

## Project 2: Assessing Difference (50 pts; due Friday, Oct 23 at the beginning of lab)

Now that you are settled into your new job at Umbridge & Associates, Inc. Your boss (Dolores) would like you to focus on the potential for development in Anytown. She wants you to concentrate on a few variables so that you can make recommendations about the design of her new development, The Bridges of River Mist. You are (theoretically) the best person for this job because you are familiar with the dataset.

- 1) Doris is most interested in determining how to make money, *but* she also knows that smaller homes have less of an impact on the environment. She understands that she needs to *compromise* between luxury home sales, sales volume, and environmental impacts of home size.
- 2) Explore the variables square footage and sales price to determine what types of analyses they are most suited to. In your methods section, make sure you cover data exploration when you discuss which tests you plan to use.
- 3) Group houses as either “bathroom” or “multiple bathroom.”
  - a. In your report you will need to answer whether or not number of bathrooms significantly affects price of the home.
  - b. You will also need to address whether or not living space significantly differs in homes with different numbers of bathrooms.
- 4) Group houses by number of bedrooms into three groups: 1 bedroom, 2 bedroom, or 3+ bedrooms.
  - a. In your report you will need to answer whether or not number of bedrooms significantly affects price of the home.
  - b. You will also need to address whether or not living space significantly differs in homes with different numbers of bedrooms.
- 5) The dataset can be found as a Microsoft Excel file “Townhouse Raw Data” on the website.
- 6) Turn in:
  - a. A short report that describes, explores, summarizes, and analyzes the townhouse variables of interest (in writing) citing appropriate tables and figures (charts).
    - i. Provide an introduction to the report that states the purpose of the project and how you plan to accomplish that purpose using statistics.\
    - ii. Clearly label and provide captions for each table in order of citation at the end of the document.
    - iii. Wrap it up with a conclusion with recommendation to Ms. Umbridge.
    - iv. Make sure you clearly cite tables with statistics and charts from your output in the short report such that during evaluation, your boss can easily find information.
  - b. The SPSS output file (.spo) that contains the results of your analysis.