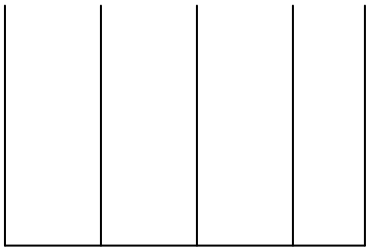
Math 100 Name _____
Fall, 2008

Homework #11
Due Monday, October 27
No late homework accepted! No exceptions!

1. Lisa Ventura bakes cakes and sells them at country fairs. Her initial cost for the Washington Parish fair was $40.00. She figures that each cake costs $2.50 to make, and she charges $6.50 per cake. Let x represent the number of cakes sold.

    a) Express the cost C as a function of x. **2 points**
    b) Express the revenue R as a function of x. **2 points**
    c) Determine the value of x for which the revenue equals the cost. **3 points**
    d) Graph the cost C and the revenue R on the same axes. Interpret the graph. **3 points**

2. A farmer has 200 meters of fencing to fence in 4 rectangular pens with one side bordering on the river. (See picture).



a) Find a mathematical model for the total enclosed area.
b) Sketch the graph.
c) State your domain.
d) Find the dimensions that will maximize the area.
e) Find the maximum area.