

October 16

SWBAT:

*Draw and describe
transformations of
tangent and cotangent*

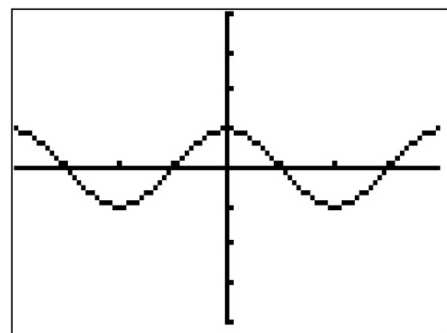
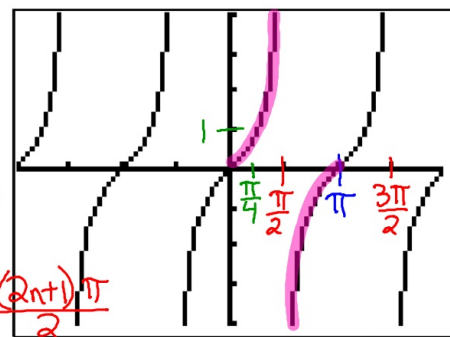
Graph
of
 $\tan(x)$

length of one
cycle = π
period = $\frac{\pi}{b}$

Range: all real #s

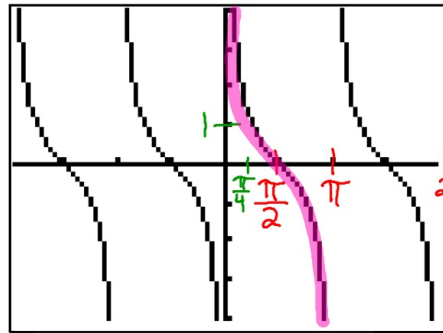
Domain: all real #s
except $x = \frac{\pi}{2}, \frac{3\pi}{2}, \dots, \frac{(2n+1)\pi}{2}$

$$\tan(x) = \frac{\sin(x)}{\cos(x)}$$



Graph of $\cot(x)$

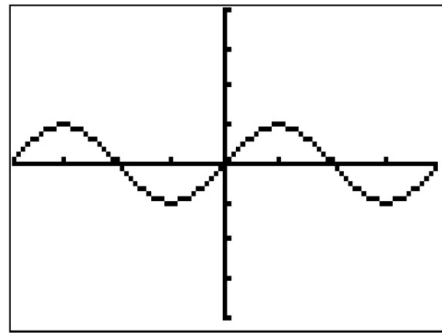
$$\cot(x) = \frac{\cos(x)}{\sin(x)}$$



length of one cycle = π
period = $\frac{\pi}{b}$

Range: all real #s

Domain: all real #s
except $x = \pi, 2\pi, \dots, n\pi$



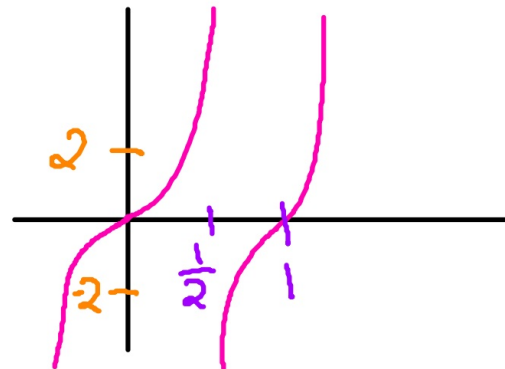
Graph $y = 2\tan(\pi x)$

amplitude = 2

v. shift = 0

period = $\frac{\pi}{b} = \frac{\pi}{\pi} = 1$

h. shift = 0



Graph

$$y = -0.5\cot(4x)$$

amp = -0.5
flipped

v. shift = 0

$$\text{period} = \frac{\pi}{b} = \frac{\pi}{4}$$

h. shift = 0

