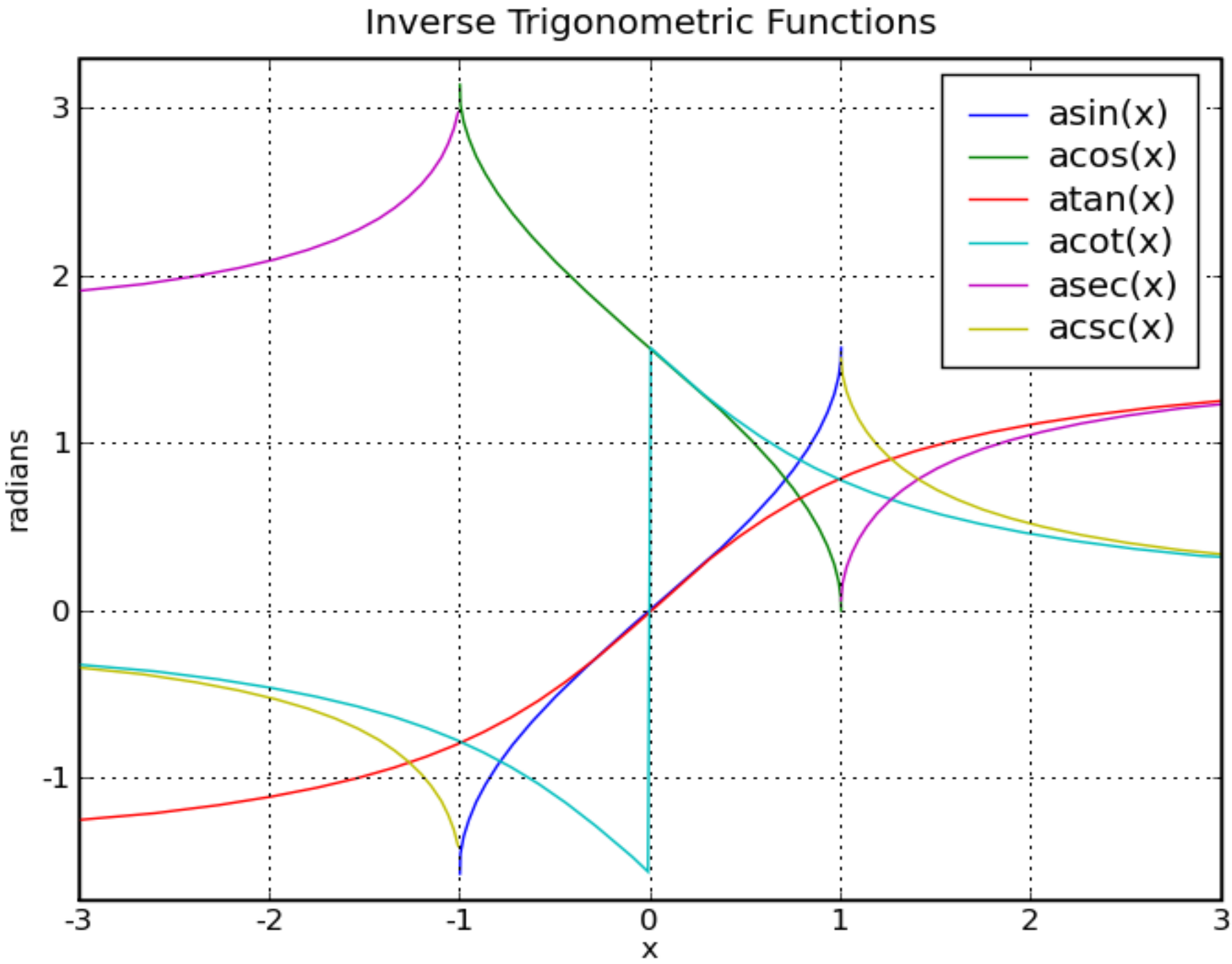
Trig functions, radians



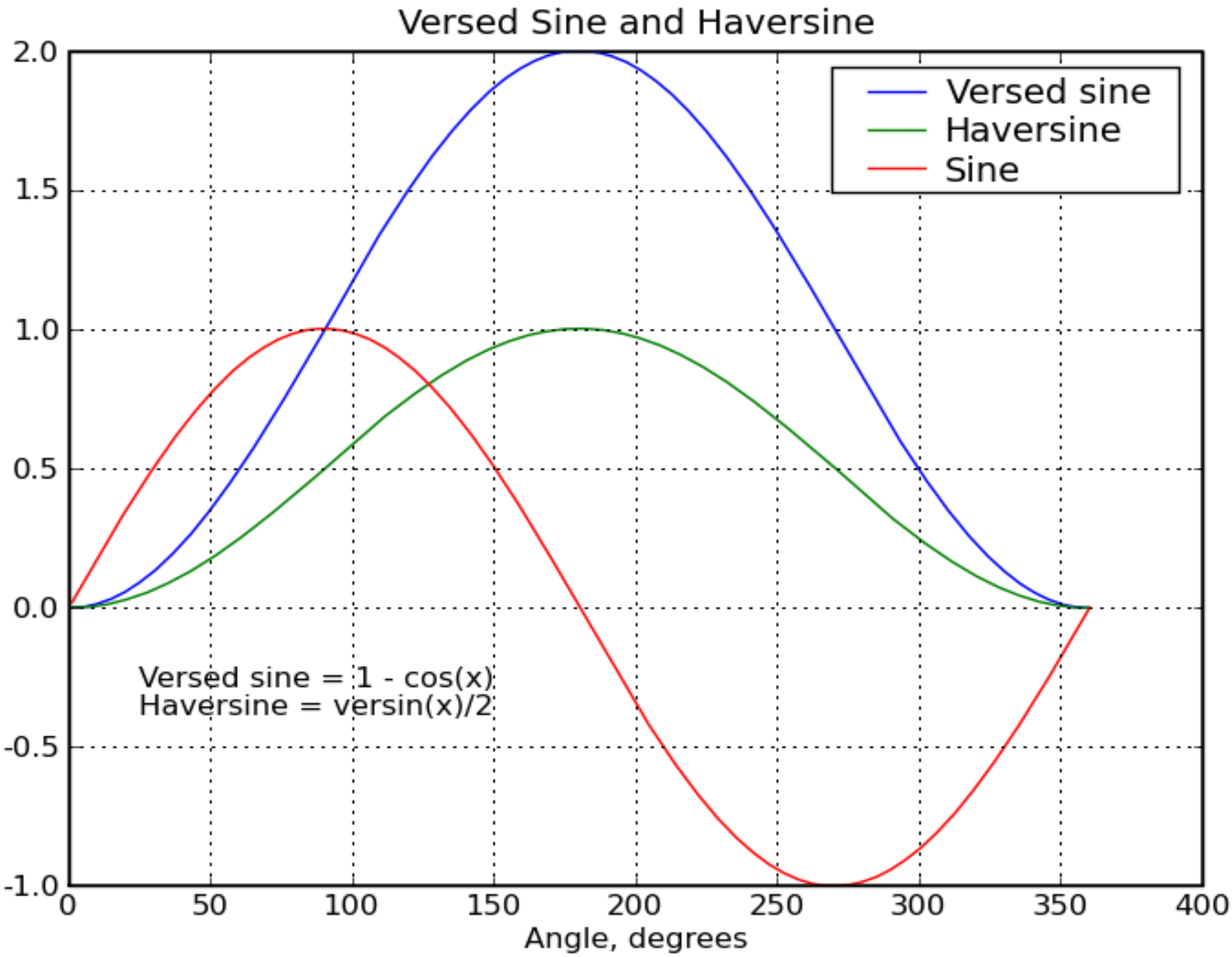
Inverse trig functions, degrees



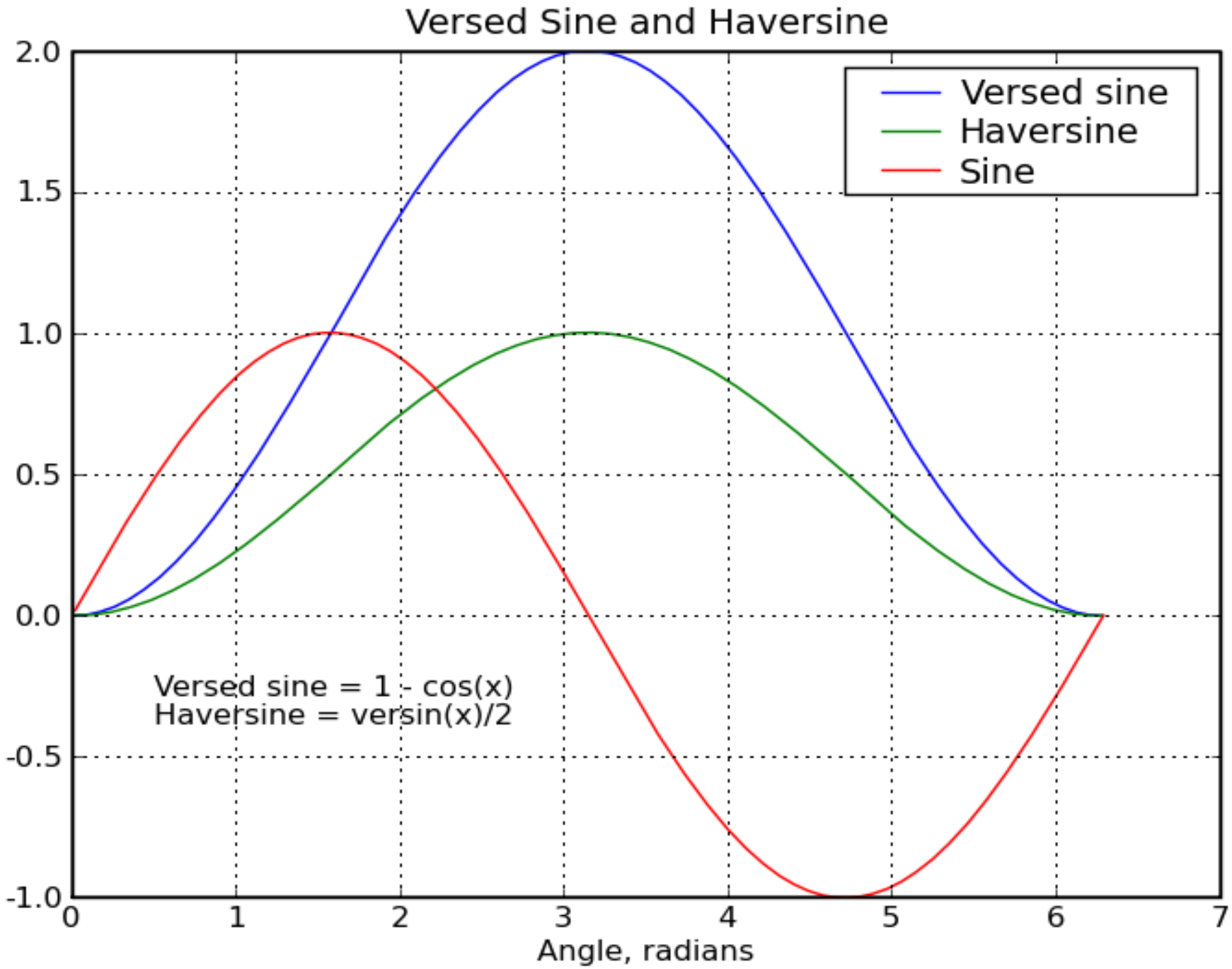
Inverse trig functions, radians



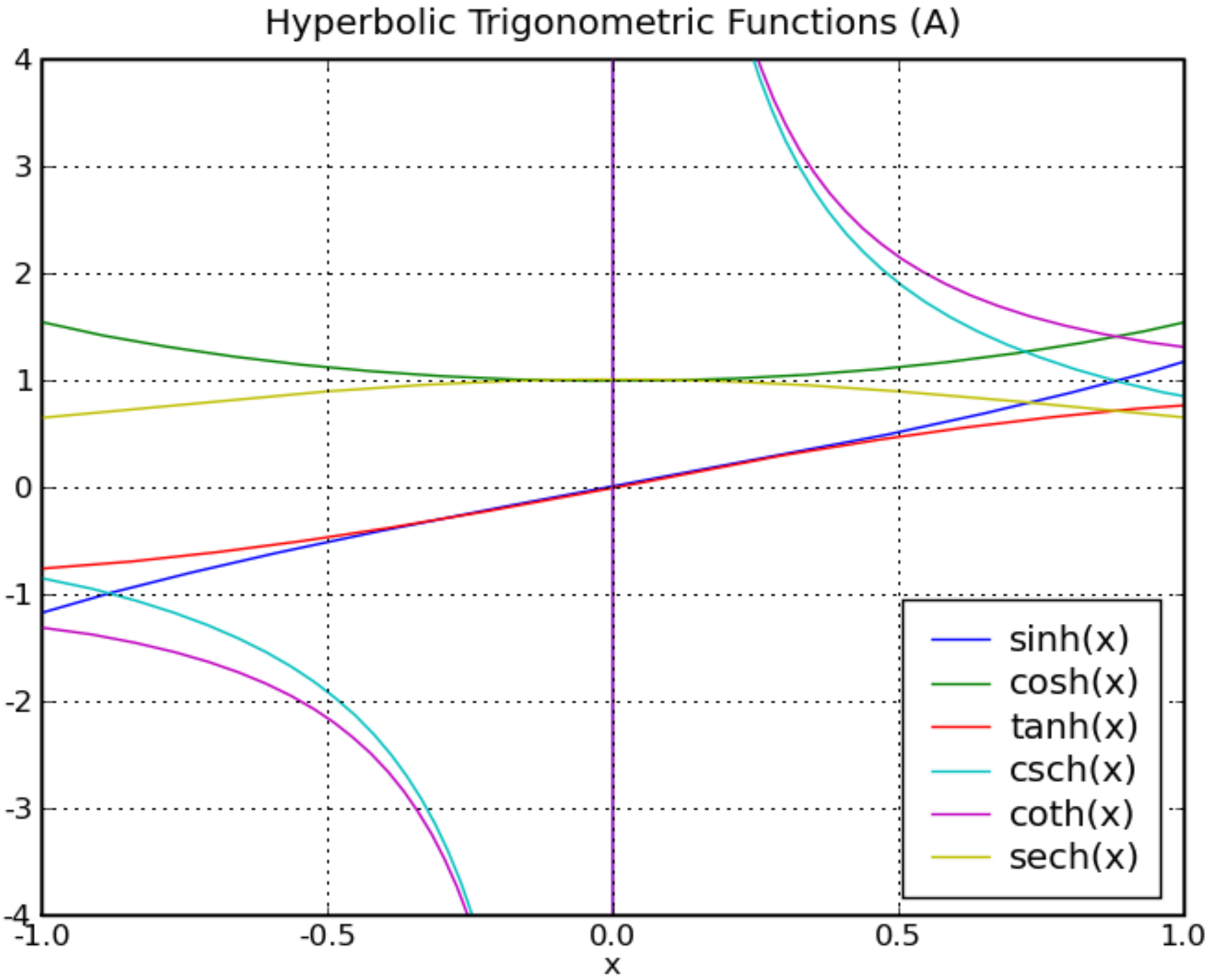
Versed sine, haversine, degrees



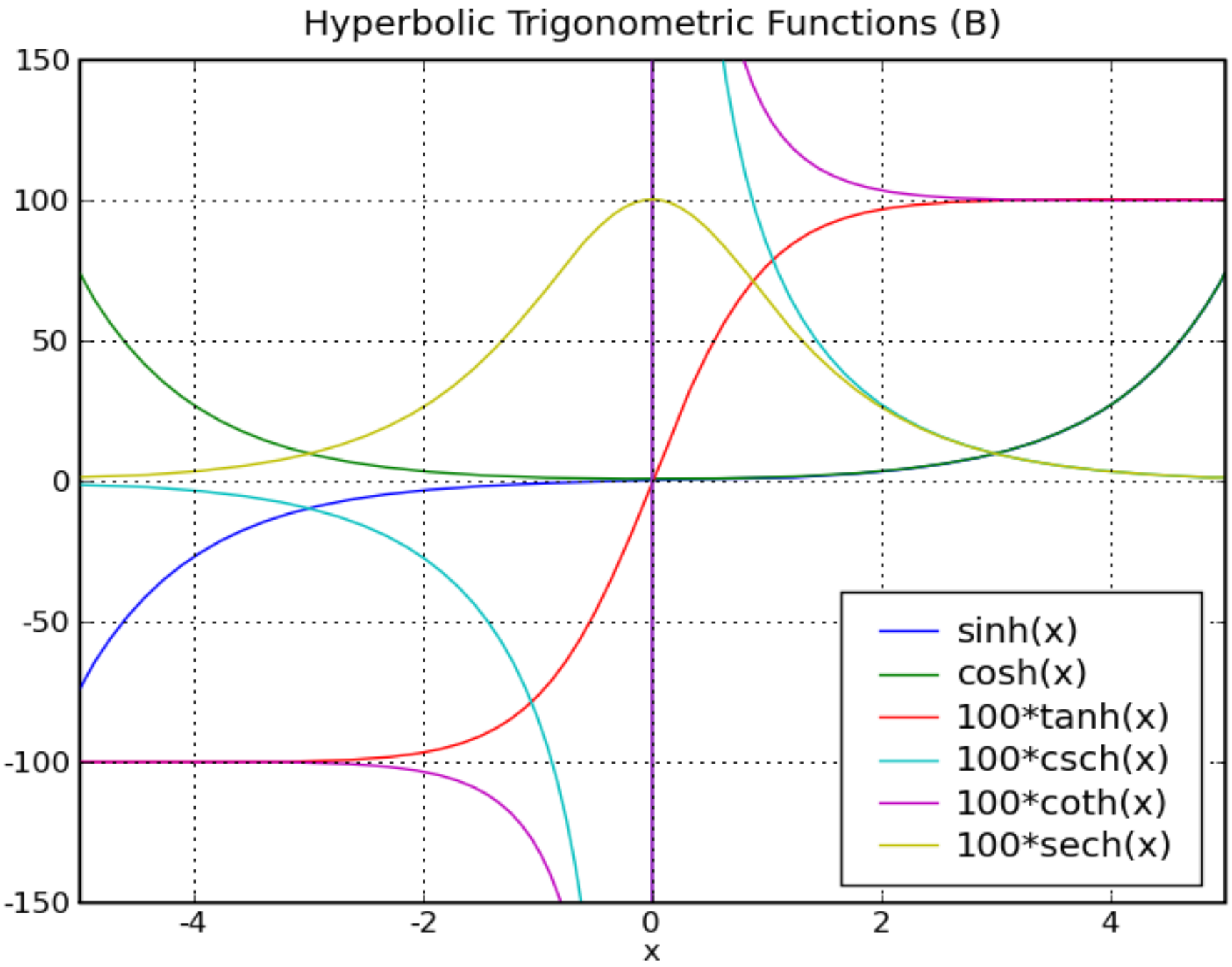
Versed sine, haversine, radians



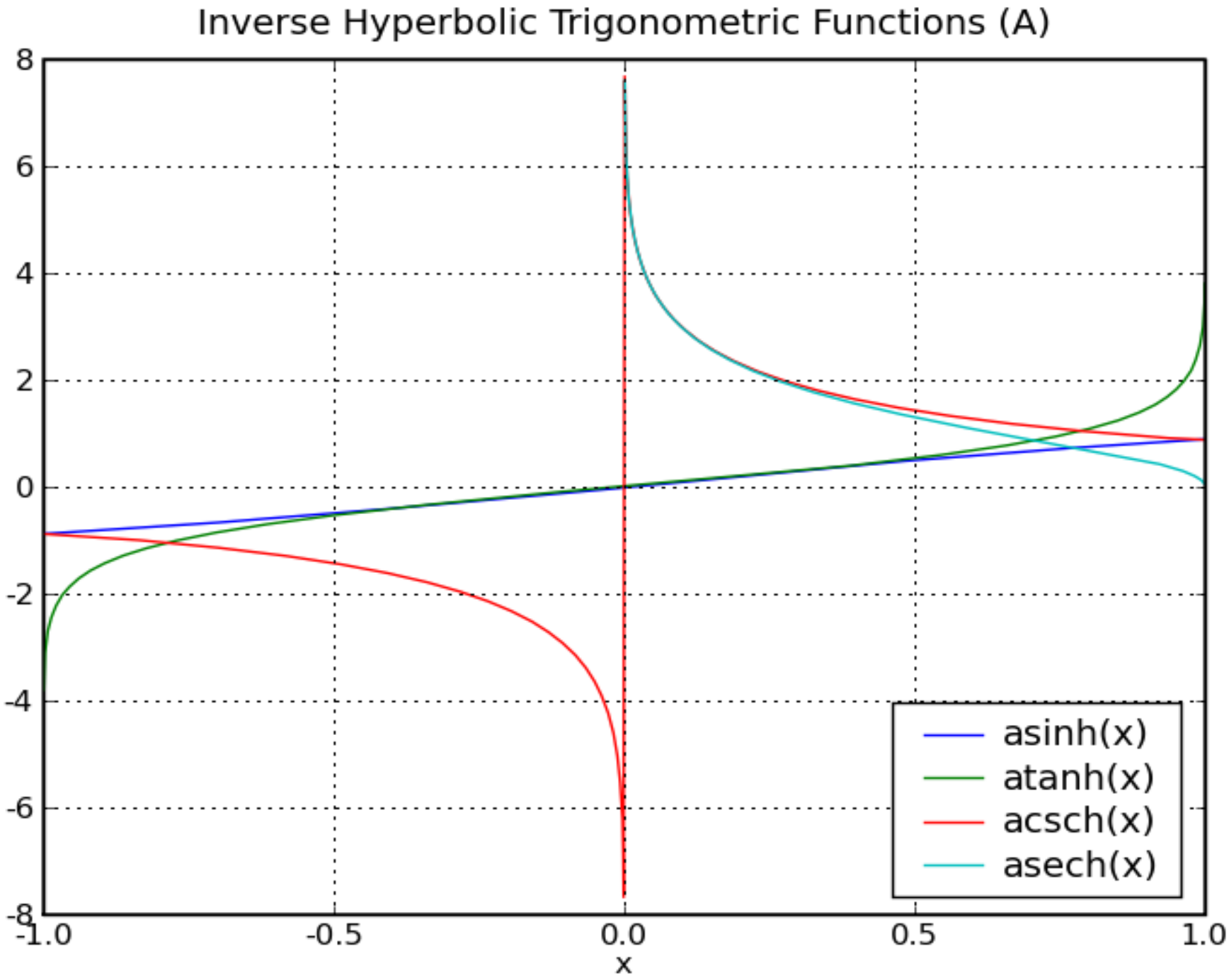
Hyperbolic trig functions 1



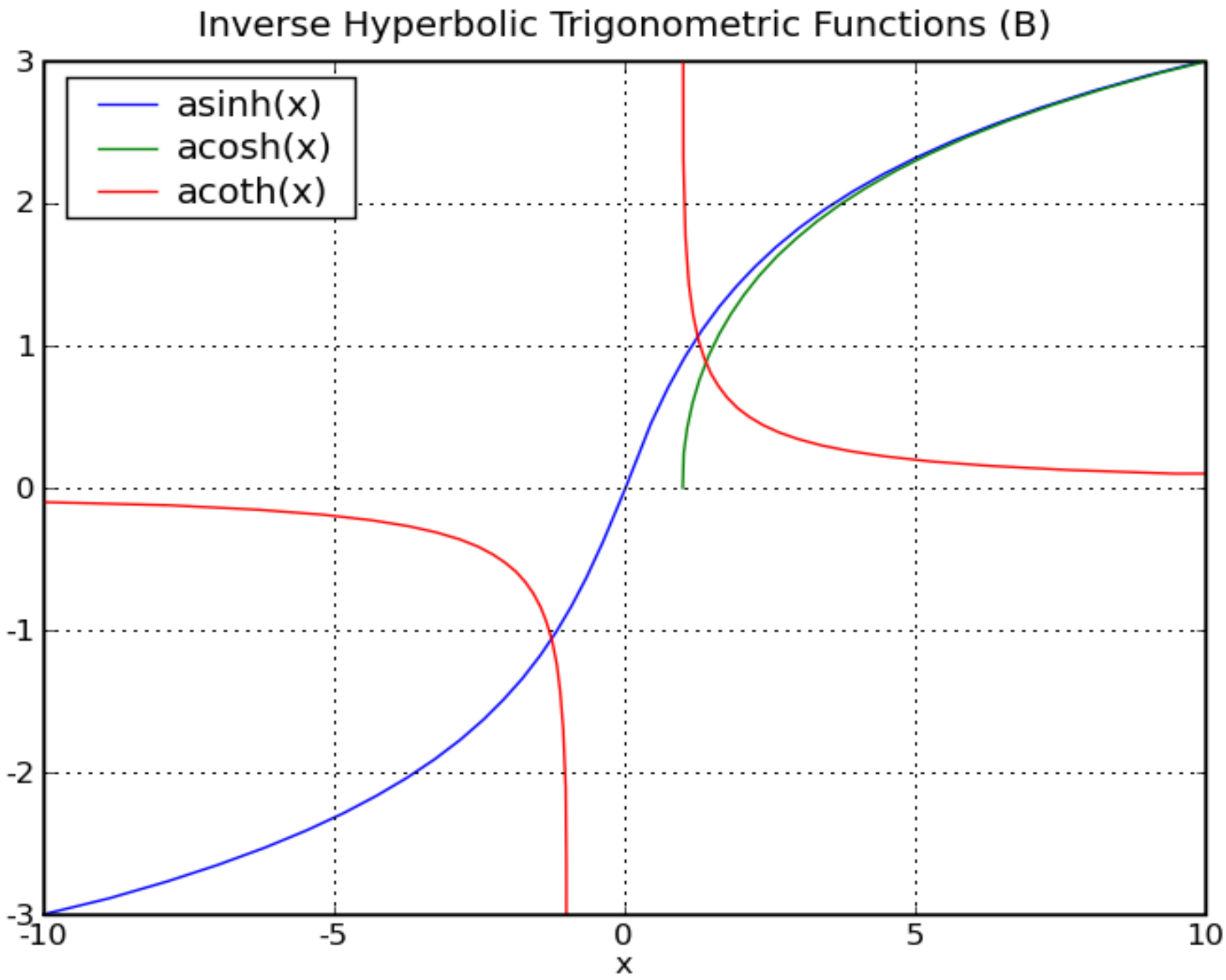
Hyperbolic trig functions 2



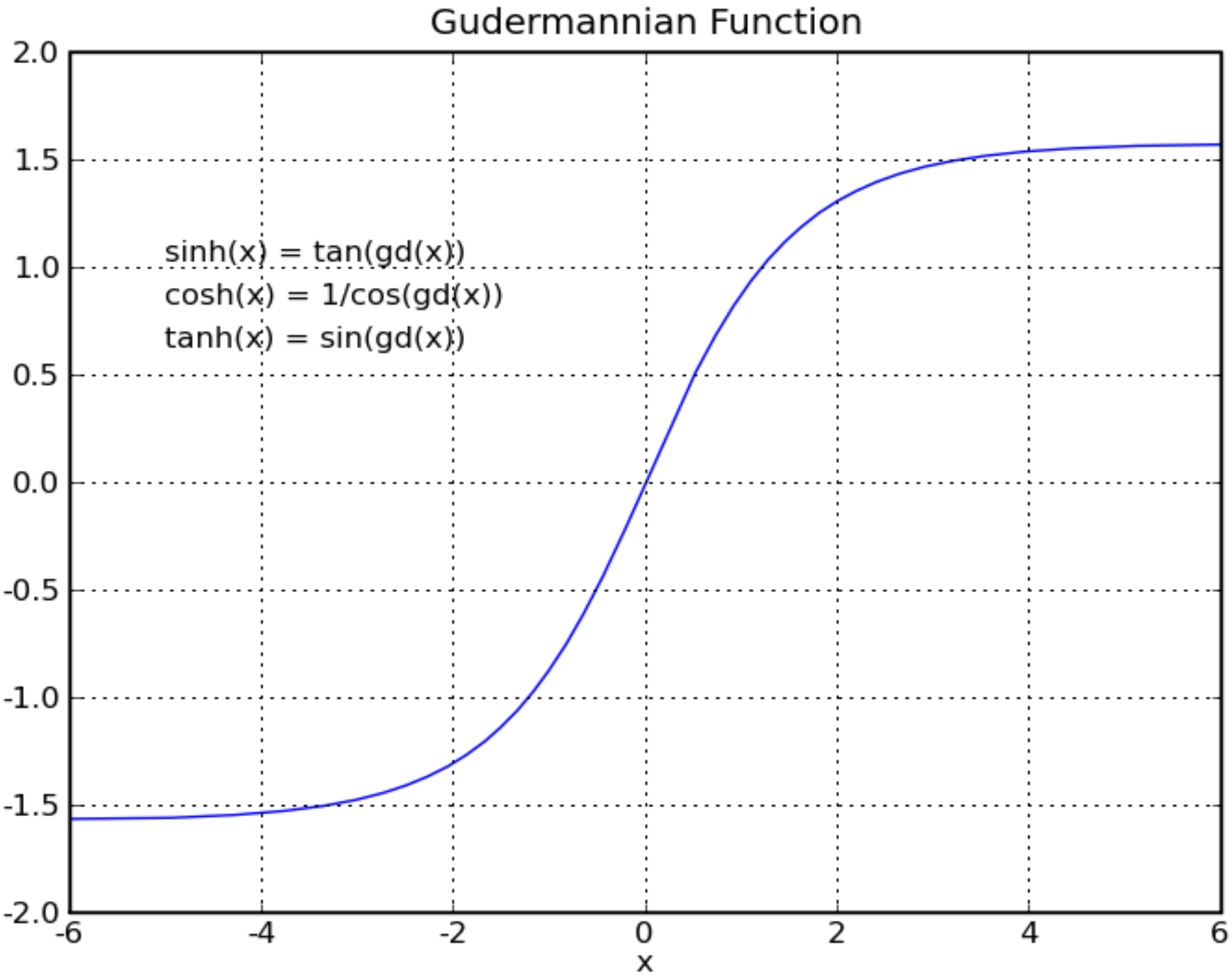
Inverse hyperbolic trig functions 1



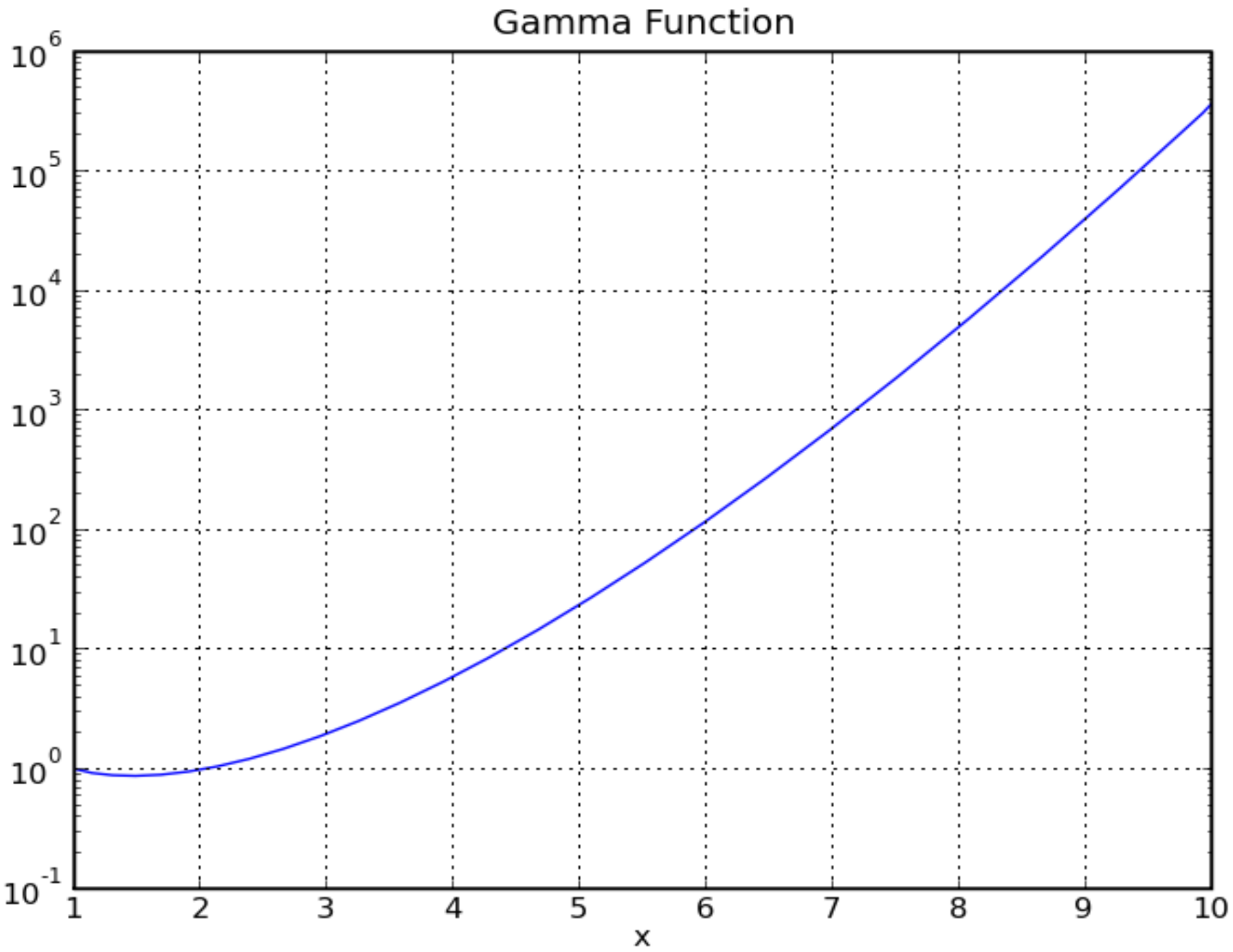
Inverse hyperbolic trig functions 2



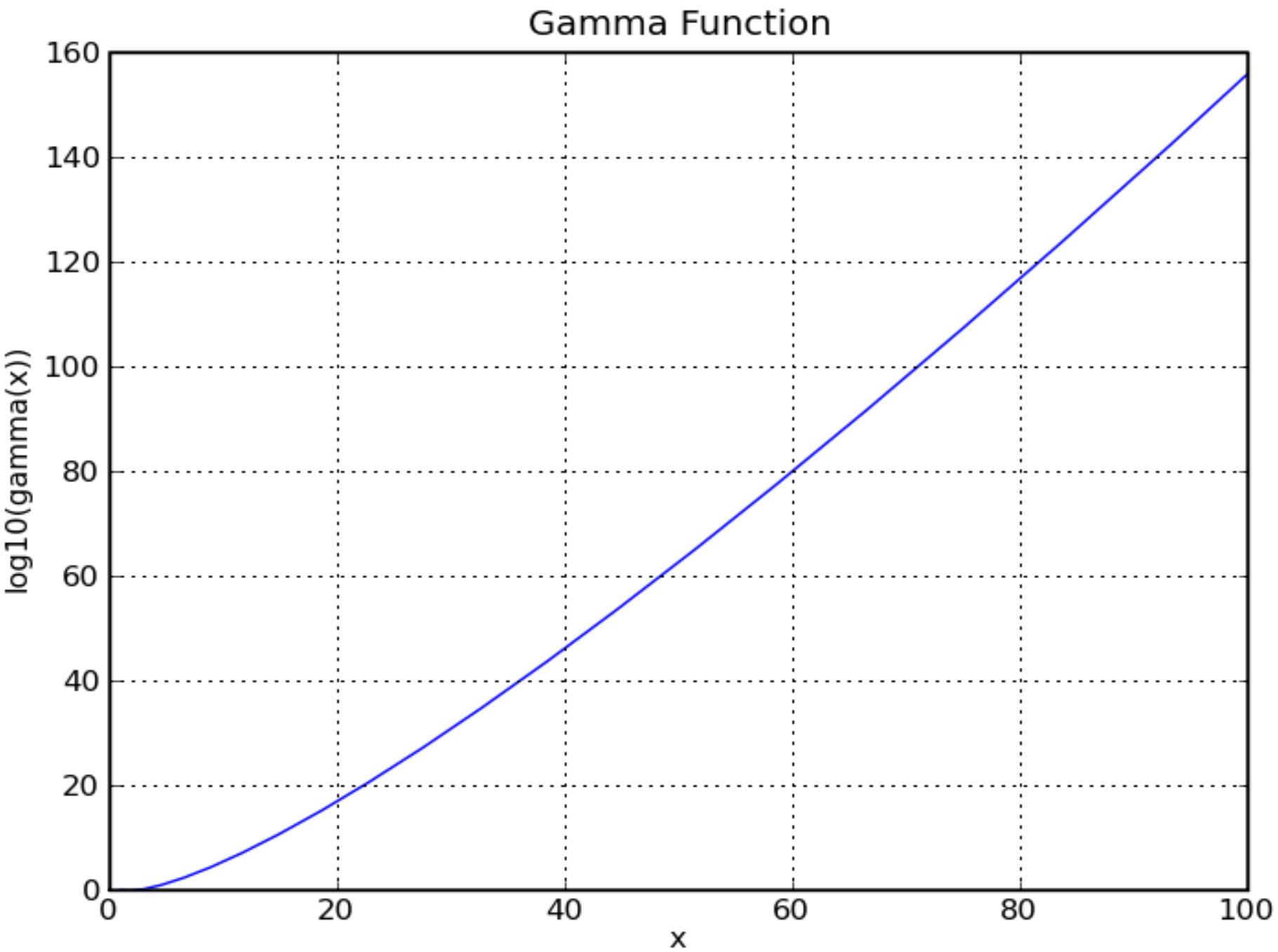
Gudermannian function (relates trig and hyperbolic trig functions without complex numbers)



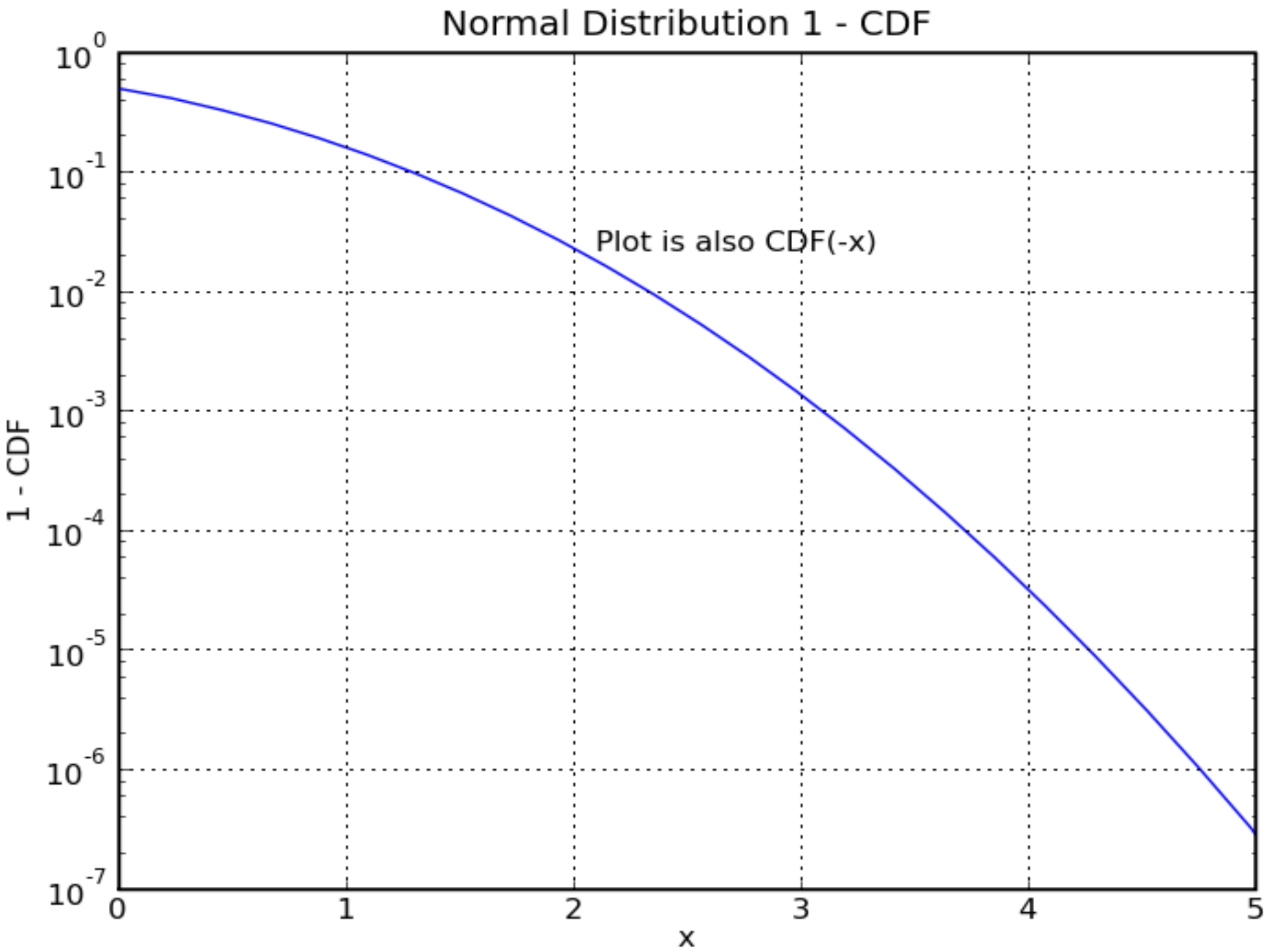
Gamma function 1-10



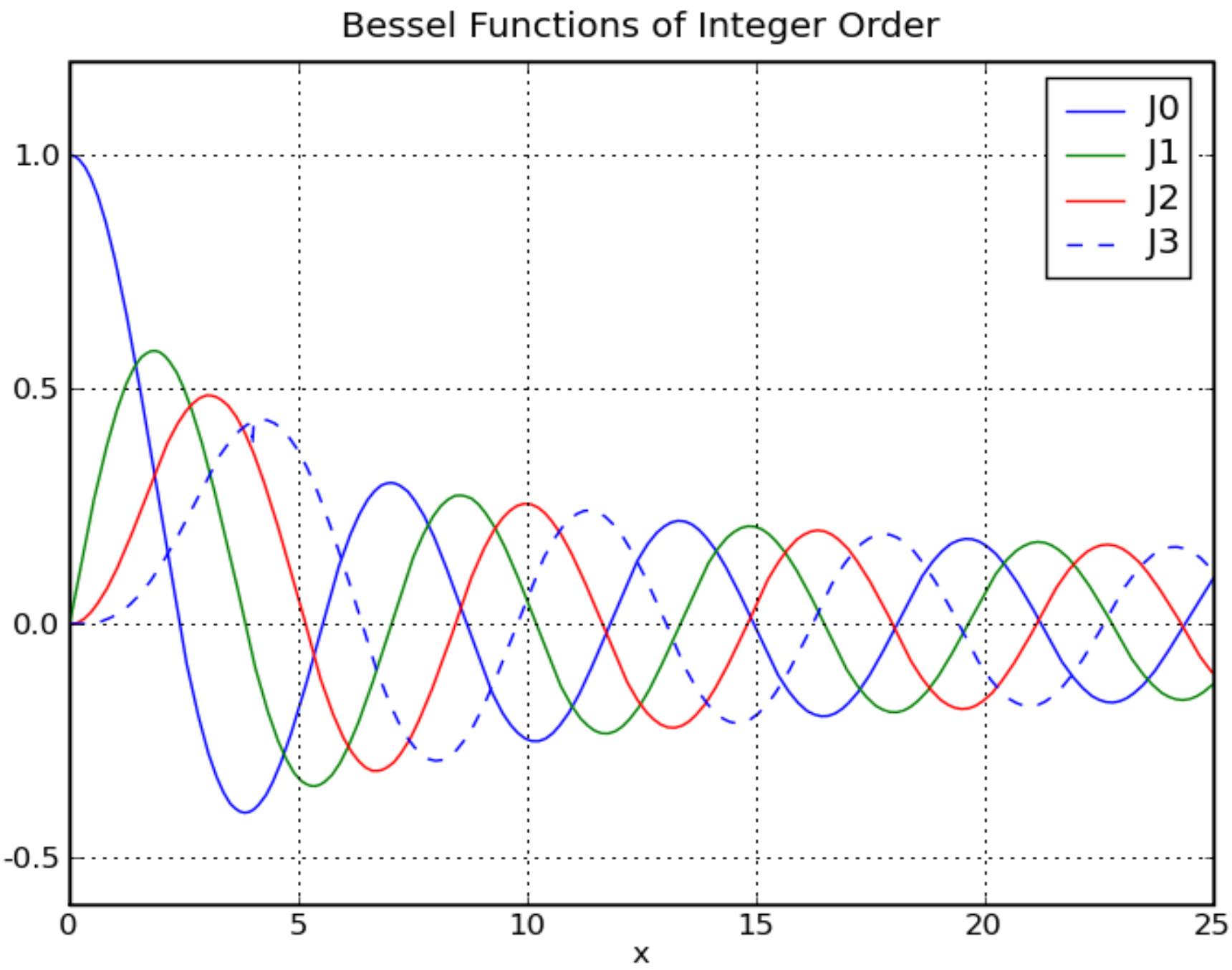
Gamma function to 100



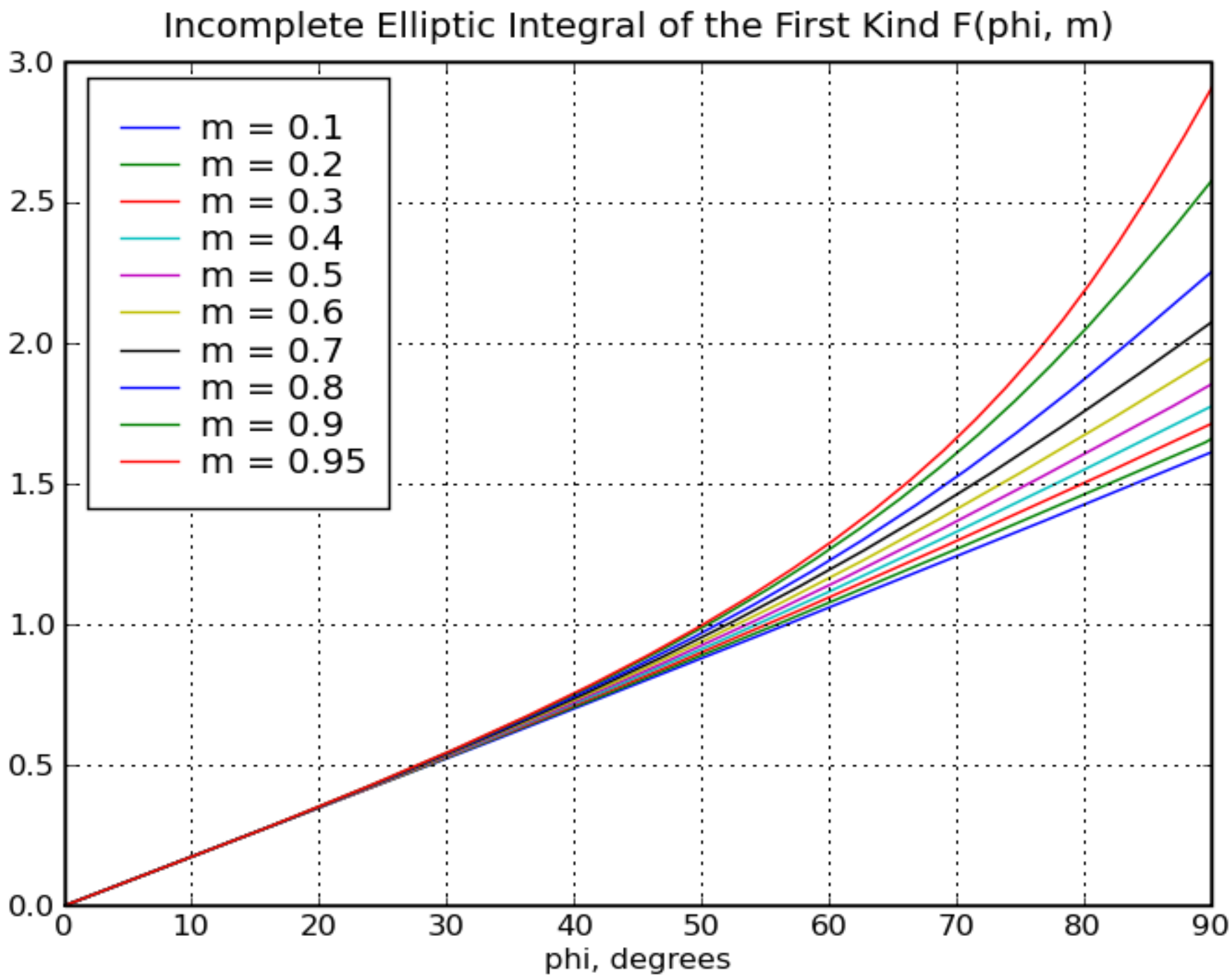
Normal distribution CDF



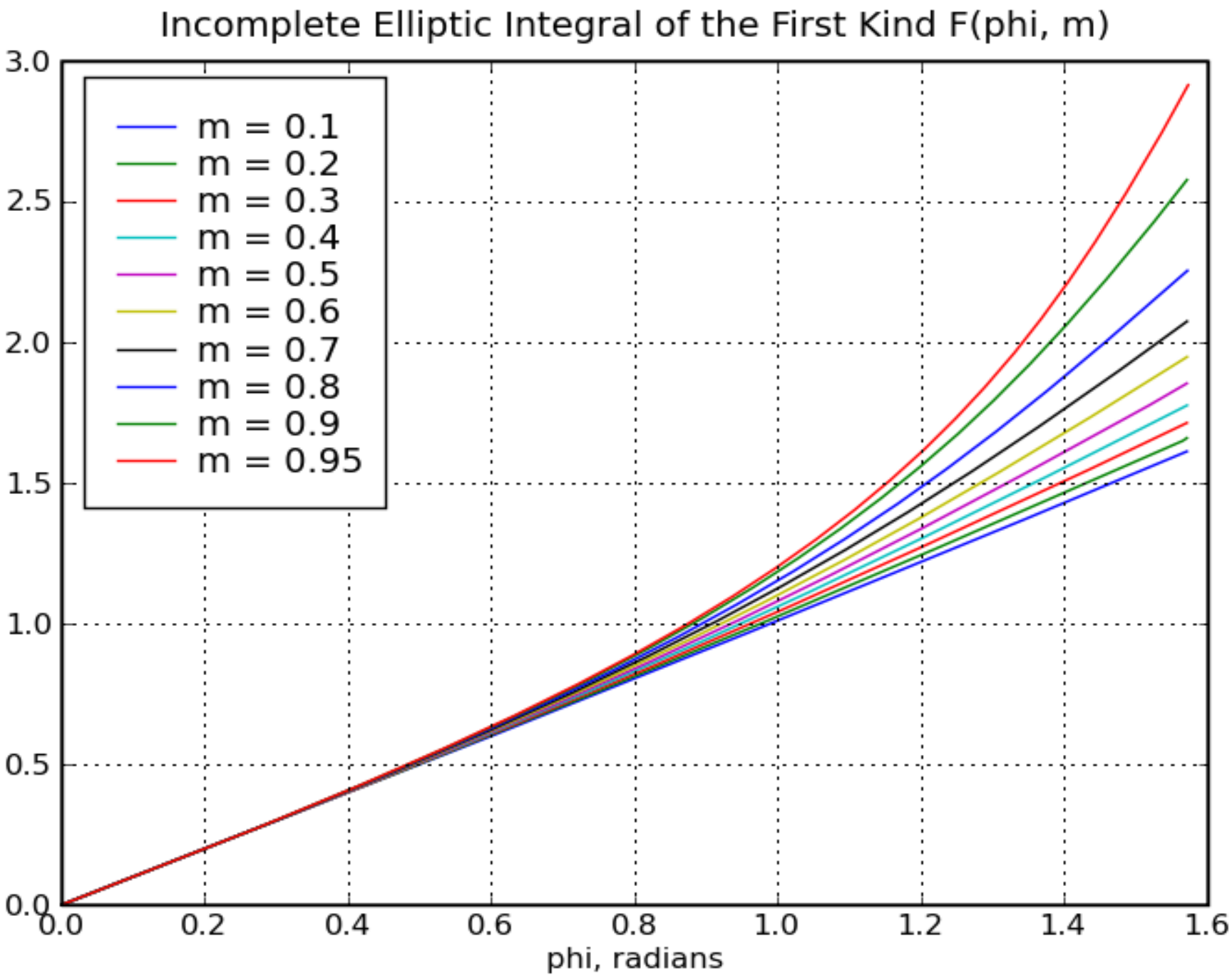
Bessel functions of integral order



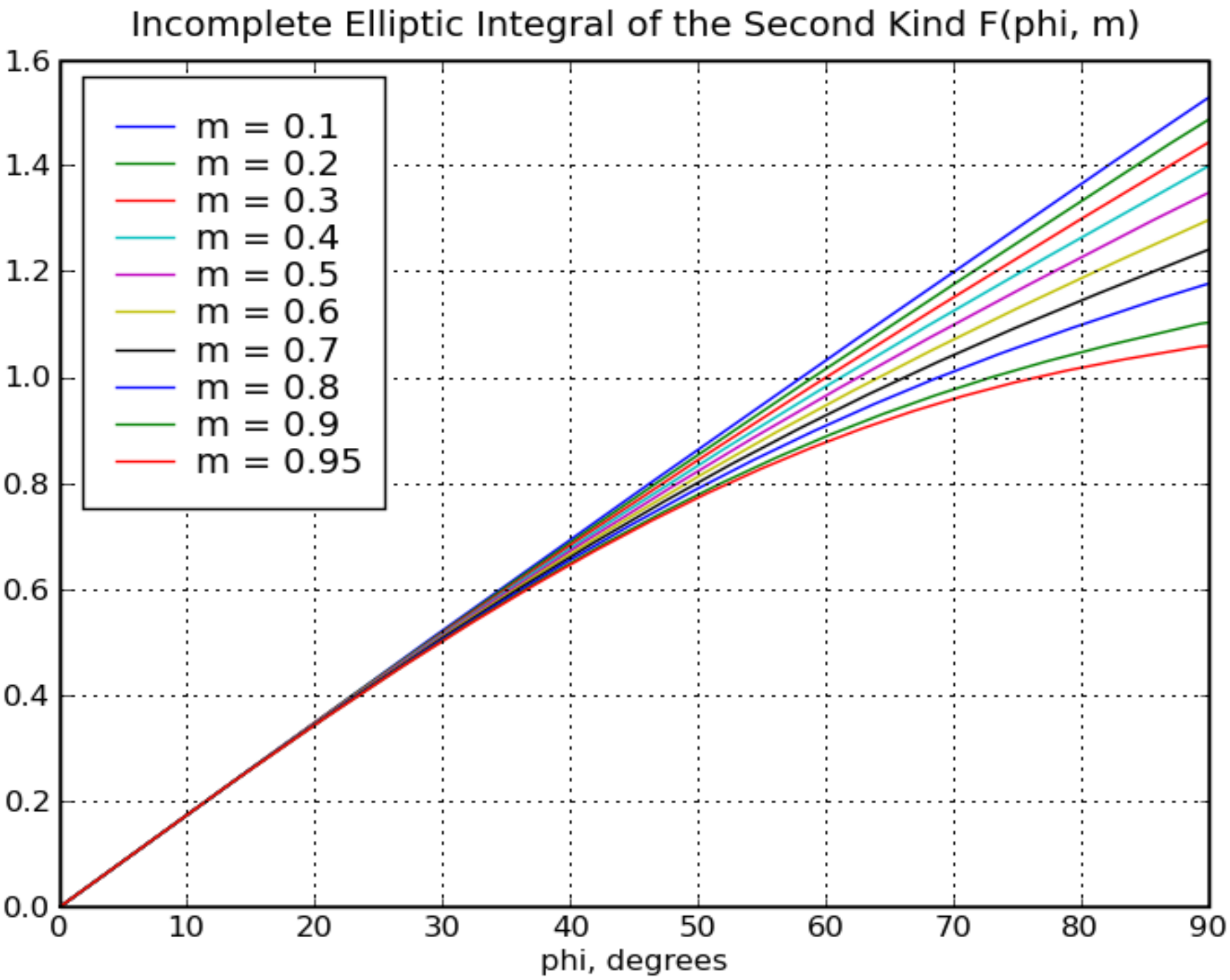
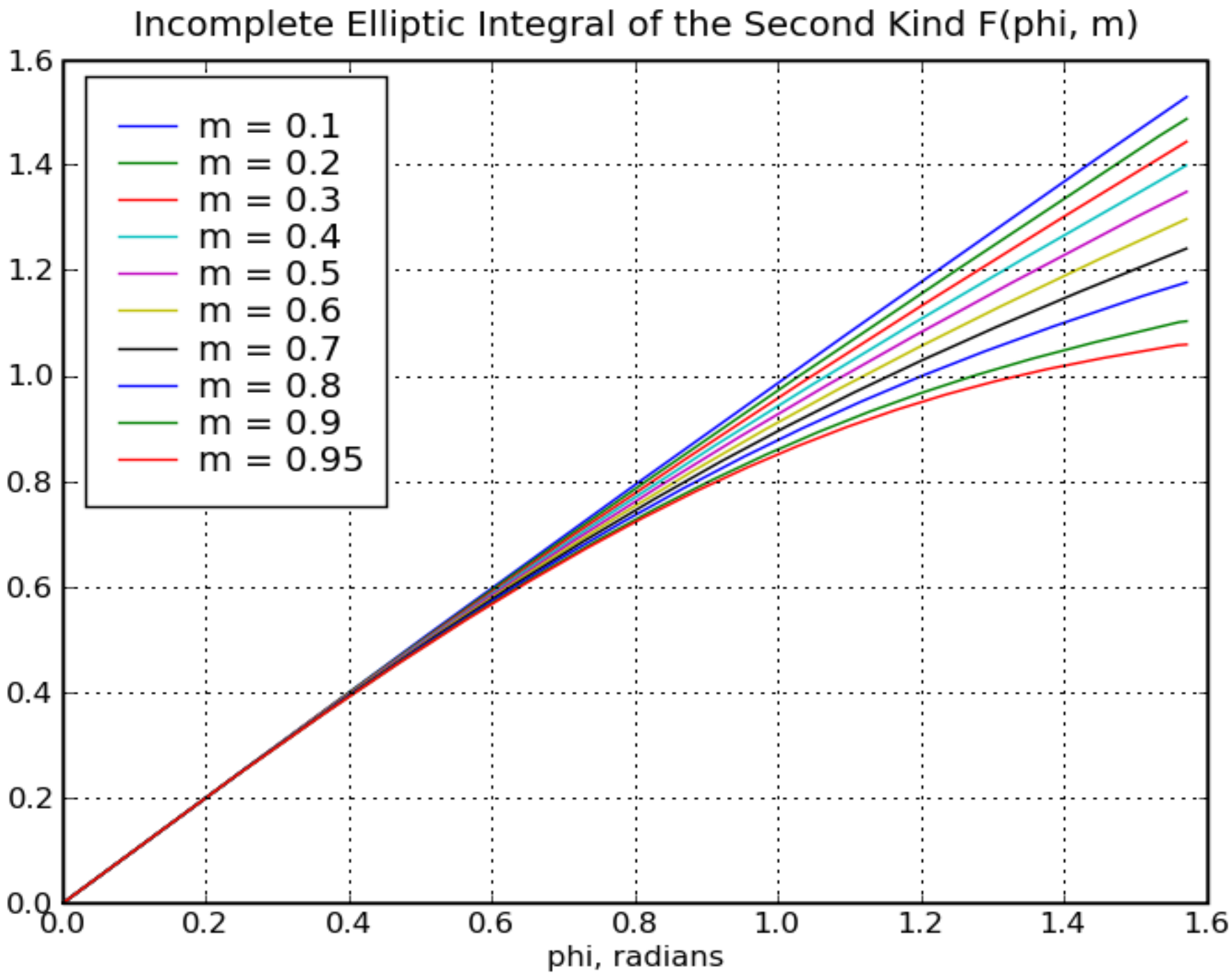
Incomplete elliptic integrals of the first kind, degrees



Incomplete elliptic integrals of the first kind, radians



Incomplete elliptic integrals of the second kind, degrees



Incomplete elliptic integrals of the first kind, radians