

## Bus 273: Statistical Analysis for Business

Fall 2009

### PROBLEM SHEET # 2

**Problem 1:** A researcher wants to carry out an inquiry about the motivation and expectations of tourists visiting Istanbul. A questionnaire is to be developed, which will finally be used in face-to-face interviews with tourists.

a) A first draft of the questionnaire has as first question:

“Do you like spending your holiday in a country with an Islam-based culture?”

Do you think this is a good idea for a first question in the questionnaire? Do you have a better idea? Discuss briefly.

b) Should the question

“Why did you choose Turkey for your holiday?”

be included in the questionnaire? Is there a better way to investigate why tourists choose Turkey? Develop some ideas as to how a professional questionnaire should be structured in this case.

**Problem 2:** Consider the variable  $X =$  age (completed years) of insurants of a car insurance company. A sample of size  $n = 20$  is:

25, 27, 30, 37, 38, 40, 41, 42, 43, 44, 46, 47, 49, 50, 53, 57, 62, 65, 65, 66

a) Draw a stem-and-leaf display of these data.

b) Determine the median.

c) Will this median equal the median of *all* insurants? (Give reasons for your answer.)

d) What is the scaling of the variable  $X$ ?

**Problem 3:** Five years ago, the price of an asset was €110. The average annual gain until now was 2.74%. Compute today's value of the asset.