4-7

(PART 1)

1. Here is a framework for approaching optimization problems.

    (a) Think. Try stuff. These are word problems.

    (b) Chose notation and explain what it means.

    (c) Write the thing you want to maximize or minimize as a function of one variable, including a reasonable domain.

    (d) Use calculus to answer the question.

2. A Cartoon of Badness

3. Example 1: Find two positive numbers whose sum is 110 and whose product is a maximum.

4. Example 2: A rancher has 800 feet of fencing with which to enclose three adjacent rectangular corrals. What dimensions should be used so that the enclosed area will be a maximum?

5. Example 3: Which points on the graph of $y = 4 - x^2$ are closest to the point $(0, 2)$?