

Differential Equations: Calculus AB

Lesson Plan 13: Review.

Overview

This is the last lesson before the unit-test. We will review the content for the test, and go over the homework review questions.

Learning Objectives

- Review and prepare for the test.

Prior Knowledge needed

The unit material.

Special Materials

None.

Instruction and activity

1. If needed, we can take **Warm-up problem (from AP)** from previous lesson.
2. **Solve review worksheet.**
3. **Putnam problem, page 95.**
4. **What they need to know:**

Concepts and procedures for the final test (not by order of significance):

1. Differential equations: Linear, order of.
2. **Words:** Converting verbal descriptions into equations and vice versa.
3. **General solutions, Initial condition, and Particular solution.**
 - a. Different ways in which the constant appears.
 - b. **Separation of Variables:** Separate ; Integrate ; Isolate.
4. **Slope fields:** Computation of, Graphical representation, Relation to solution curves.
5. **Approximation:** Tangent line to a curve at a point and local linear approximation.
6. Important cases: **Exponential solutions.**

Tools you will need: Integration (!!), differentiation (implicit and explicit), manipulation of inverse functions .

5. **Test anxiety-reduction:** Describe the text structure, and general procedure and scheme.