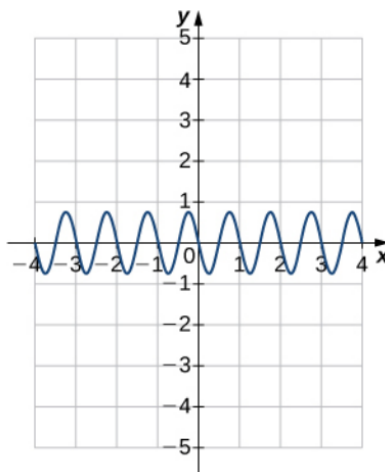# Exercise 166

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 0.75, and one cycle is completed in 1 unit. The period is then $B = 2\pi/1 = 2\pi$. Therefore,

$$y = -\sin(2\pi x).$$

There's a negative sign because the graph goes down to -1 from $x = 0$ as opposed to $+1$ in a regular sine curve.