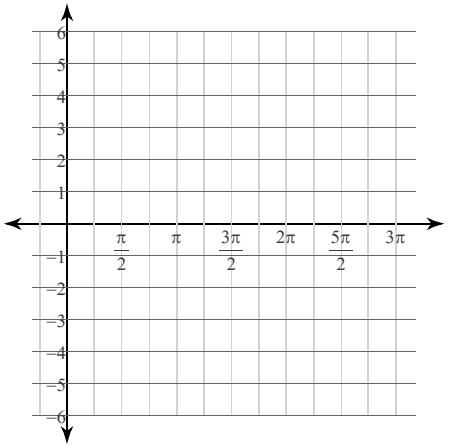
 Name_____

Graphs of Trig Functions

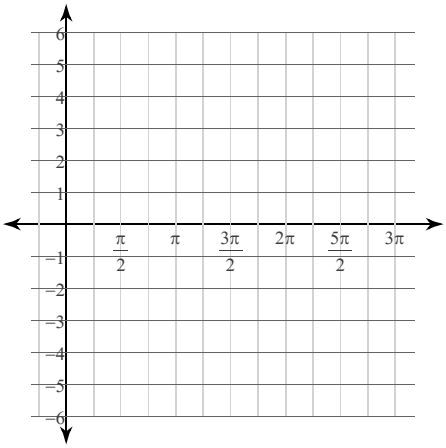
Date_____ Period____

Find the amplitude, the period in radians, the phase shift in radians, the vertical shift, and the minimum and maximum values. Then sketch the graph using radians.

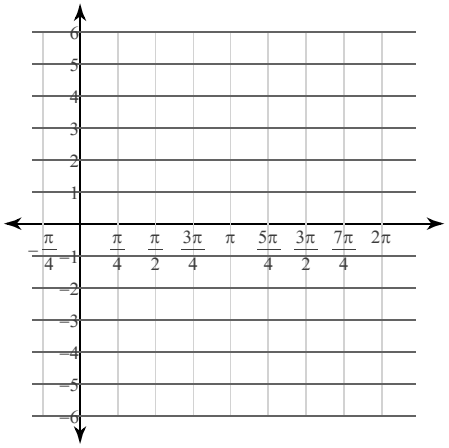
1) $y = 3\sin\left(\theta - \frac{5\pi}{6}\right)$



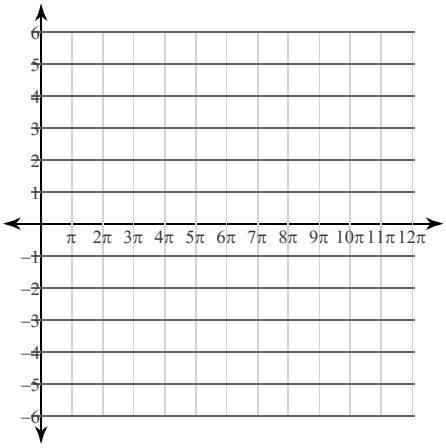
2) $y = 3\cos\theta$



3) $y = 2\sin\left(-3\theta - \frac{\pi}{2}\right) + 2$

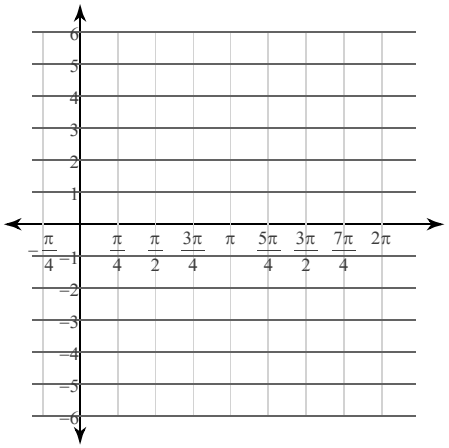


4) $y = \cos\left(\frac{\theta}{4} + \frac{\pi}{4}\right) - 2$

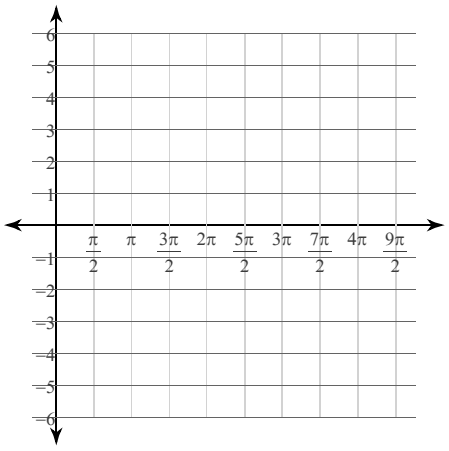


Find the period in radians, the phase shift in radians, the vertical shift, and two vertical asymptotes (if any). Then sketch the graph using radians.

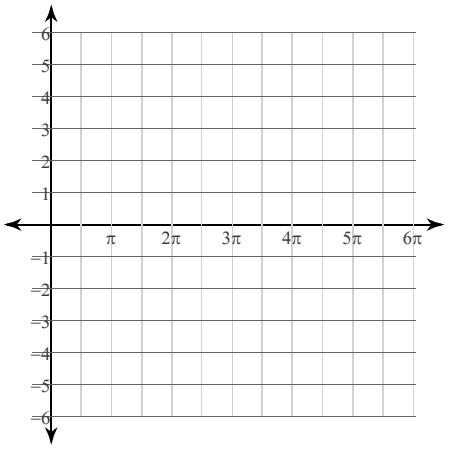
5) $y = \tan\left(2\theta - \frac{11\pi}{6}\right) - 1$



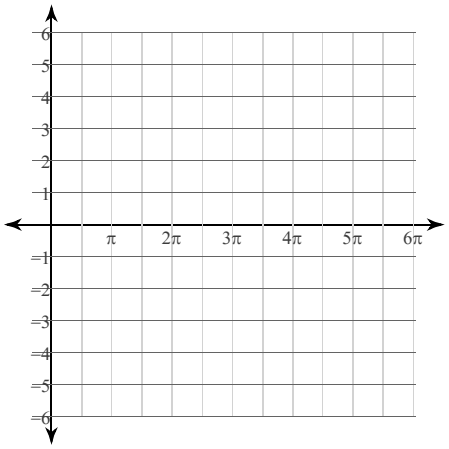
6) $y = 2\cot\left(\frac{\theta}{3} + \frac{5\pi}{6}\right)$



7) $y = \frac{1}{2} \cdot \csc\left(\frac{\theta}{2} + \frac{3\pi}{4}\right)$



8) $y = 3\sec\left(\frac{\theta}{2} - \frac{3\pi}{4}\right)$



Find the transformations required to obtain the graph starting with a basic trig function.

9) $y = 5\cos\left(\theta + \frac{5\pi}{6}\right)$

10) $y = 5 + \sin\left(8\theta + \frac{3\pi}{4}\right)$

11) $y = \sin\left(\theta - \frac{\pi}{6}\right) - 2$

12) $y = \frac{1}{10} \cdot \tan\left(\theta - \frac{\pi}{3}\right)$