

**MTH 162**  
**Quiz 1**  
**Spring 2011**

Show all work in a neat and organized fashion. Clearly indicate your answers.  
10 points possible.

1. (5 pts.) A retired woman has \$450,000 to invest. She has chosen one relatively safe investment fund that has an annual yield of 4% and another, riskier fund that has a 7% annual yield. The first year, she earned \$19,919.25. How much did she invest in each fund?

**2.** (5 pts.) A consumer index for the years 1990–2010 can be accurately approximated by the linear model determined by the line connecting  $(1990, 125.2)$  and  $(2010, 341.5)$ , where the  $x$ -coordinate is the year and the  $y$ -coordinate is the index value (measured in dollars).

(a) Write the equation of the line connecting these two points to find a linear model for these data.

(b) Interpret the slope of this line as a rate of change.

(For maximum possible credit, write one complete, correct sentence that includes the numeric value of the slope, the correct units for the slope, and the words “increased at a rate of” or “decreased at a rate of.”)