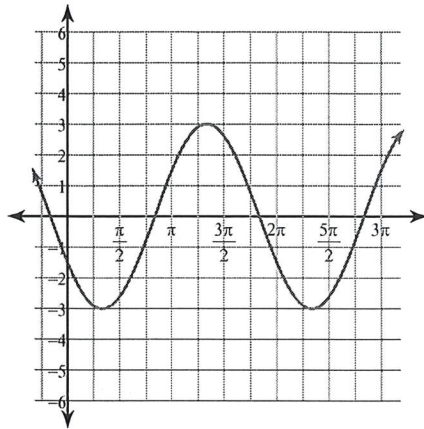


Graphs of Trig Functions

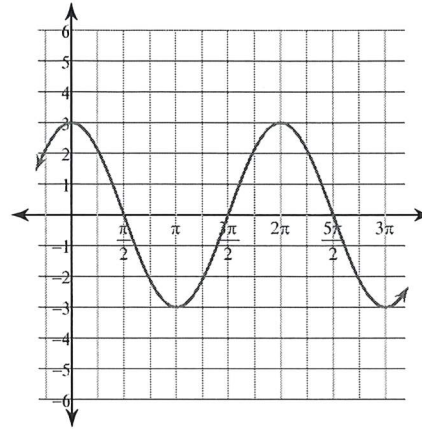
Find the amplitude, the period in radians, the phase shift in radians, the vertical shift, and the minimum and maximum values. Then sketch the graph using radians.

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



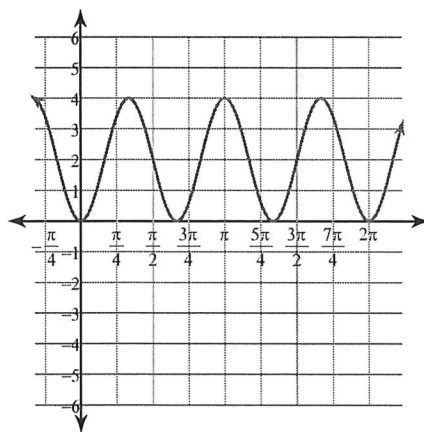
Amplitude: 3  
 Period:  $2\pi$   
 Phase shift: Right  $\frac{5\pi}{6}$   
 Vert. shift: None  
 Min: -3  
 Max: 3

2)  $y = 3\cos\theta$



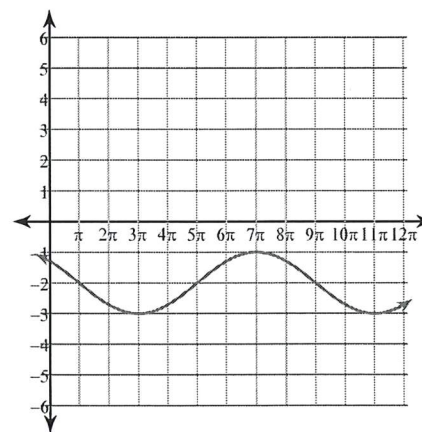
Amplitude: 3  
 Period:  $2\pi$   
 Phase shift: None  
 Vert. shift: None  
 Min: -3  
 Max: 3

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



Amplitude: 2  
 Period:  $\frac{2\pi}{3}$   
 Phase shift: Left  $\frac{\pi}{6}$   
 Vert. shift: Up 2  
 Min: 0  
 Max: 4

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



Amplitude: 1  
 Period:  $8\pi$   
 Phase shift: Left  $\pi$   
 Vert. shift: Down 2  
 Min: -3  
 Max: -1