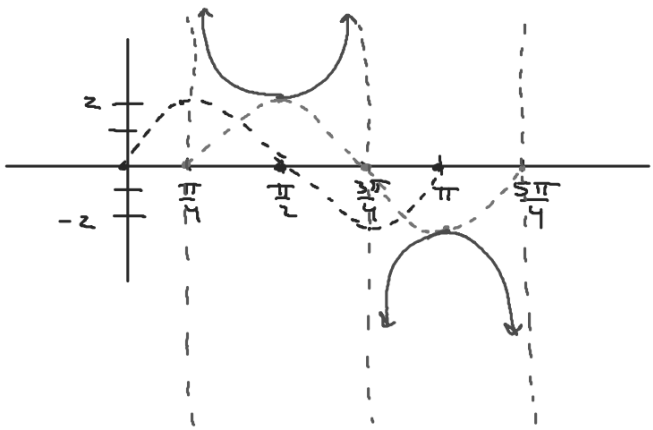
1. $y = 2\csc 2(x - \frac{\pi}{4})$

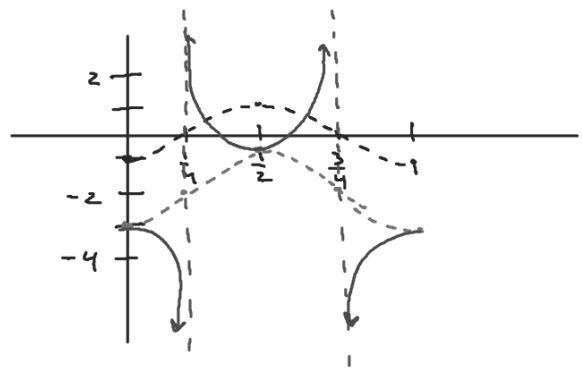
Amplitude	2
Period	$\frac{2\pi}{B} = \frac{2\pi}{2} = \pi$
Phase Shift	Right $\frac{\pi}{4}$
Vertical Shift	None
Asymptotes	$x = \frac{\pi}{4}, \frac{3\pi}{4}, \frac{5\pi}{4}$



Reflect over x-axis

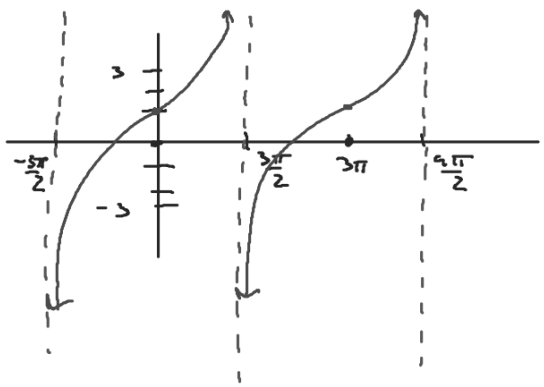
2. $y = -\sec 2\pi x - 2$

Amplitude	1
Period	$\frac{2\pi}{B} = \frac{2\pi}{2\pi} = 1$
Phase Shift	None
Vertical Shift	Down 2
Asymptotes	$x = \frac{1}{4}, \frac{3}{4}$



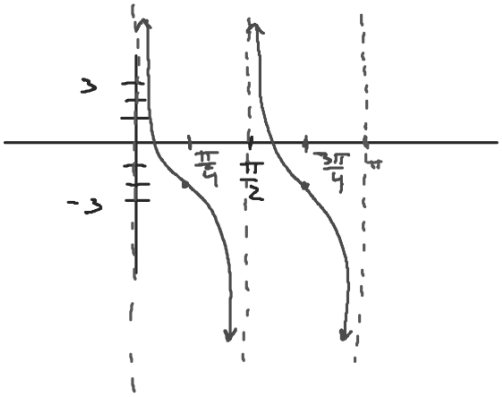
3. $y = 2\tan\frac{x}{3} + 1$

Amplitude	2
Period	$\frac{\pi}{B} = \frac{\pi}{\frac{1}{3}} = 3\pi$
Phase Shift	None
Vertical Shift	Up 1
Asymptotes	$x = -\frac{3\pi}{2}, \frac{3\pi}{2}, \frac{9\pi}{2}$



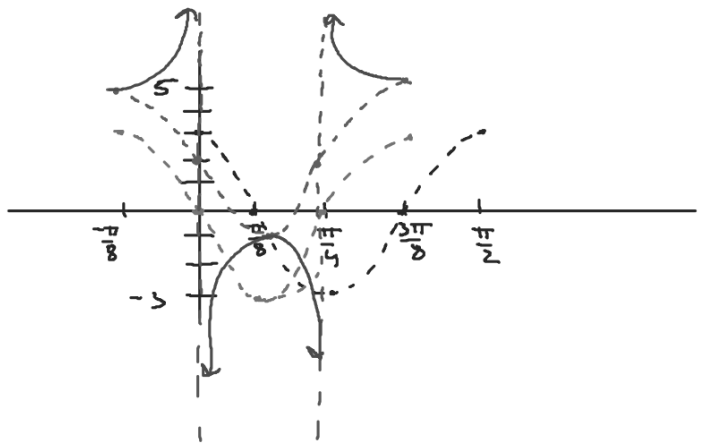
4. $y = \cot 2x - 2$

Amplitude	1
Period	$\frac{\pi}{2}$
Phase Shift	None
Vertical Shift	Down 2
Asymptotes	$x = 0, \frac{\pi}{2}, \pi$



5. $y = 3\sec 4(x + \frac{\pi}{8}) + 2$

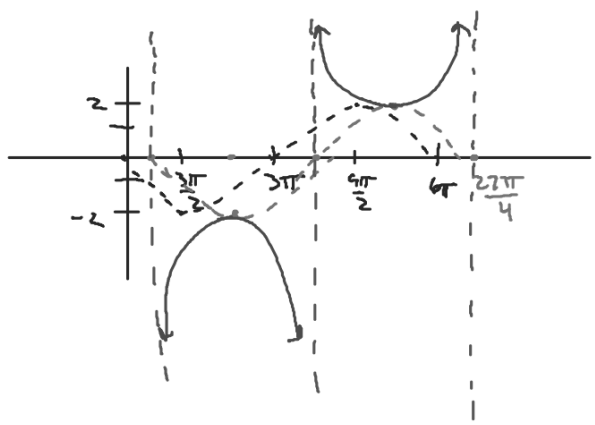
Amplitude	3
Period	$\frac{2\pi}{B} = \frac{2\pi}{4} = \frac{\pi}{2}$
Phase Shift	Left $\frac{\pi}{8}$
Vertical Shift	Up 2
Asymptotes	$x = 0, \frac{\pi}{4}$



6. $y = -2\csc\frac{1}{3}(x - \frac{3\pi}{4})$

Reflect over x-axis

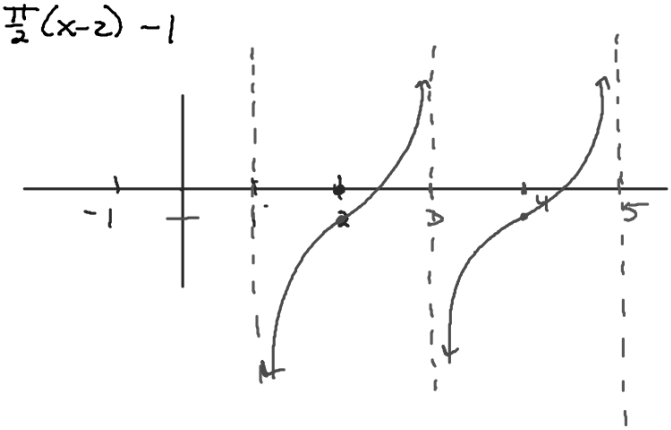
Amplitude	2
Period	6π
Phase Shift	Right $\frac{3\pi}{4}$
Vertical Shift	None
Asymptotes	$x = \frac{3\pi}{4}, \frac{15\pi}{4}, \frac{27\pi}{4}$



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

$y = 2\tan\frac{\pi}{2}(x-2) - 1$

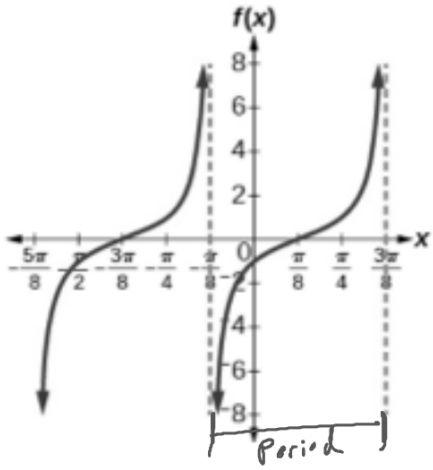
Amplitude	2
Period	2 $\quad \frac{\pi}{B} = \frac{\pi}{\frac{\pi}{2}} = 2$
Phase Shift	Right 2
Vertical Shift	Down 1
Asymptotes	$x = 1, 3, 5$



8. $y = \cot 2\left(x + \frac{\pi}{4}\right) - 1$

Amplitude	
Period	
Phase Shift	
Vertical Shift	
Asymptotes	

Write the equation for each tangent function



$y = A \tan B(x-c) + D$

$Per = \frac{\pi}{B}$

$B = \frac{\pi}{Per}$

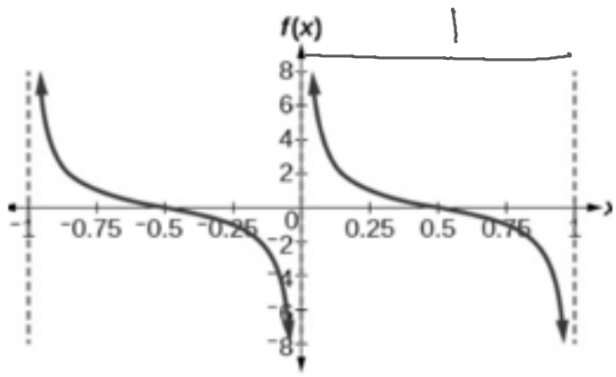
$= \frac{\pi}{\frac{\pi}{2}} = 2$

$\frac{3\pi}{8} - \left(-\frac{\pi}{8}\right)$

$\frac{4\pi}{8} = \frac{\pi}{2}$

$y = \tan 2\left(x - \frac{\pi}{8}\right)$

Write the equation for each tangent function



$A = 1$

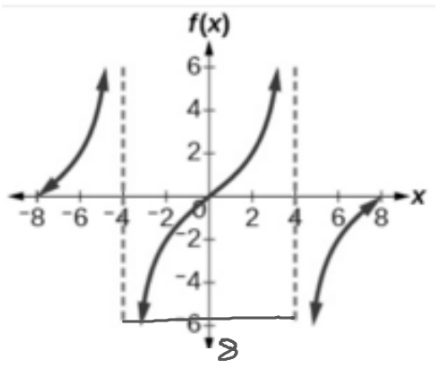
$B = \frac{\pi}{Per}$

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

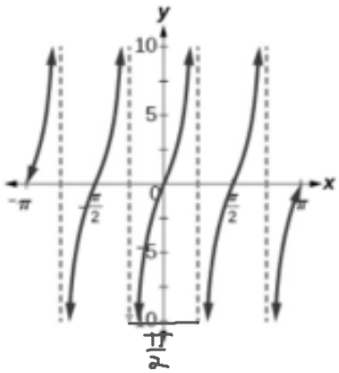
$C = .5$ Right

$y = -\tan \pi (x - .5)$

Write the equation for each tangent function

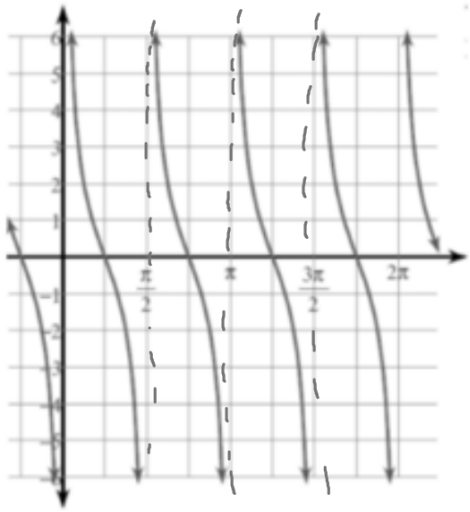


$y = \tan \frac{\pi}{8} x$



$y = \tan 2x$

Write the equation for each cotangent function

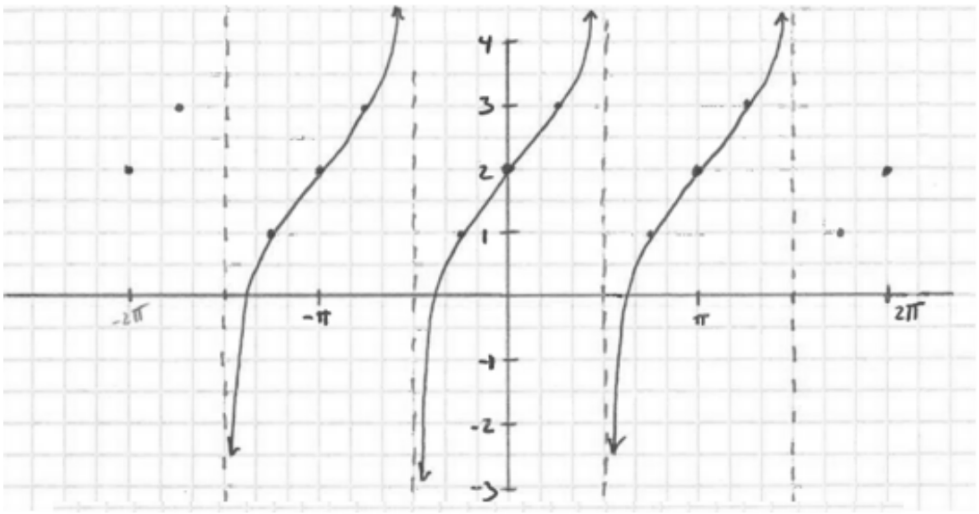


Per $\frac{\pi}{B}$

$B = \frac{\pi}{Per} = \frac{\pi}{\frac{\pi}{2}} = 2$

$y = \cot 2x$

Write the equation for each cotangent function



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

Write the equation for each cotangent function