

Required reading:

- Larson 9e: pages 434-438 (read from the beginning through Example 6)
- Dawkins: Differential Equations, section 2-1: Linear Differential Equations
<http://tutorial.math.lamar.edu/Classes/DE/Linear.aspx>
 - Notes: Read all. (Last modified: 06/03/2018)

Required homework:

- Larson 9e: pages 440-441, problems 17, 18, 19, 20, 23, 24

Additional comments regarding the Larson reading:

Take special note of the "Study Tip" on page 435 (under Theorem 6.3). It is easy to miss this statement, but it is an important part of the solutions to the examples, starting with Example 2. Basically, the solution process has five steps:

1. Rewrite (if necessary) the first-order linear DE in standard form.
2. Determine the integrating factor.
3. Multiply each side of the standard form equation by the integrating factor.
4. Integrate both sides of this equation, noting the left side results in the product of y and the integrating factor.
5. Solve for y .

Additional comments regarding the Dawkins reading:

Dawkins includes separable DEs (and its related topics) with his course notes on Differential Equations, which is a one-semester course (sometimes two semesters) that typically requires two semesters of calculus as a prerequisite. Unlike his Calculus notes, there are no Practice or Assignment Problems posted online.

Note that Dawkins' "solution process" is essentially the same as the five-step process stated above.