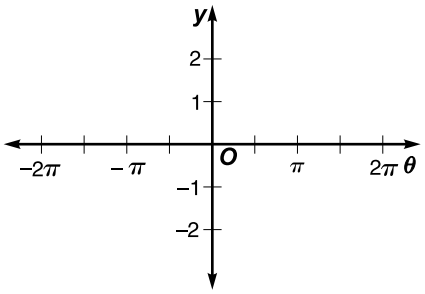
6-4

Practice

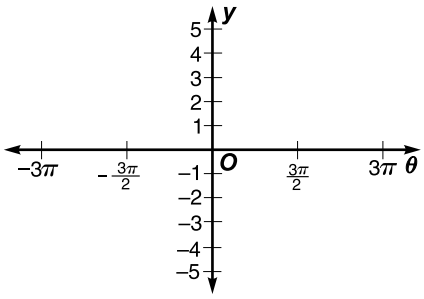
Amplitude and Period of Sine and Cosine Functions

State the amplitude and period for each function. Then graph each function.

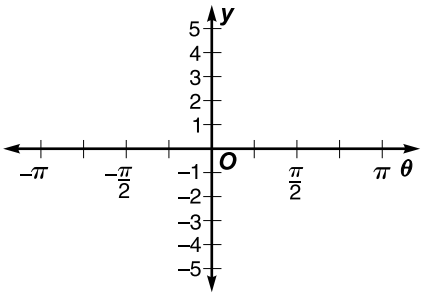
1. $y = -2 \sin \theta$



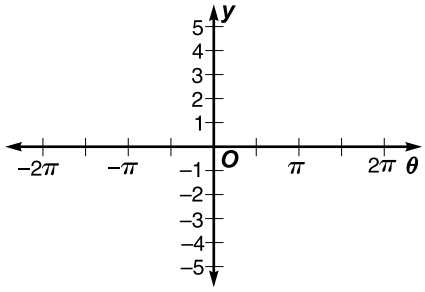
2. $y = 4 \cos \frac{\theta}{3}$



3. $y = 1.5 \cos 4\theta$



4. $y = -\frac{2}{3} \sin \frac{\theta}{2}$



Write an equation of the sine function with each amplitude and period.

5. amplitude = 3, period = 2π

6. amplitude = 8.5, period = 6π

Write an equation of the cosine function with each amplitude and period.

7. amplitude = 0.5, period = 0.2π

8. amplitude = $\frac{1}{5}$, period = $\frac{2}{5}\pi$

9. ***Music*** A piano tuner strikes a tuning fork for note A above middle C and sets in motion vibrations that can be modeled by the equation $y = 0.001 \sin 880\pi t$. Find the amplitude and period for the function.