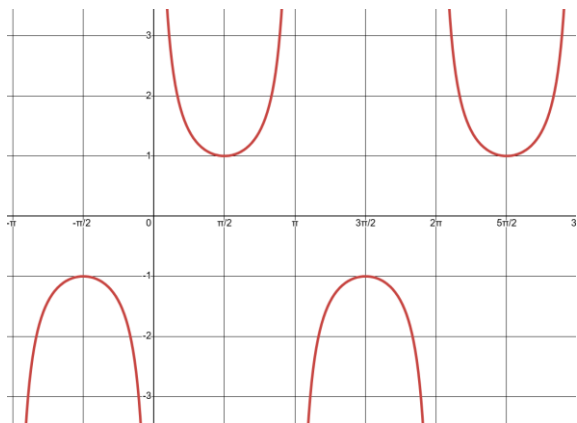


The graph of $y = \operatorname{cosec} x$ has been sketched below.

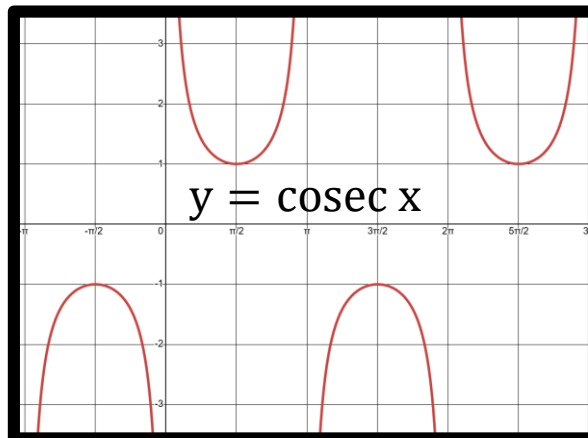
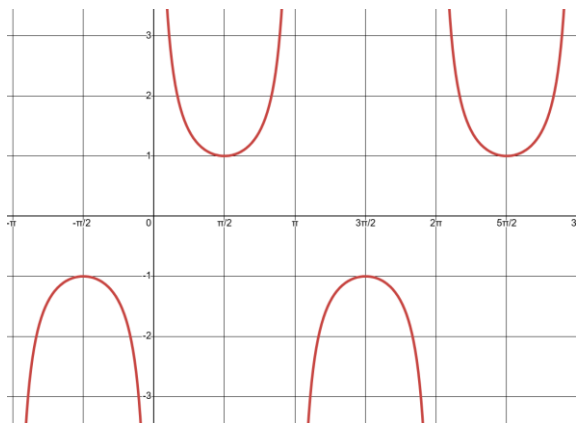
Sketch the following

transformations

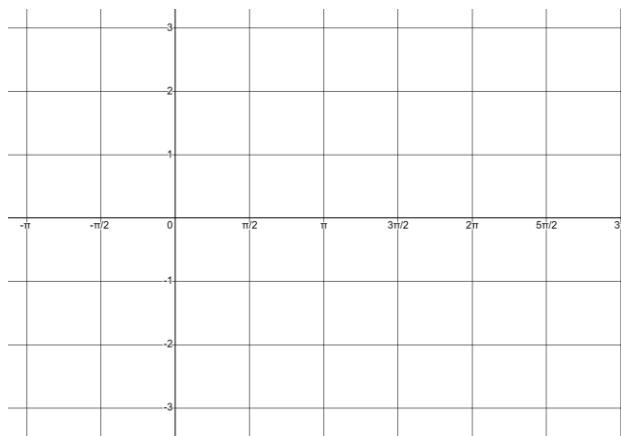
$$y = 1 + \operatorname{cosec} x$$



$$y = \operatorname{cosec} \left(x - \frac{\pi}{2} \right)$$

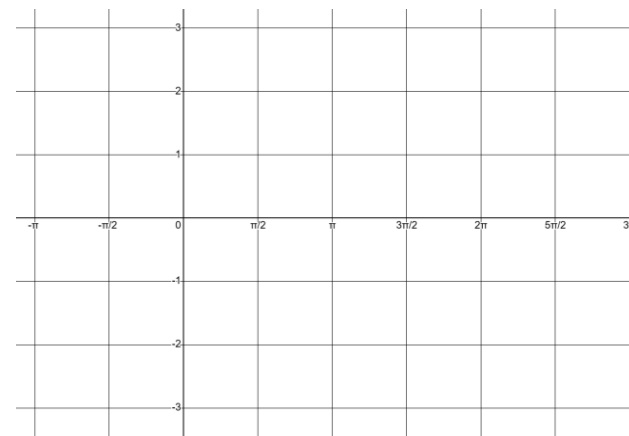


$$y = -\operatorname{cosec}(x)$$

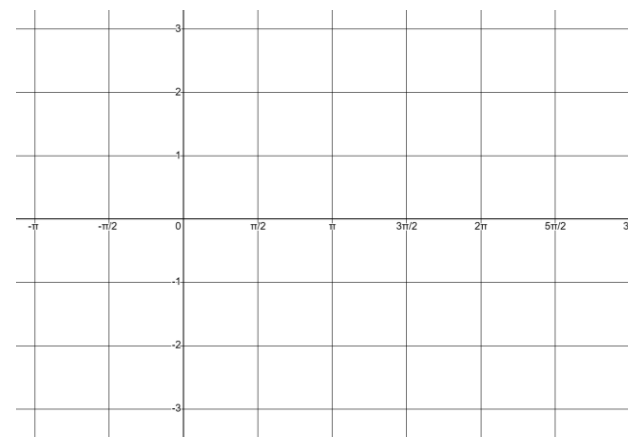


Sketch and label the following transformations on the grids below

$$y = 2\operatorname{cosec} x$$



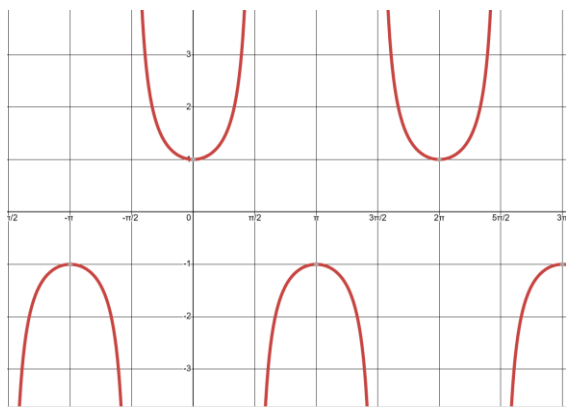
$$y = 1 - \operatorname{cosec} x$$



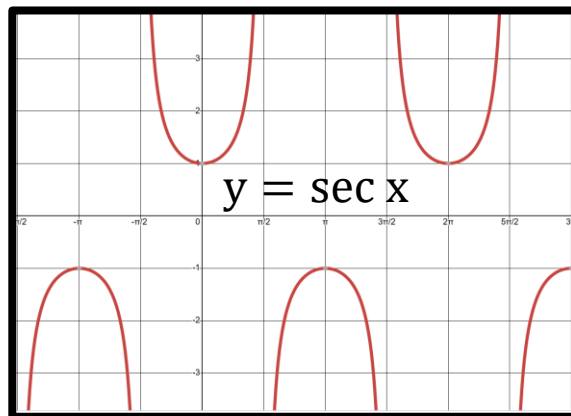
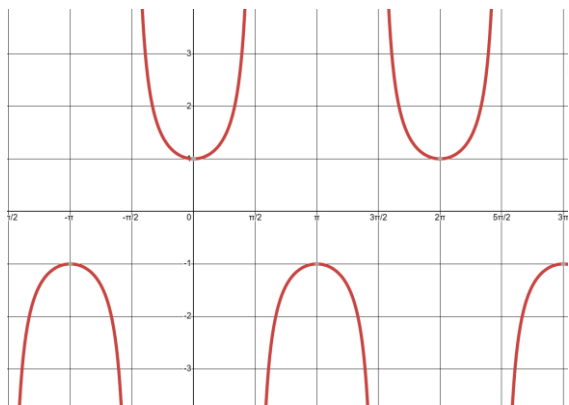
The graph of $y = \sec x$ has been sketched below.

Sketch the following transformations

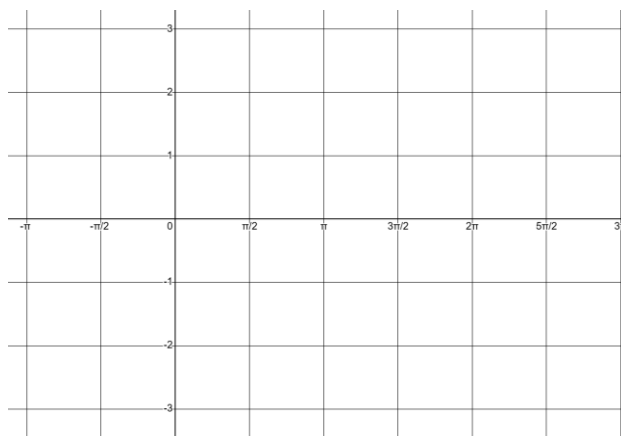
$$y = 1 + \sec x$$



$$y = \sec\left(x - \frac{\pi}{2}\right)$$

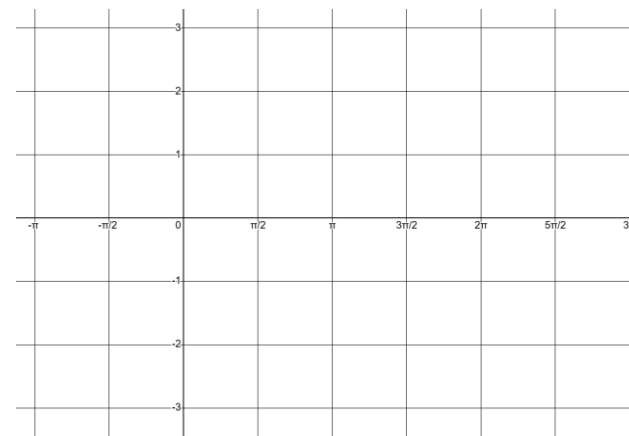


$$y = -\sec(x)$$

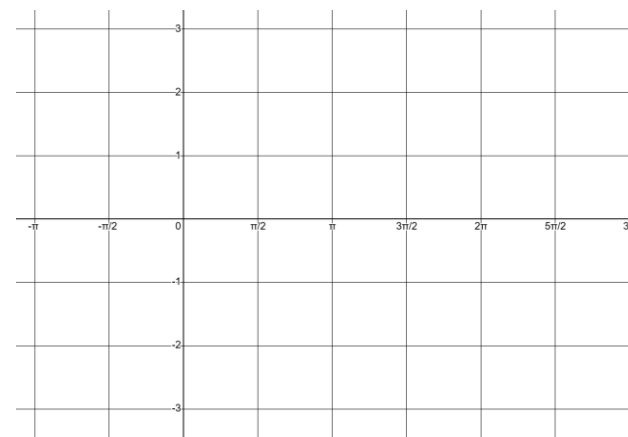


Sketch and label the following transformations on the grids below

$$y = 2\sec x$$

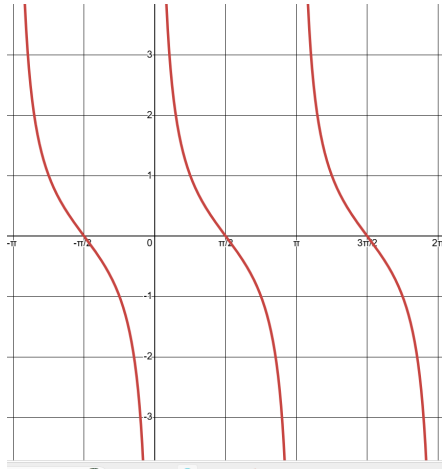


$$y = 1 - \sec x$$

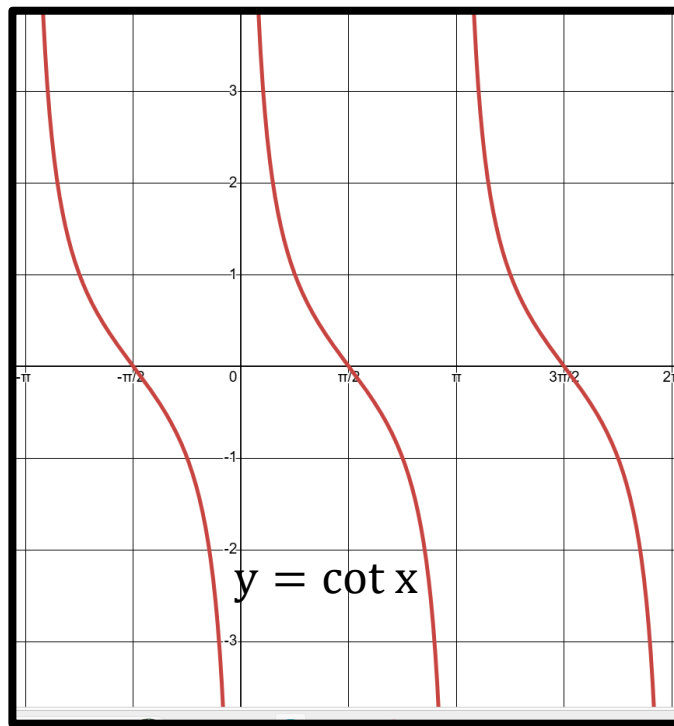
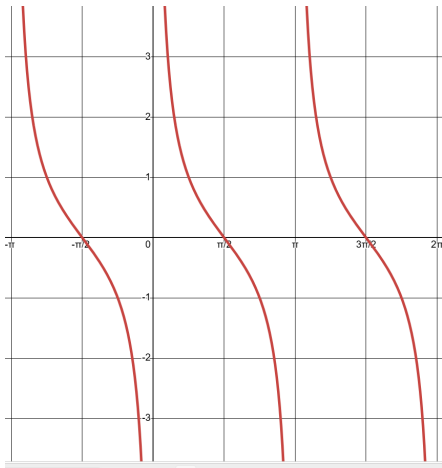


The graph of $y = \cot x$ has been sketched below.

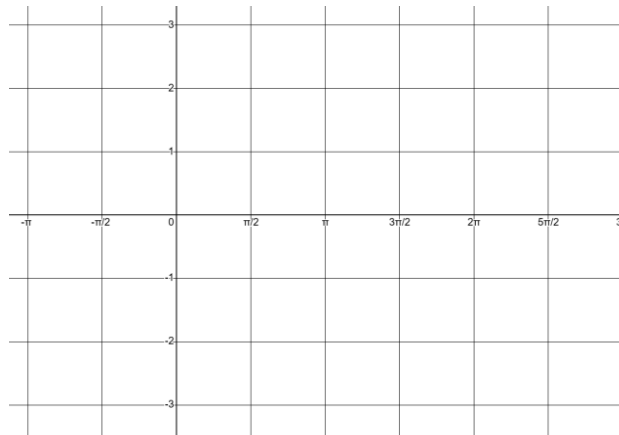
Sketch the following transformations
 $y = 1 + \cot x$



$$y = \cot\left(x - \frac{\pi}{2}\right)$$

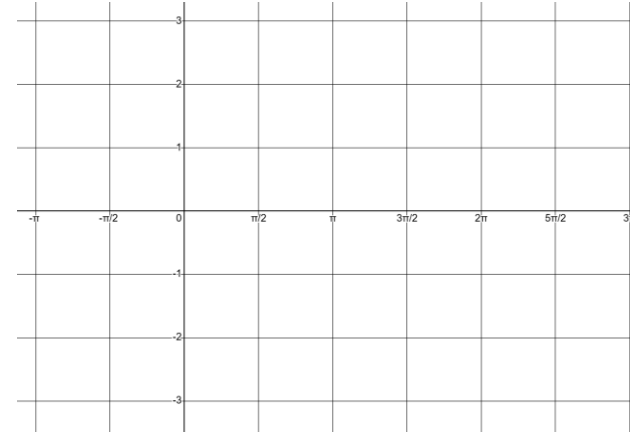


$$y = -\cot(x)$$

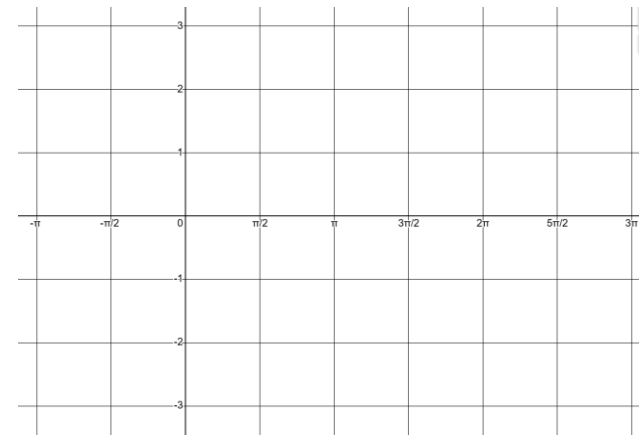


Sketch and label the following transformations on the grids below

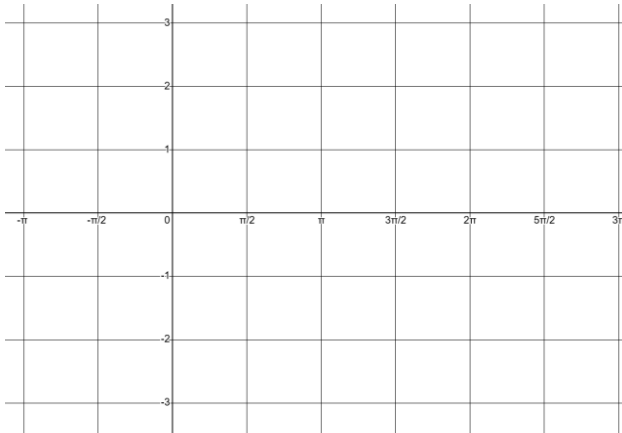
$$y = 2\cot x$$



$$y = 1 - \cot x$$

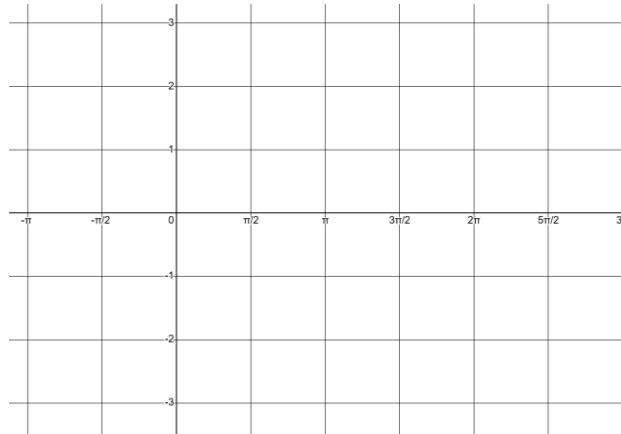


$$y = -\cot\left(x - \frac{\pi}{2}\right)$$

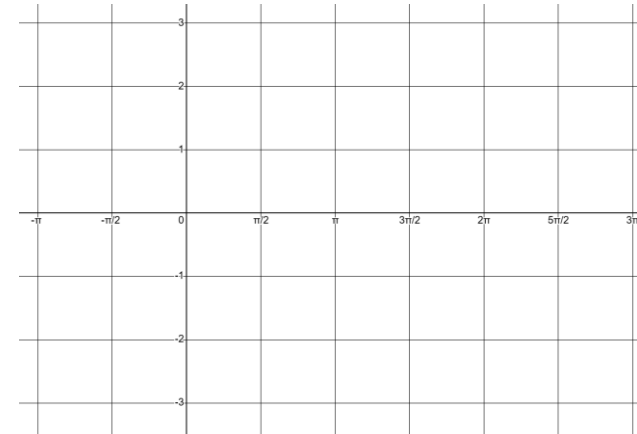


Sketch and label the
following transformations
on the grids below

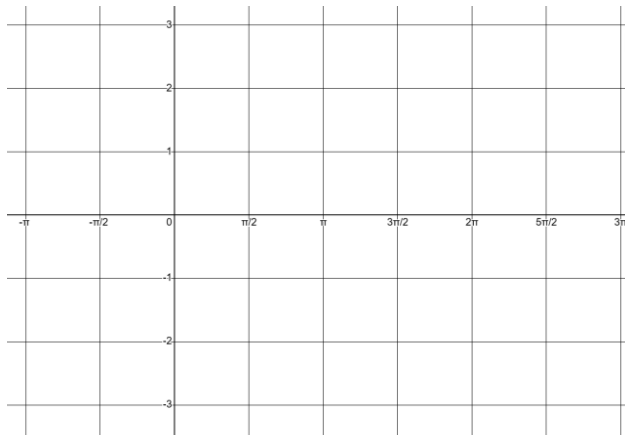
$$y = 3 + 2\sec(x)$$



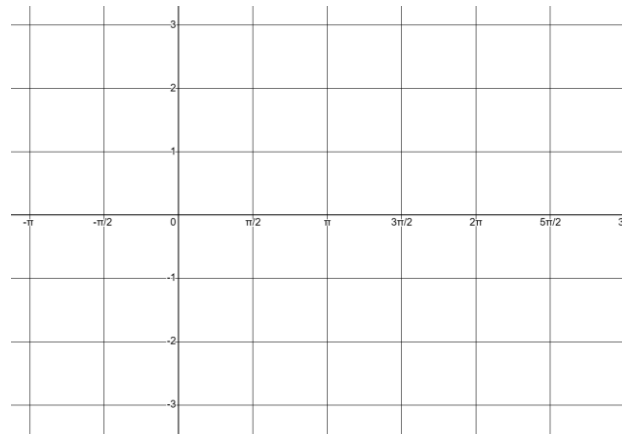
$$y = \sec(2x)$$



$$y = 2 - \operatorname{cosec}(x)$$



$$y = 2\cot\left(x + \frac{\pi}{2}\right)$$



$$y = \cot(-2x)$$

