## QUIZ 4 - MATH 111 YOUR NAME:

Read each problem **very carefully** before starting to solve it. Each problem is worth 10 points. It is necessary to show **all** your work. Correct answers without explanations are worth 0 points. GOOD LUCK!!

- 1. A manufacturer of widgets has fixed costs of 200 per month, and the variable cost is 55 per thousand widgets. Let N be the number, in thousands, of widgets produced in a month.
  - (a) Find a formula for the manufacturer's total cost C as a function of N.

(b) The manufacturer sells the widgets for \$ 58 per thousand widgets. Find a formula for the total revenue R as a function of N.

(c) Use the previous answers to find a formula for the profit P of this manufacturer as a function of N.

(d) Make a graph for this manufacturer's profit versus N and, then, determine the breakeven point for this manufacturer.