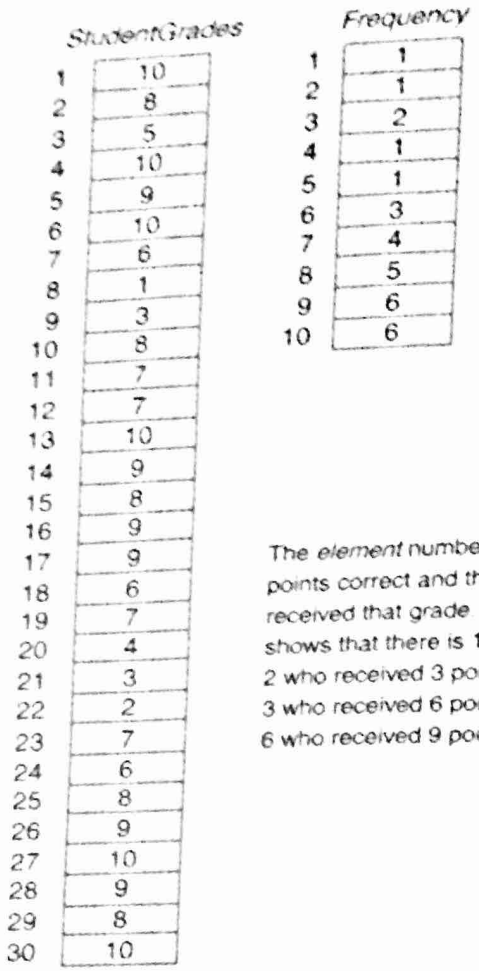

Figure 8.18d Example of a Frequency Distribution

Cross-Tabulation

Cross-Tabulation

Figure 8.19 demonstrates the use of pointers for a cross-tabulation. Notice that in this case, one value points to the row and another value points to the column in the cross-tabulation array. The data for cross-tabulation problems come from questionnaires. A cross-tabulation shows the number of people who gave the same responses to two questions from the questionnaire. A frequency distribution shows the number of people who gave the same answer to one question. For example, in a frequency distribution, a set of test scores would be separated into the number of students who received each grade. In a cross-tabulation, a set of test scores could be separated into the number of females that received each test grade and the number of males that received each test grade, or the number in each class that received each test grade. A cross-tabulation allows the user to have more detail in the analysis of the data.

Figure 8.19 shows the algorithms and flowcharts for a cross-tabulation for the following problem: A questionnaire has been sent out by a company that conducts polls. The company needs a program to calculate the cross-tabulation for any two items on the questionnaire. The questionnaire has five items. Items 1 and 2 are *age* and *education* (5 possible answers). Items 3 through 5 are *yes* or *no* questions. There were 150 questionnaires returned. The following would be a sample output given option 1 = gender and option 2 = question 1. The *CrossTab* array represents the output