

Graph one cycle and fill in the blanks. $\frac{2\pi}{b} =$

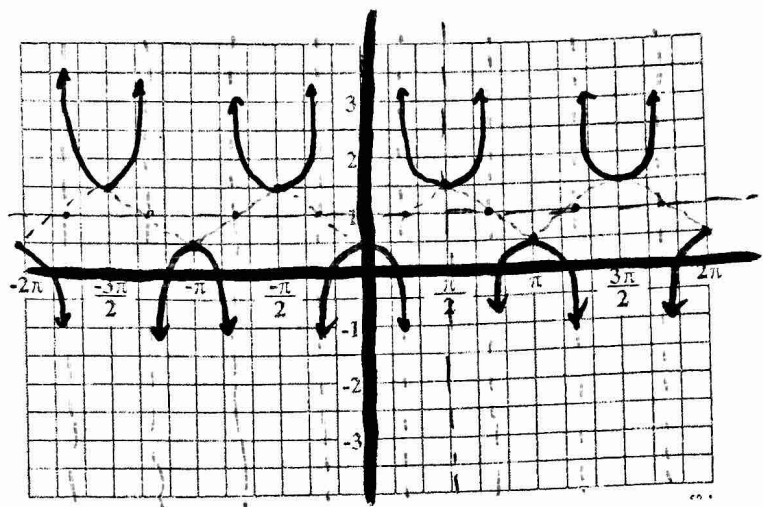
1. $y = \frac{1}{2} \sec 2\left(x - \frac{\pi}{2}\right) + 1$ Period = π

↑ Verticals stretch

Three Specific Asymptotes

$x = \frac{\pi}{4}$ $x = \frac{3\pi}{4}$ $x = \frac{5\pi}{4}$

Equation of Asymptotes $x = \frac{\pi}{4} + n\frac{\pi}{2}$

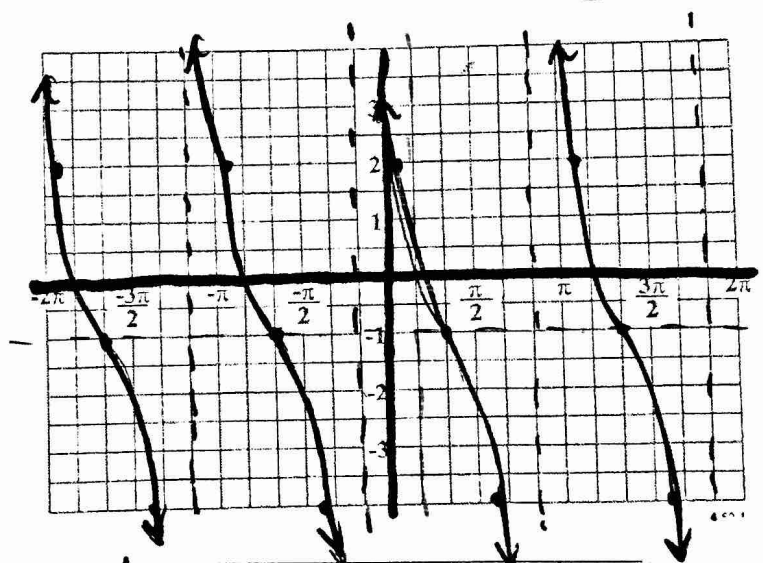


2. $y = 3 \cot\left(x + \frac{\pi}{6}\right) - 1$ Period = $\frac{\pi}{b} = \pi$

↑ V. stretch ↑ H. stretch
Two Specific Asymptotes

$x = -\frac{\pi}{6}$ $x = \frac{5\pi}{6}$

Equation of Asymptotes $x = -\frac{\pi}{6} + n\pi$ $n \in \mathbb{Z}$



3. $y = -2 \csc 2x - 1$ Period = $\frac{2\pi}{b} = \pi$

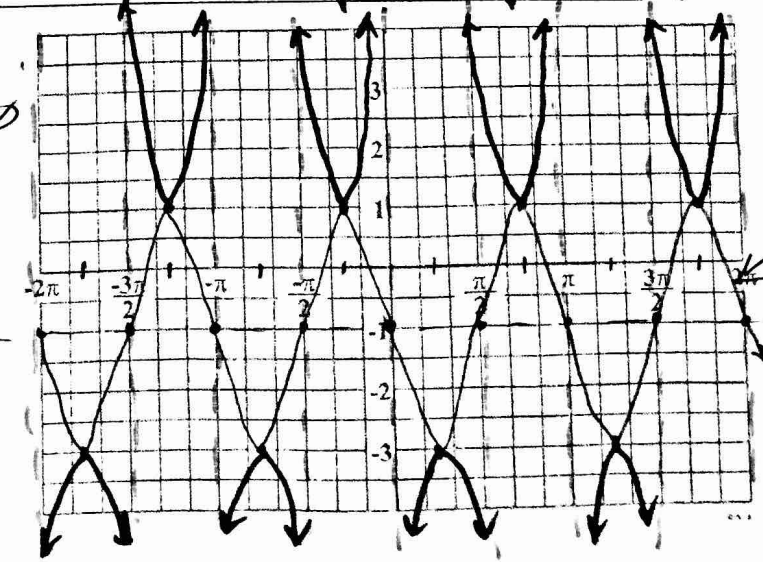
Equation of Asymptotes

$x = \frac{\pi}{2} + n\pi$ $x = \frac{3\pi}{2} + n\pi$ $n \in \mathbb{Z}$

Three Specific Asymptotes

$x = \frac{\pi}{2}$ $x = \frac{3\pi}{2}$

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



v. stretch

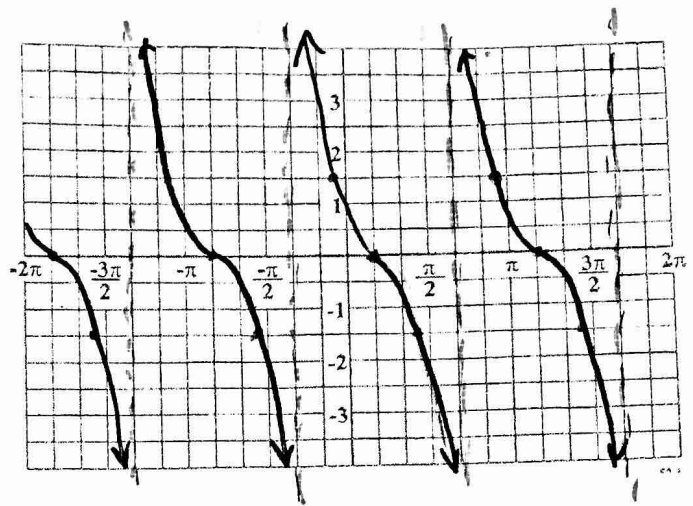
4. $y = -\frac{3}{2} \tan\left(x - \frac{\pi}{6}\right)$

h. shift

Period = π

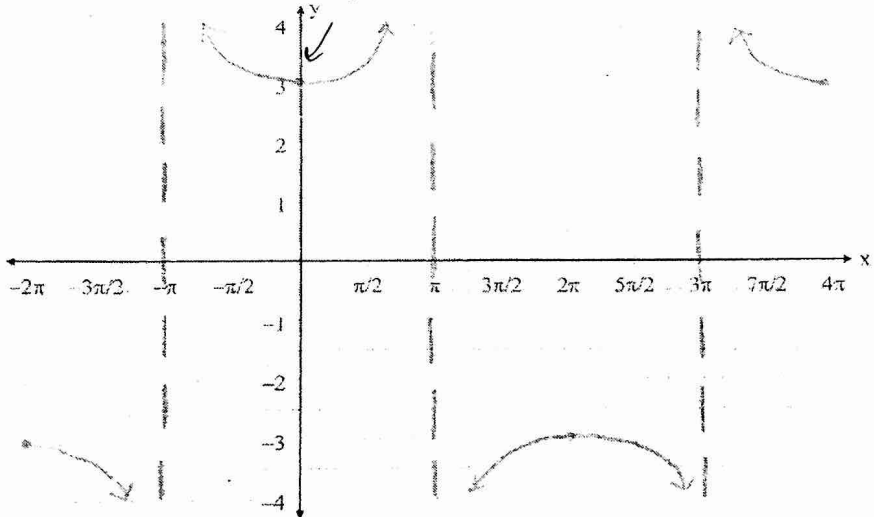
Equation of Asymptotes $x = \frac{2\pi}{3} + n\pi$

Two Specific Asymptotes $x = \frac{2\pi}{3}$ $x = \frac{5\pi}{3}$



Write the equation for each graph.

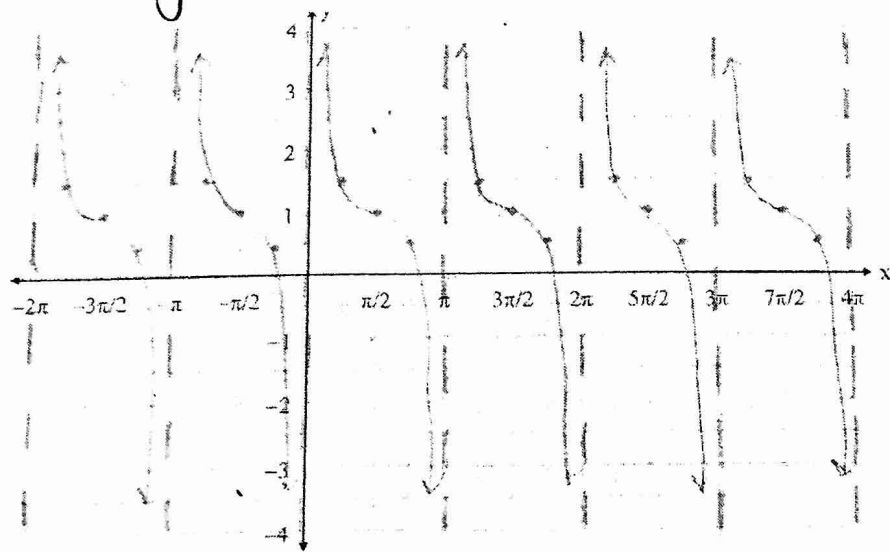
5.



$y = 3 \sec x$

Equation: $y = 3 \sec x$

6.



Equation: $y = \frac{1}{2} \cot x + 1$