In April 2007, the recommended retail value of a used 2001 Toyota Corolla was $8,290. At the same time, the recommended retail value for a used 1998 Toyota Corolla was $6,260.

(a) Find a linear model for the recommended retail value of a used Toyota Corolla as function of its production year. State the meaning of each of your variables.

(b) Use your model to predict the recommended retail value of a used 2003 Toyota Corolla.

(c) The actual recommended retail value of a used 2003 Toyota Corolla in April 2007 was actually $11,880. How good was your model in predicting this value? Explain.

(d) Can you describe any real-world meaning to the x- and y-intercepts of your function? Explain.
The annual base salary for a sales representative is $33,000. The representative also earns a commission of 5% on all sales she makes.

(a) Find a linear function that models the annual income of the sales representative as a function of her total sales that year. Your function should have the form $y = mx + b$, where $y$ is her total income and $x$ is her total sales. Explain what $m$ and $b$ represent.

(b) If the representative wishes to earn $65,000 in a year, what will her total sales have to be?

(c) Suppose the sales representative can negotiate her contract with her employer. She wants to earn $65,000 in a year, but she only expects to be able to make $500,000 in total sales. What rate of commission should she ask for in her contract?