

## Exercise 14

What do the terms in the series

$$\frac{\pi}{4} = \sin 1 + \frac{1}{3} \sin 3 + \frac{1}{5} \sin 5 + \dots$$

look like? Make a graph of  $\sin n$  for  $n = 1, 2, 3, 4, \dots, 20$  without drawing the intervening curve; that is, just plot the 20 points. Use a calculator; remember that we are using radians. In some sense the numbers  $\sin n$  are *randomly* located in the interval  $(-1, 1)$ . There is a great deal of “random cancellation” in the series.