5.3-5.4 Review Name:_____

Pre-Calculus Hour:_____

Find the period, amplitude, phase shift and vertical shift of each function and graph the function.

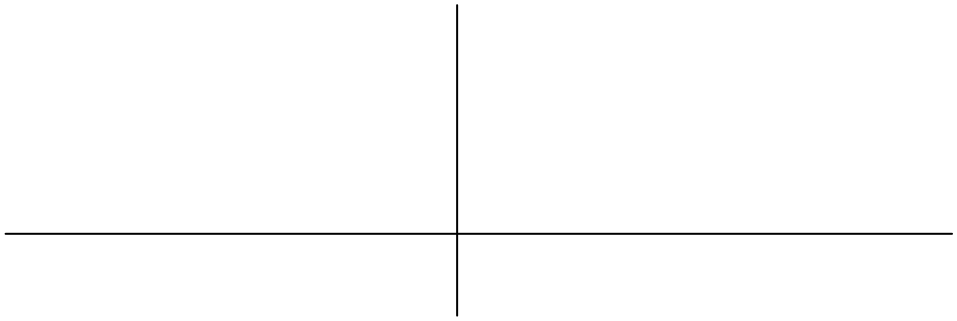
1. $y = -\sin\theta + 2$

   Period:

   Amplitude:

   Phase Shift:

   Vertical Shift:



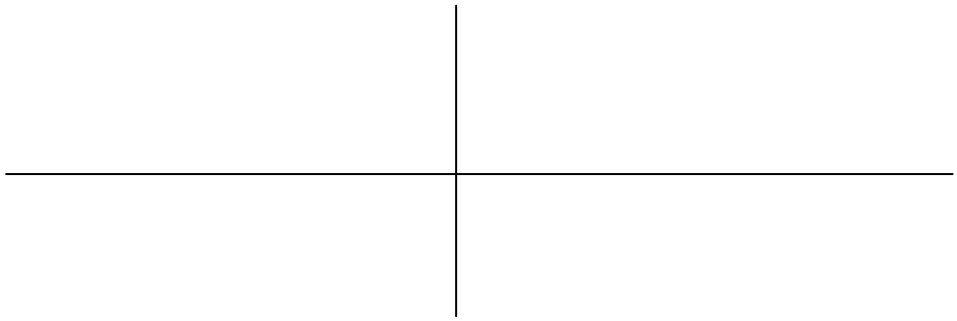
2. $y = 2\cos\left(\theta + \frac{\pi}{2}\right)$

   Period:

   Amplitude:

   Phase Shift:

   Vertical Shift:



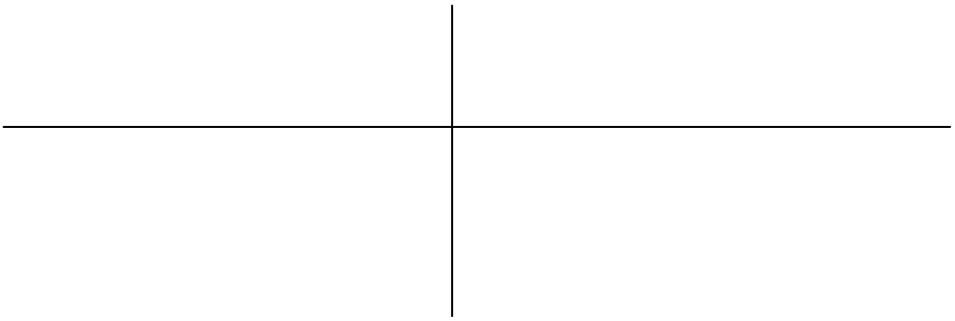
3. $y = -\cos\frac{1}{2}\theta - 1$

   Period:

   Amplitude:

   Phase Shift:

   Vertical Shift:



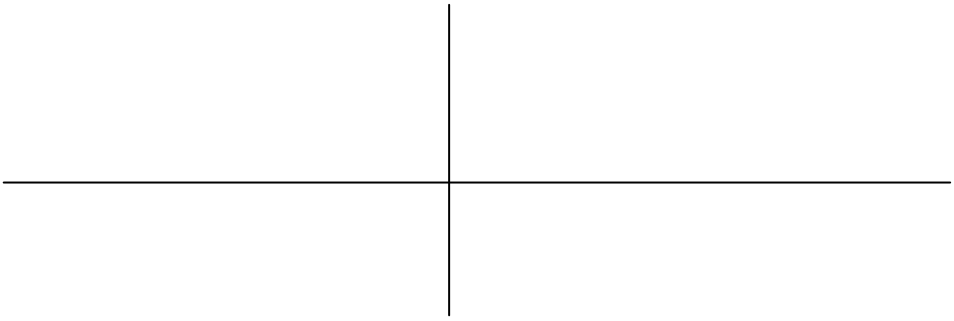
4. $y = 3\sin 2\left(\theta - \frac{\pi}{4}\right)$

   Period:

   Amplitude:

   Phase Shift:

   Vertical Shift:



5. A tuning fork is struck, producing a pure tone as its tines vibrate. The vibrations are modeled by the function: $v(t) = 0.7\sin(880\pi t)$, where v(t) is the displacement of the tines in millimeters and t is measured in seconds.

   a) Find the period of the vibration.

   b) Find the maximum and minimum displacements of the tines.

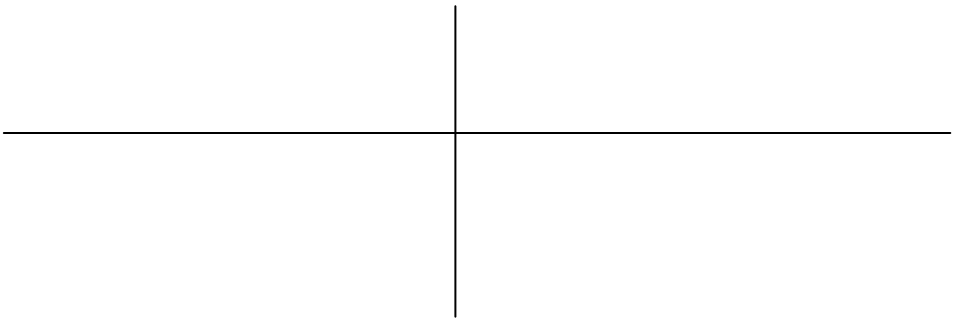
6. $y = 2\sec\theta - 1$

Period:

Amplitude:

Phase Shift:

Vertical Shift:



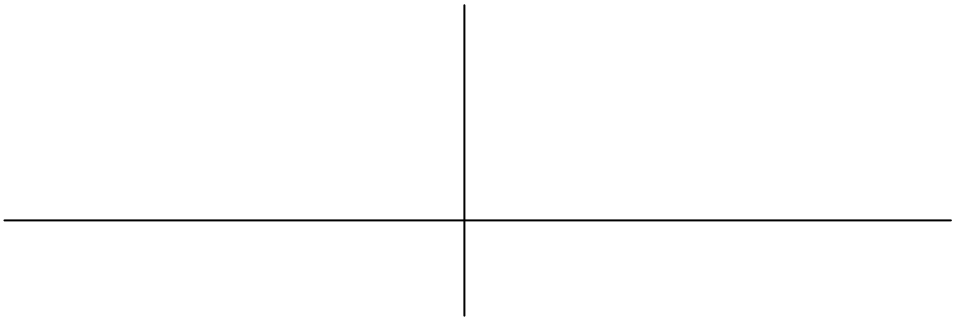
7. $y = -\frac{1}{2}\csc\theta + 2$

Period:

Amplitude:

Phase Shift:

Vertical Shift:



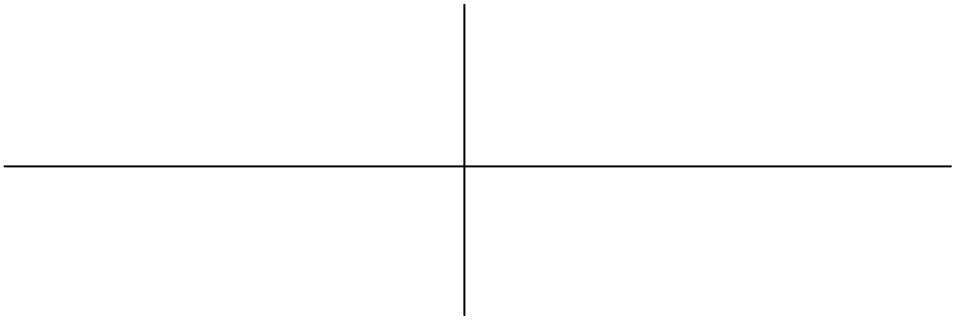
8. $y = \cot\left(\theta - \frac{\pi}{2}\right)$

Period:

Amplitude:

Phase Shift:

Vertical Shift:



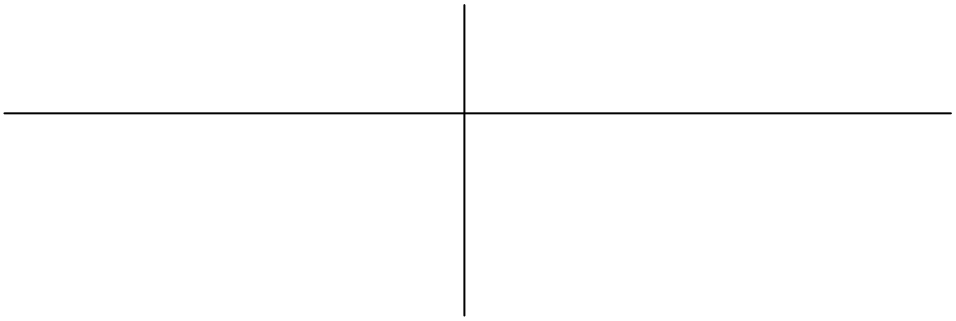
9. $y = \tan\left(\theta + \frac{\pi}{2}\right) - 1$

Period:

Amplitude:

Phase Shift:

Vertical Shift:



10. $y = 2\csc\left(\theta - \frac{\pi}{2}\right)$

Period:

Amplitude:

Phase Shift:

Vertical Shift: