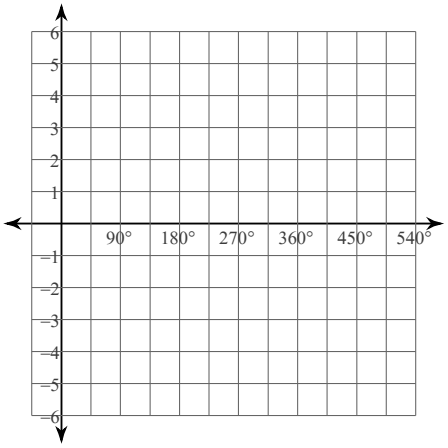
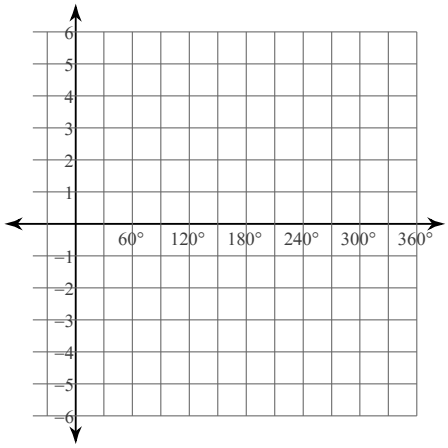
Amplitude, Period, Phase Shift, Vertical Shift

Graph each function using degrees.

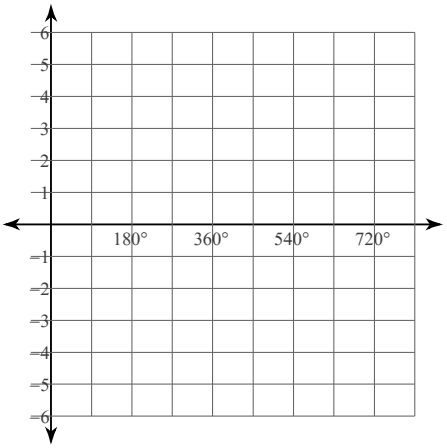
1) $y = \frac{1}{2} \cdot \tan\left(\frac{\theta}{2} - 45\right) + 2$



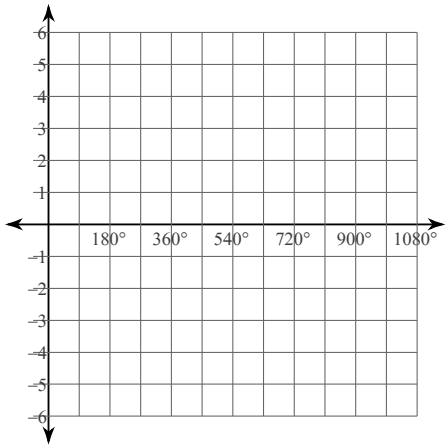
2) $y = 2\sin\left(3\theta - 30\right) + 2$



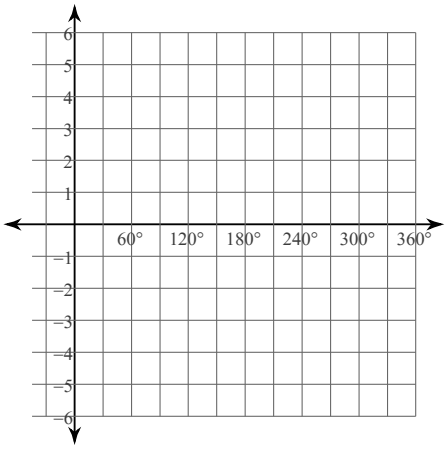
3) $y = 2\tan\left(\frac{\theta}{3} + 300\right) + 1$



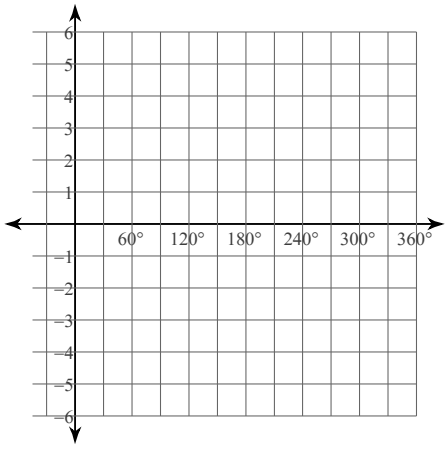
4) $y = 1 + \frac{1}{2} \cdot \cos\left(\frac{\theta}{2} - 135\right)$



5) $y = 4\cos\left(3\theta - 330\right) - 1$

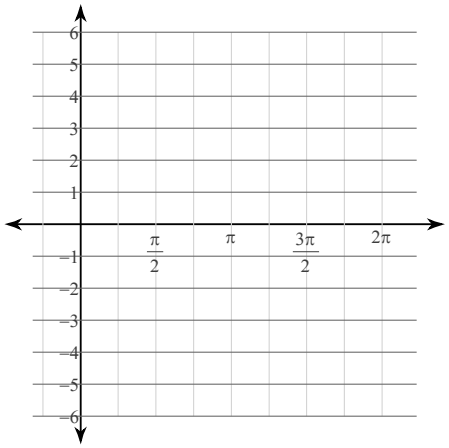


6) $y = \frac{1}{2} \cdot \tan\left(2\theta + 60\right) + 2$

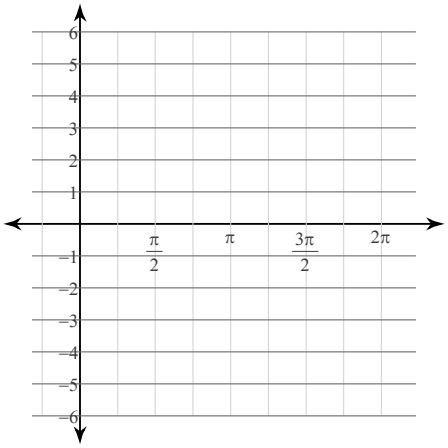


Using radians, find the amplitude and period of each function. Then graph.

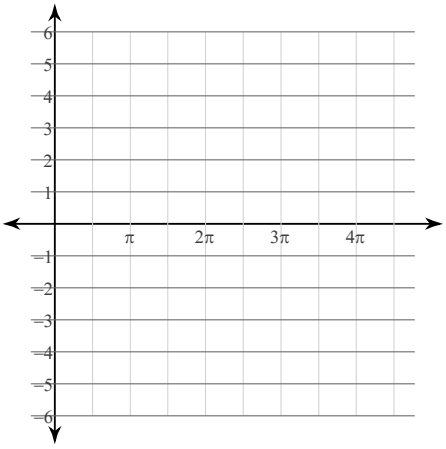
7) $y = 2\cos 2\theta + 2$



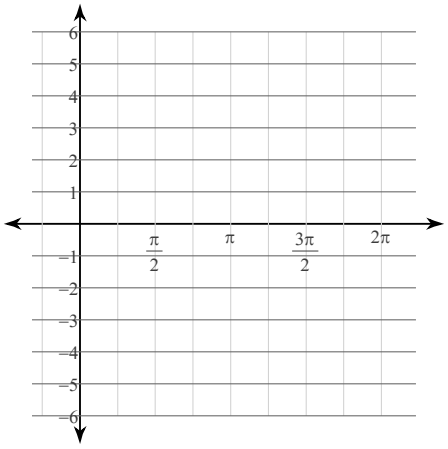
8) $y = 2\sin\left(2\theta - \frac{3\pi}{4}\right) - 2$



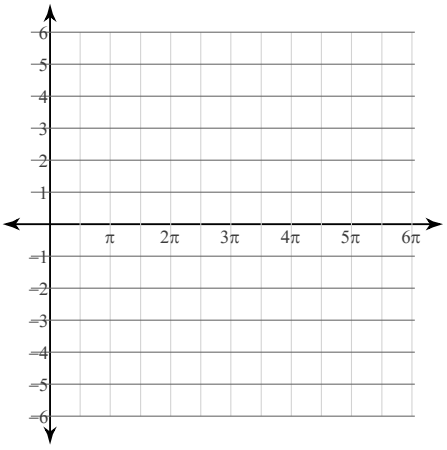
9) $y = 3\tan\left(\frac{\theta}{3} + \frac{\pi}{4}\right) + 2$



10) $y = 2\sin\left(2\theta - \frac{7\pi}{4}\right) - 2$



11) $y = -1 + \frac{1}{2} \cdot \cos\left(\frac{\theta}{2} + \frac{\pi}{4}\right)$



12) $y = 4\tan\left(\frac{\theta}{2} - \frac{\pi}{4}\right) - 1$