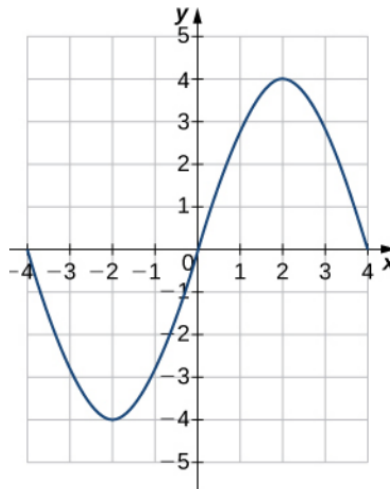


Exercise 163

For the following exercises, each graph is of the form $y = A \sin Bx$ or $y = A \cos Bx$, where $B > 0$. Write the equation of the graph.



Solution

The amplitude is 4, and one cycle is completed in 8 units. The period is then $B = 2\pi/8 = \pi/4$. Therefore,

$$y = 4 \sin \left(\frac{\pi}{4}x \right).$$