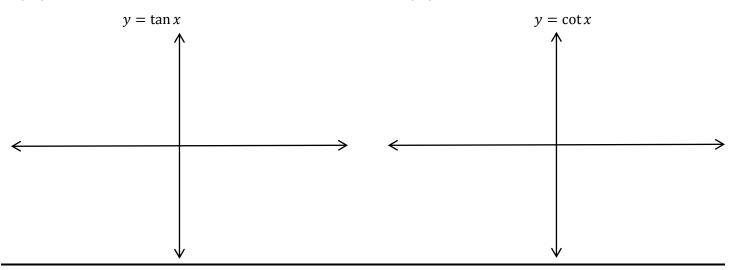
## **Tangent and Cotangent Graphs**

Write tan (x) and cot (x) in terms of sin (x) and cos (x)

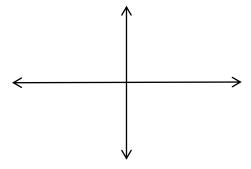
What is the y-intercept of  $y = \tan x$ ?  $y = \cot x$ ?

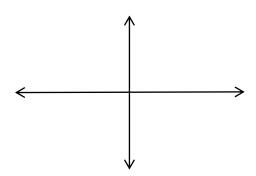
Display cosecant and secant for numbers x,  $-2\pi < x < 2\pi$ . Mark asymptotes



Determine the new period, phase shift, vertical stretch or shrink and vertical translation without a graphing calculator

• 
$$y = 3\tan\left(\frac{1}{2}x - \pi\right) + 1$$





• 
$$y = -\frac{1}{2}\cot(3x - 2\pi) + 1$$

