

Graphs of Trigonometric Functions (4.5, 4.6)

Graphs of Sine and Cosine

$$y = A \sin(Bx - C) + D$$

Amplitude

Period

$$y = A \cos(Bx - C) + D$$

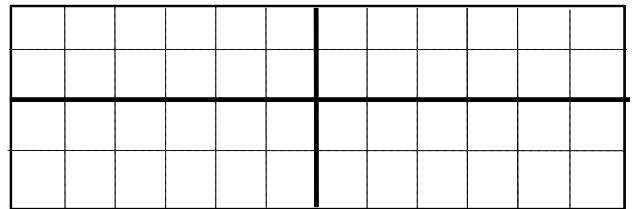
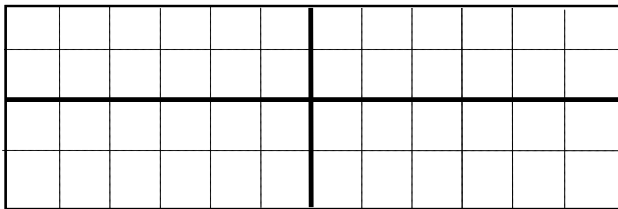
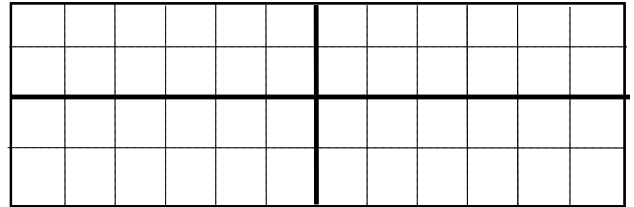
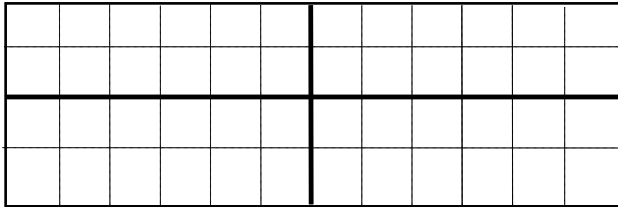
Horizontal Phase Shift

Vertical Phase Shift

Graphing Sine and Cosine Functions: Determine the amplitude, period, and phase shift of each function. Then graph one period of the function.

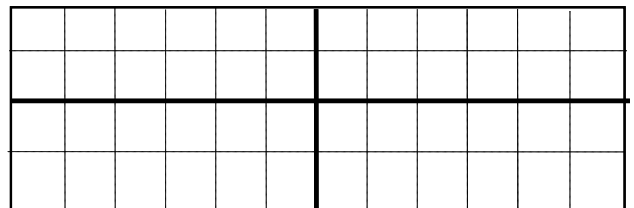
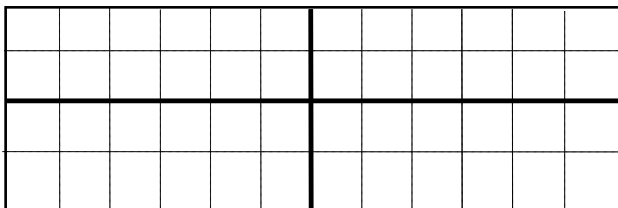
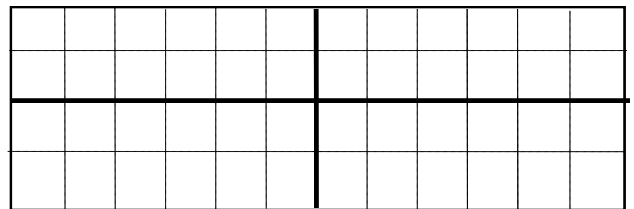
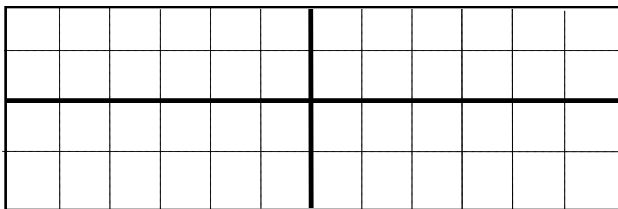
1) $y = 2 \sin\left(2x - \frac{\pi}{2}\right) - 1$

2) $y = -\cos(2\pi x + 4) + 1$



3) $y = -\csc\left(\pi x - \frac{\pi}{2}\right) + 1$

4) $y = 2 \cos(3x + 2\pi)$



Graphs of Tangent and Cotangent

$$y = A \tan(Bx - C) + D$$

$$y = A \cot(Bx - C) + D$$

Amplitude

Horizontal Phase Shift

Period

Vertical Phase Shift

Graphing the Other Trigonometric Functions: Determine the amplitude, period, and phase shift of each function. Then graph two periods of the function.

5) $y = \tan\left(2x + \frac{\pi}{4}\right) + 1$

6) $y = -\cot\left(\frac{\pi}{2}x + \frac{\pi}{4}\right) - 2$

