

**Lesson 50 - Analytic Solutions II: Second Order Differential Equations**

**Objectives**

- Given a second order, linear, homogeneous differential equation, determine the characteristic or auxiliary equation.
- Determine a general solution to a given second order, linear, homogeneous differential equation.
- Find the particular solution to a second order, linear, homogeneous initial-value problem.

**READ**

- Stewart, Chapter 17.1, pages 1111-1116.

**THINK ABOUT**

- What is an oscillation?
- What is the relationship between position velocity and acceleration?

**MATHEMATICA COMMANDS AND TASKS YOU NEED TO KNOW**

No new commands.