

Week's Objectives, Deadlines, etc

Mon Objective: To calculate derivatives.

Work: Assignment; see below. Due Tuesday, Nov 27th.

Tues Objective: Define instantaneous rates of change, motion in terms of derivatives, and economics.

Due:: Thanksgiving packet due; answers will be bubbled in on scantron as bellringer.

Work: Reading Assignment

Wed Objective: Calculate instantaneous and average rates of change.

Work: Sect 3.4 (p 135-136):8 - 11, 13, 16

Thu Objective: Calculating the motion of objects.

Work: Sect 3.4 (p 137): 18 - 24

Fri Objective: Calculating motion, rates of change, and marginal costs and revenue.

Work: Sect 3.4 (p 137 - 138):25 - 28, 40 - 46

1 Assignment, Monday Nov 26, 2007

1. Read Example 9, Section 3.3 on page 123, then answer the following questions.
 - (a) What does $p(x)$ represent, and why is it defined as $p(x) = t(x)y(x)$?
 - (b) Why do we set x to 0 to find the current instantaneous rate of change?
 - (c) How would the rate of increase change if she expanded her farm at the rate of 20 trees per year?
2. Try question 51, Section 3.3
 - (a) How do you calculate the annual production of apples?
 - (b) What rates of increase are you given?
 - (c) Similar to example 9, how would you calculate the current (instantaneous) rate of increase of annual production?
3. Try question 52, Section 3.3
4. Questions 24 - 48, even, Section 3.3

2 Assignment Tuesday, Nov 27 2007

Based on section 3.4, define the following terms. Each definition should include both what the term means, and how you would calculate it.

- Instantaneous Rate of Change
- Displacement
- Average Velocity
- Instantaneous Velocity (usually referred to simply as velocity)
- Speed
- Acceleration
- Sensitivity to Change
- Marginal Revenue
- Marginal Cost