

# Homefun 19

## Sum Rectangles

MATH 150

15 points

**Directions:** Work in groups of 2 to 4 in class and then finish outside of class as necessary. Each group should submit **ONE** solution page for the group. (Be sure everyone's name is on it!)

The purpose of this assignment is to practice working with Riemann sums.

1. Use upper and lower Riemann sums to find upper and lower estimates for the area under the graph of  $f(x) = \sqrt{x}$  for  $x$  between 1 and 4 using 6 rectangles.
2. For  $f(x) = x^2$ , find the closed form for a Riemann sum using  $n$  rectangles on the interval  $[0, 1]$ .