

- Go to Fourier Basis Functions and play with the simulation near the top of the page.
  1. What function does  $a_m$  correspond to? What does  $m$  mean?
  2. What function does  $b_m$  correspond to? What does  $m$  mean?
  3. What values can  $m$  take?
- Go to Fourier Series: Exploration and look at the simulation near the top of the page. It shows the graph of a function in blue.
  1. Move the sliders until the green curve matches the blue one. *Only three of the sliders need to be set to nonzero values.*
  2. Based on the graph, why might you anticipate which values of  $a_m$  and  $b_m$  are nonzero, larger or smaller, positive or negative?