Calculus

Date:

Items Needed: .Book,.

Objective: The students will learn how to apply the most common use of calculus, the determination of minimums and maximums.

Lesson:

- One of the most common applications of calculus involves the determination of minimum and maximum values. Someone always wants to know the greatest profit and considering our society today, the least of anything.
- Calculus is used so often in the determination of these answers.
- Read example number 1.
- Before we solve the problem, can you come up with a bunch of sides that will produce a box with 108 square inches?
- Look at page 219 to help you see different sizes of boxes and the different volumes that they yield.

- Outlining a problem
  1. Sketch the problem if you can.
  2. Find an equation that is going to be maximized or minimized.
  3. If a secondary equation is involved, substitute it back into the primary equation to eliminate one of the variables. Solve in terms of the independent variable.
  4. Find the maximums or minimums and then determine whether they make sense for the problem or not.

- Do example 1 p. 218.
- Just look at example 4 p. 221.
- Do example 5 p. 222.
- Do number 33 page 225.

Assignment: . Have students do 28-30, 35, 38 (Capstone), 54 p. 224.

Evaluation: (Could be from any one/several of the following)

Responses from classroom questions
Results of classroom sample problems
Homework responses
Check answer with Calculator
End of the section exam

Enrichment: