

Graphing Reciprocal Trigonometric Functions

These notes are intended as a supplement of chapter 4 in your workbook.

Reciprocal Trigonometric Functions

Recall

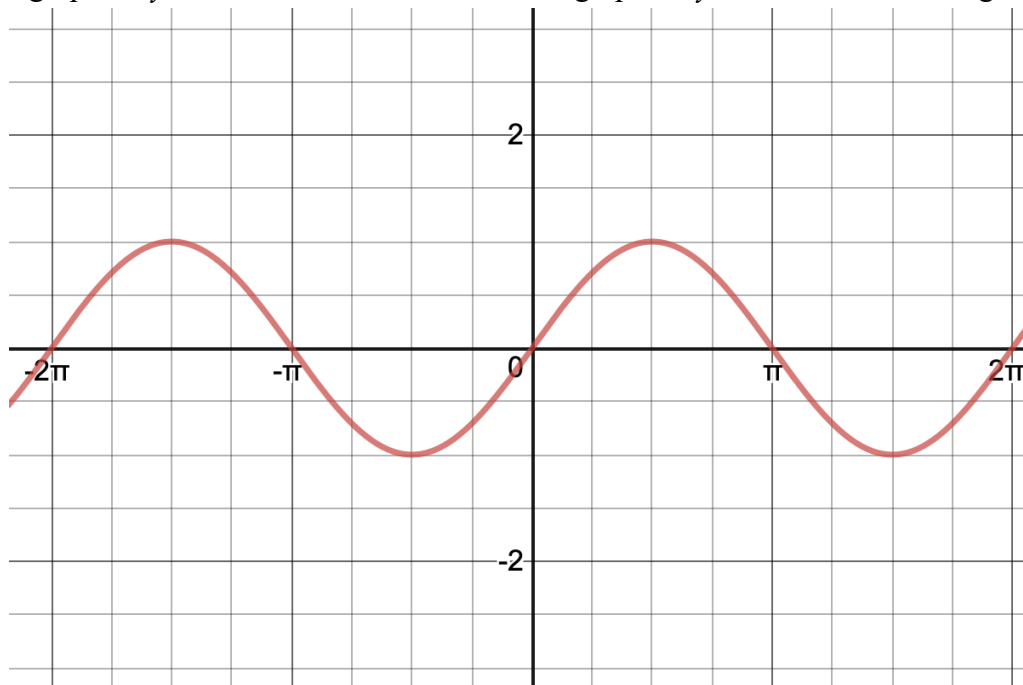
In addition to the three primary trigonometric ratios, there are also three related ratios. These are called the **reciprocal trigonometric ratios**.

- The reciprocal of cosine is called **secant**. $\sec \theta = \frac{1}{\cos \theta}$
- The reciprocal of sine is called **cosecant**. $\csc \theta = \frac{1}{\sin \theta}$
- The reciprocal of tangent is called **cotangent**. $\cot \theta = \frac{1}{\tan \theta}$

Now that we have learned how to graph reciprocal functions, we are going to use that knowledge to draw the graphs of the reciprocal trigonometric functions.

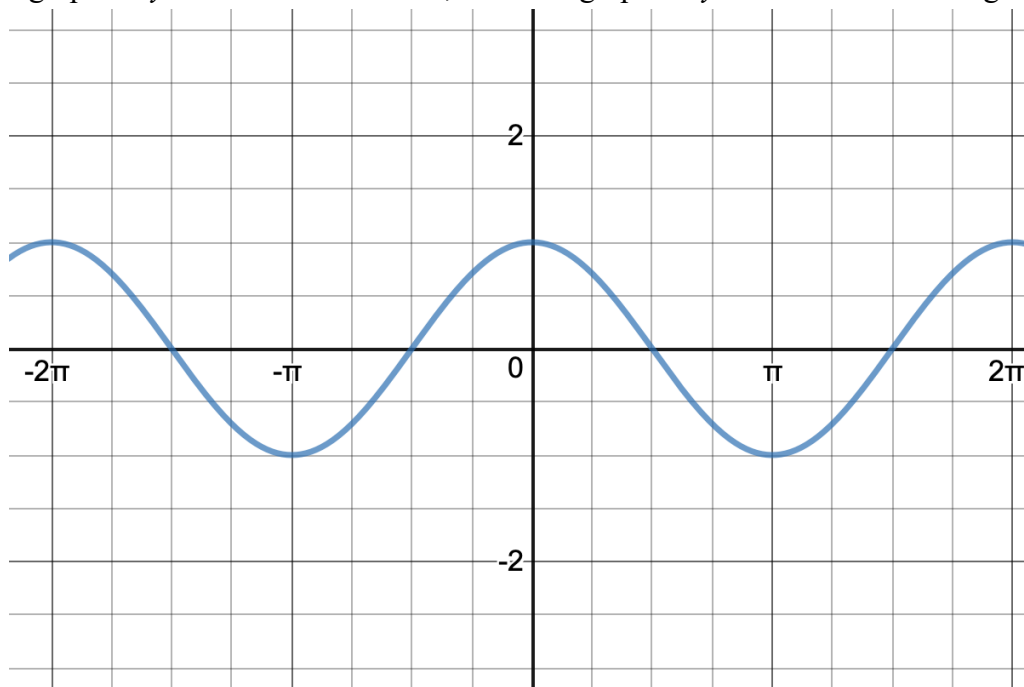
Graphing Cosecant

Given the graph of $y = \sin x$ shown below, draw the graph of $y = \csc x$ on the same grid.



Graphing Secant

Given the graph of $y = \cos x$ shown below, draw the graph of $y = \sec x$ on the same grid.



Graphing Cotangent

Given the graph of $y = \tan x$ shown below, draw the graph of $y = \cot x$ on the same grid.

