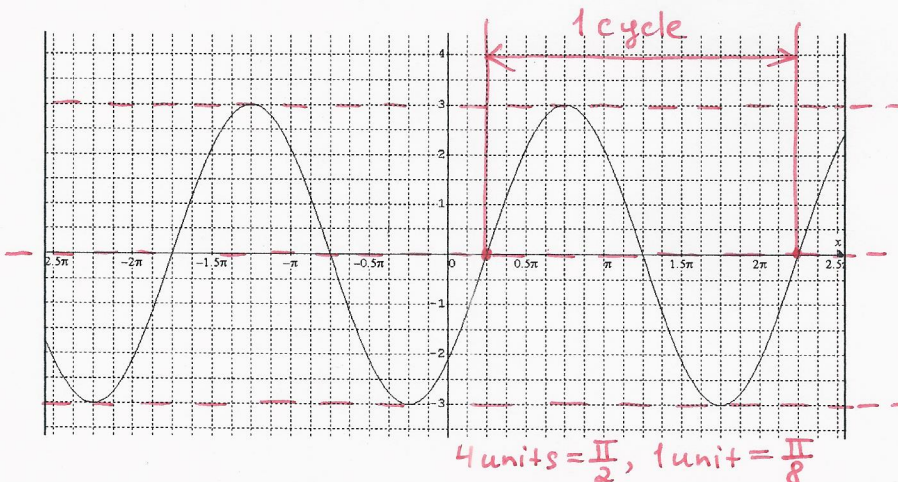


Amplitude, Period and Phase Shift Continued

For each of the following graphs determine the amplitude, period and phase shift as well as possible equations.



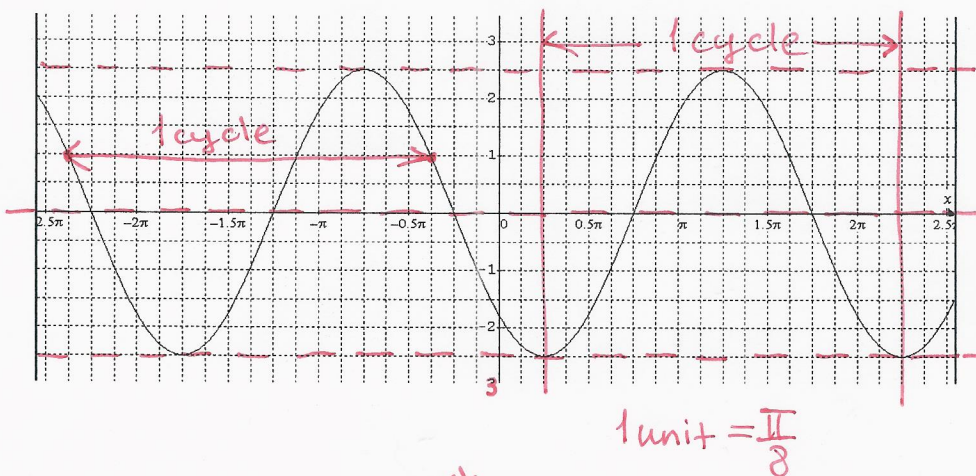
$y_{max} = 3, y_{min} = -3, y_{ave} = 0$

period = 2π , $k = \frac{2\pi}{2\pi} = 1$

midline: $y = 0$, amp = 3
 sine function: p.s. = $\frac{\pi}{4}$ ← 2 squares
 $y = 3 \sin(x - \frac{\pi}{4})$

cosine function: p.s. = $\frac{3\pi}{4}$ (unreflected)
 $y = 3 \cos(x - \frac{3\pi}{4})$

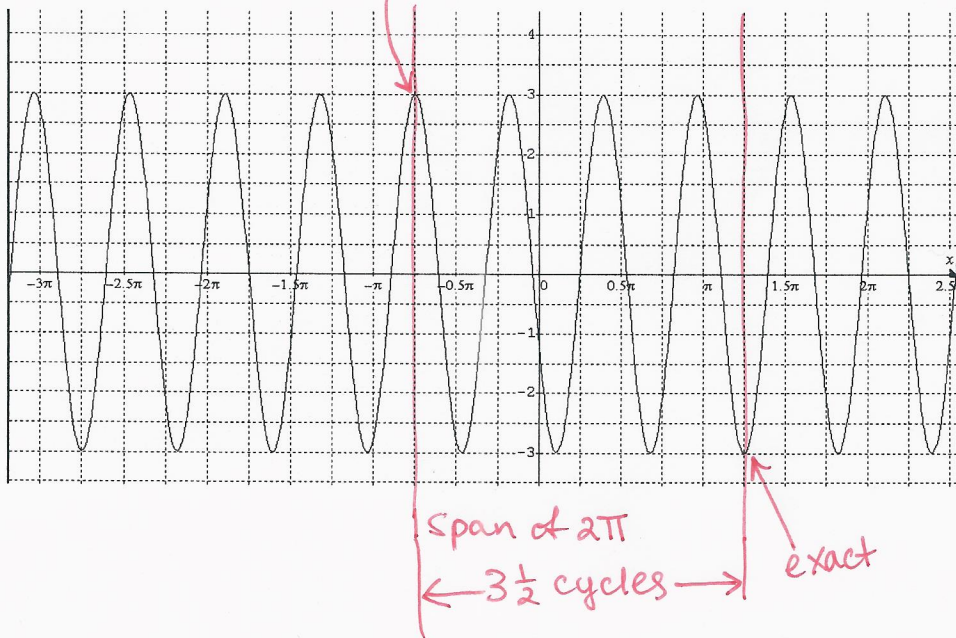
or
 $y = -3 \cos(x + \frac{\pi}{4})$ (reflected)



period = 2π , amp = 3,
 midline: $y = 0$, $k = 1$

sine: $y = 3 \sin(x - \frac{3\pi}{4})$

cosine: $y = -3 \cos(x - \frac{\pi}{4})$



amp = 3, period = ? midline: $y = 0$

period = $\frac{2\pi}{\frac{7}{2}} = \frac{4\pi}{7}$

$k = \frac{2\pi}{\frac{4\pi}{7}} = \frac{14}{4} = \frac{7}{2}$

sine: $y = 3 \sin[\frac{7}{2}(x - \frac{\pi}{4})]$

cosine:

$y = 3 \cos[\frac{7}{2}(x + \frac{3\pi}{4})]$