

Math 150, Section 2.6

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Modeling with functions

The purpose of this section is to teach the student how to create functions to solve a descriptive problem by choosing suitable variable(s). This process is called **modeling**. Thus you will be asked to create functions from descriptive problems and then use it to do calculations.

Guidelines for modeling with functions

The steps for modeling are as follows

- ▶ **Express the model in words.** Identify the quantity you want to model and express it in words as a function of other quantities.
- ▶ **Choose the variable.** Assign a variable x to one of the quantities and express other quantities in terms of x . The choice of which quantity should be called x must be done carefully.
- ▶ **Setup the model.** Express the function as a formula in x .
- ▶ **Use the model.** Use the model to answer the questions posed in the problem.

Try all the suggested problems.