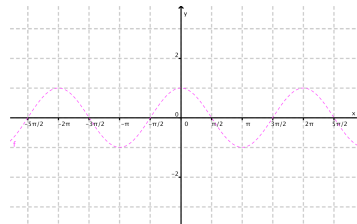## 1.6 ~ Graphs of Other Trigonometric Functions

You will learn to:

- Sketch graphs of tangent and cotangent functions.

- Sketch graphs of cosine and cosecant functions.

- Analyze the transformations of these functions.

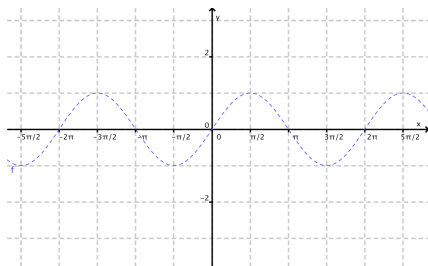$f(x) = \tan x = \dfrac{\sin x}{\cos x}$

Asymptotes: $\cos x = 0$

Period:

Domain:

Range:

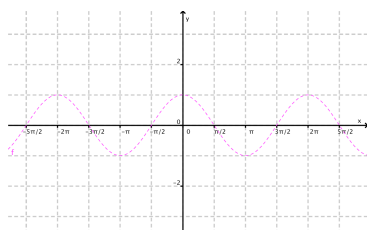Asymptotes:

$f(x) = \cot x = \dfrac{\cos x}{\sin x}$

Period:

Domain:

Range:

Asymptotes:

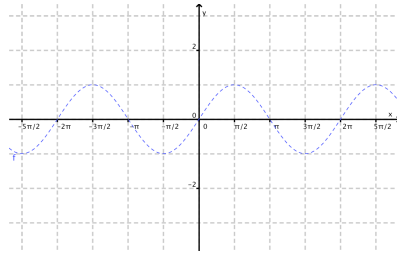$f(x) = \sec x = \dfrac{1}{\cos x}$

Sketch $y = \cos x$

Then plot asymptotes and points on $y = \sec x$
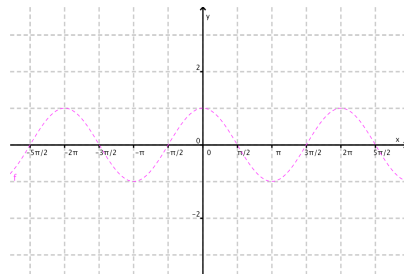
Period:

Domain:
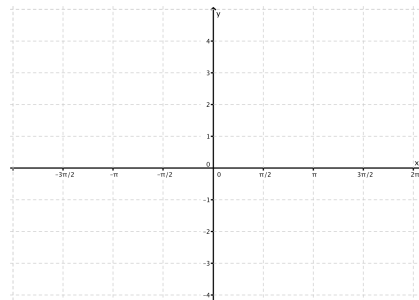
Range:

Asymptotes:

$$f(x) = \csc x = \frac{1}{\sin x}$$

Period:

Domain:

Range:

Asymptotes:

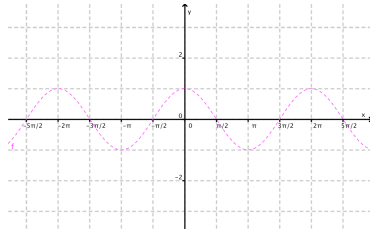Example 1: Graph this function with transformations.

$f(x) = 3 \sec(2x) + 1$

Period:

Domain:

Range:

Asymptotes:

Example 2: Graph this function with transformations.
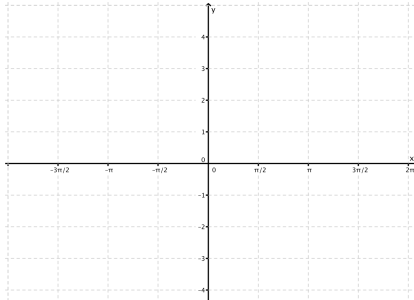
$$f(x) = tan(2x - \frac{\pi}{2}) - 2$$

Period:

Domain:

Range:

Asymptotes:

Example 3:
a) Write an equation for each of these graphs, assuming there are no transformations.
b) Write each function that is a co-function as a transformation of another function.