Section 8.1 Worksheet: Numerical Integration

1. Why is approximate integration important?

2. Why is the midpoint rule called that? Why is the trapezoidal rule called that?

3. Which rule has the better (that is, smaller) error, in general: midpoint or trapezoidal?

4. How does the error in Simpson's rule compare with the errors in the other two rules, in general?

5. What curve is mentioned in our text as an important way to think about Simpson's rule?