

Reading Assignment # 1

Math 9 - Prof. Orellana

Sept. 26, 2007

1. Give a detailed description of the objective of Section 6.1.
2. Explain Figure 2. What is it illustrating? Why do we have $f(x_i^*) - g(x_i^*)$ as the height instead of $f(x_i^*) + g(x_i^*)$?
3. Why do we require $f(x) \geq g(x)$ for all x in $[a, b]$ in the boxed statement in page 347? For what special case is the statement in (2) known already?
4. What is the difference between Example 1 and Example 2? What does the "v" mean next to Example 2?
5. Why if I were to ask you for an exact solution to Example 3, you should complain?
6. In the solution to Example 3, the author refers to Newton's method. In what page(s) in your book can you find what this means? Give a short description of this method.
7. What is the difference between statement (2) in page 347 and statement (3) in page 350? Why is (3) a more general statement?
8. In Example 4, there is a reference to the "Midpoint Rule". Where in the book do they discuss this rule. Write a few sentences explaining what this rule.
9. Explain how Figure 10 helps visualize the solution in Example 5.
10. What do Figure 11 and Figure 12 illustrate?