

## Introduction to Quantitative Research Methods Homework 2

Due: 14:00, 3 February 2010

### 1. Tabular data and percentages

From the following table representing family structure for black and white children in a particular community, find (a) the percent of black children having two-parent families, (b) the percent of white children having two-parent families, (c) the proportion of black children having two-parent families, and (d) the proportion of white children having two-parent families.

**Family Structure for Black and White Children**

<i>Family Structure</i>	<i>Race of Child</i>	
	<i>Black</i>	<i>White</i>
One parent	53	59
Two parents	60	167
Total	113	226

### 2. Class intervals

A researcher studying the prevalence of alcohol use among seniors in a particular high school asked 45 of these youths how many drinks they had consumed in the last week. Convert the following frequency distribution of responses (number of drinks) into a grouped frequency distribution containing four class intervals, and (a) determine the size of the class intervals, (b) identify the midpoint of each class interval, (c) find the percentage for each class interval, (d) find the cumulative frequency of each class interval, and (e) find the cumulative percentage for each class interval.

<i>Number of Drinks</i>	<i>f</i>
7	5
6	9
5	6
4	11
3	4
2	3
1	3
0	4
	$N = 45$

### 3. Interpreting tabular data

The following is a cross-tabulation of votes in the 2004 Democratic presidential primary by age for a local sample of respondents aged 18 and over:

<i>Vote</i>	<i>Age</i>				<i>Total</i>
	<i>18–29</i>	<i>30–44</i>	<i>45–59</i>	<i>60+</i>	
Kerry	27	25	34	11	97
Edwards	23	35	10	10	78
Dean	<u>30</u>	<u>20</u>	<u>10</u>	<u>15</u>	<u>75</u>
Total	80	80	54	36	250

- Which is the independent variable and which is the dependent variable?
- Compute column percents for the cross-tabulation.
- What percent of the sample voted for Kerry?
- What percent of the 18–29 age group voted for Edwards?
- Among which age group was Kerry most popular?
- Among which age group was Edwards most popular?
- Among which age group was Dean most popular?

### 4. Use R to produce a bar graph from this table:

<i>Country of Origin of International Students</i>	<i>f</i>
Canada	5
China	7
England	2
Germany	5
Greece	3
Other	<u>4</u>
	<i>N</i> = 26