

Name: SOLUTIONS

Quiz #10, November 26, 2007

1. Estimate the area under the graph of $f(x) = x^2 + 2$ from $x = 1$ to $x = 5$ using four approximating rectangles and right endpoints. Sketch the graph and the rectangles. Is your estimate an underestimate or an overestimate?

$$R_4 = \frac{5-1}{4}(f(2) + f(3) + f(4) + f(5)) = 1(6 + 11 + 18 + 27) = 62$$

This is an overestimate since each rectangle lies above the curve. For a picture see the book!