

MATH 31 - Calculus. Homework 10. Due Th. 05/08/2025. Professor Luis Fernández

NAME: _____

Do not write your answers here. Use the graph paper attached to do the graph.

Write your answers in other sheets and STAPLE them to this one.

1. (a) Estimate the area under the graph of $f(x) = 1 + x^2$ from $x = -1$ to $x = 2$ using three rectangles and right end points. Then improve your estimate by using six rectangles. Sketch the curve and the approximating rectangles.
(b) Repeat part (a) using left endpoints.
(c) Repeat part (a) using midpoints.
(d) From your sketches in parts (a)–(c), which estimate appears to be the most accurate?
2. Stewart, Section 5.2, exercises 21 and 22.
3. Stewart, Section 5.2, exercise 35.
4. Stewart, Section 5.3, exercises 9, 11, 13, 15, 26, 28, 30.