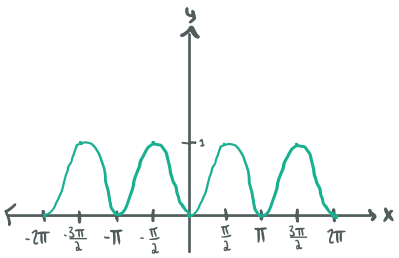
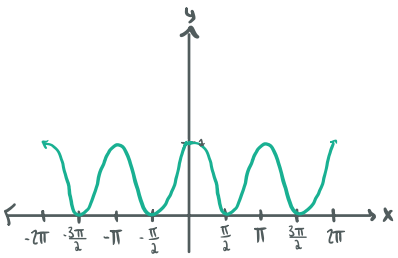
Trigonometric Functions

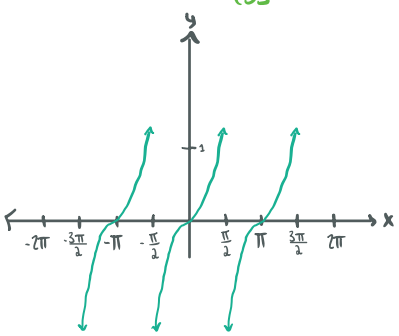
sin



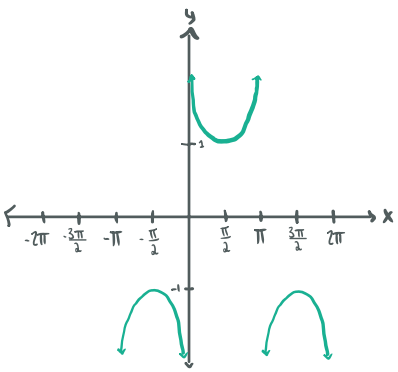
cos



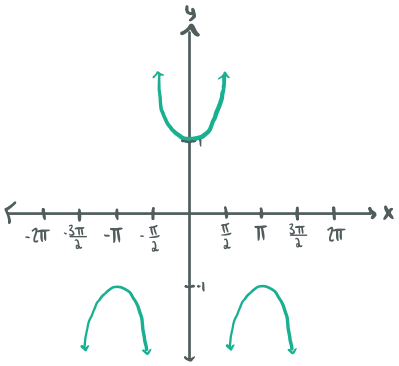
$\tan = \frac{\sin}{\cos}$



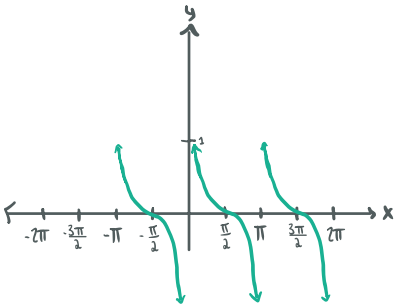
$\csc = \frac{1}{\sin}$



$\sec = \frac{1}{\cos}$



$\cot = \frac{1}{\tan}$



Note: None of these functions are injective (Recall: Horizontal line test)

∴ They do not have inverses

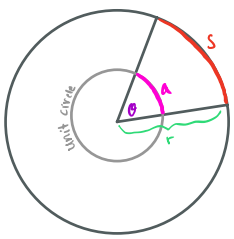
But, if we restrict their domains we can derive inverse trig functions: $\cos^{-1}$, $\sin^{-1}$, $\tan^{-1}$, etc...

Translations:

$$y = a \cdot f(b(x+c)) + d$$

- a: Vertical Stretch
- d: Vertical Shift
- b: Horizontal Stretch
- c: Horizontal Shift

Radian Measure (a)



$$\theta = a = \frac{s}{r}$$

Convert degrees to radians