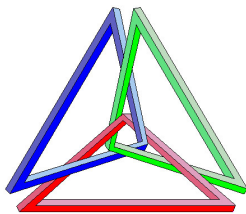


Secondary Trigonometric Functions

J. Garvin



Slide 1/11

Secondary Trigonometric Functions

The three secondary (reciprocal) trigonometric functions are:

- $f(x) = \csc x$
- $f(x) = \sec x$
- $f(x) = \cot x$

Like the primary trigonometric functions, graphs of the secondary trigonometric functions can be sketched by using the 5 key points at 0 , $\frac{\pi}{2}$, π , $\frac{3\pi}{2}$ and 2π .

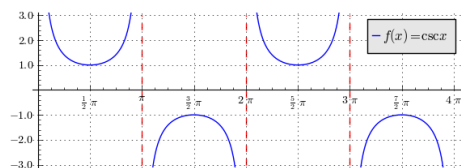
If transformations are required, these points can be adjusted.

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Slide 2/11

Secondary Trigonometric Functions

Example

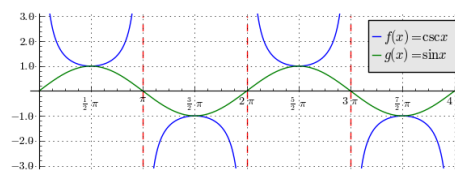
Sketch a graph of $f(x) = \csc x$.



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Slide 3/11

Secondary Trigonometric Functions

Compare the graph of $f(x) = \csc x$ to $g(x) = \sin x$.

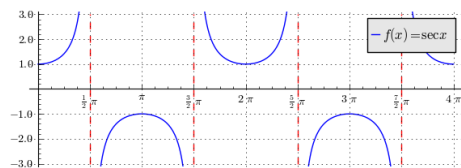


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Slide 4/11

Secondary Trigonometric Functions

Example

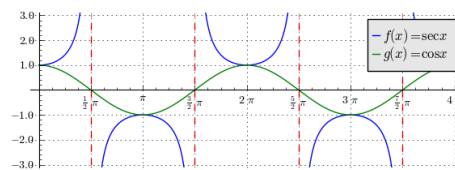
Sketch a graph of $f(x) = \sec x$.



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Slide 5/11

Secondary Trigonometric Functions

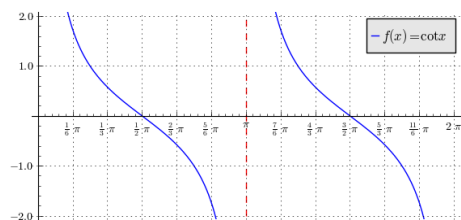
Compare the graph of $f(x) = \sec x$ to $g(x) = \cos x$.



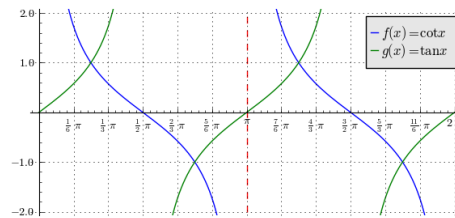
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Slide 6/11

Secondary Trigonometric Functions

Example

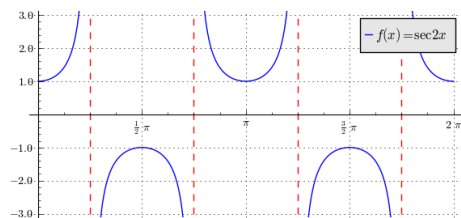
Sketch a graph of $f(x) = \cot x$.J. Garvin — Secondary Trigonometric Functions
Slide 7/11

Secondary Trigonometric Functions

Compare the graph of $f(x) = \cot x$ to $g(x) = \tan x$.J. Garvin — Secondary Trigonometric Functions
Slide 8/11

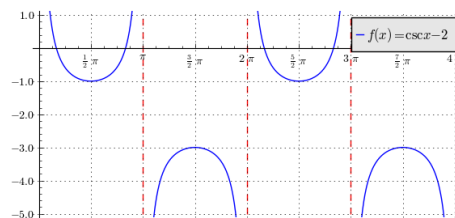
Secondary Trigonometric Functions

Example

Sketch a graph of $f(x) = \sec 2x$.J. Garvin — Secondary Trigonometric Functions
Slide 9/11

Secondary Trigonometric Functions

Example

Sketch a graph of $f(x) = \csc x - 2$.J. Garvin — Secondary Trigonometric Functions
Slide 10/11

Questions?

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Slide 11/11