

Unit 5 – Data Analysis

Chapter 1 – Presenting Data

Objectives

- ◆ Interpret bar graphs.
- ◆ Create bar graphs.
- ◆ Create tables.
- ◆ Interpret tables.
- ◆ Draw and interpret line plots.

Vocabulary

- ◆ Table
- ◆ Bar graph
- ◆ Tally chart
- ◆ Survey
- ◆ Line plot

Notes

In *Primary Mathematics 2B*, students learned to read and interpret bar graphs. In this chapter, they will learn to construct simple bar graphs. They will also learn to present data in tables, tally charts, and line plots.

Tallies are an easy way to keep track of things as you are counting them; they are not a particularly helpful way of presenting data. Once the data have been collected, they can be organized into a table that makes it easy to find and compare specific pieces of data.

A bar graph uses the length of solid bars to represent numbers and compare data. A single glance at a bar graph can tell you how quantities compare. Pictographs are similar to bar graphs but more eye-catching.

Line plots are often used to show the spread of data. They are used for small numbers or pieces of data. They can be used in simple probability experiments to record how often an event occurs. In later levels of *Primary Mathematics*, they will be used to easily identify the range, mode, and any outliers.

Your student will be constructing simple bar graphs and line plots. Provide plenty of help in determining what scale to use for the graph and keep it simple. Collecting data and drawing graphs does not have to be restricted to math class and once your student has the general idea, he can practice the skills in other areas, such as science or social studies.

You might want to show your student how to put the data into a spreadsheet application on the computer and have the program create graphs.

Material

- ◆ Graph paper

(4) Subtract a number close to a ten

Activity

Write the following expressions and discuss their solutions.

35 – 10: Ask your student to solve.

35 – 9: Ask your student which one is easier to solve, **35 – 9** or **35 – 10**. 10 is just one more than 9, but it is easier to subtract 10 than it is to subtract 9. Ask her how she could use $35 - 10$ to solve $35 - 9$. Lead her to see that she can subtract 10 and add back in 1. If needed, use place-value discs to illustrate. To subtract 9, we need to trade in a ten for ten ones and take away 9 ones. We are left with 1 one. This is the same as subtracting 10 and then adding 1.

80 – 19: Point out to your student that 19 is one less than 20. We can solve this problem by subtracting 20, then adding back 1. Illustrate with place-value discs if needed.

80 – 17 : 17 is close to 20, but is 3 less. So we subtract 10 and add back 3.

83 – 17: Again, we can subtract 20 and add back 3.

83 – 38: This time we need to subtract 40 and add back 2.

Discussion

Tasks 16-17 p. 32

Practice

Task 18, p. 32

Workbook

Exercise 2, #3-4, p. 29 (answers p. 31)

Reinforcement

Mental Math 12

Game

Material: 4 sets of number cards 1-9.

Procedure: Deal out all cards. Each player turns over three cards. The highest card is a ten. The player forms a 2-digit number out of the other two cards and subtracts it from the 10. For example, a 5, 8, and 2 are turned over. The 8 is used as 80. The player uses the 5 and 2 to make 52 and subtract it from 80 to get 28. The player with the lowest difference gets all the cards that have been turned over. Play continues until all cards have been turned over. The player with the most cards wins.

$35 - 10 = 25$
$35 - 9 = 26$ $35 - 9 = 35 - 10 + 1$ $= 25 + 1$ $= 26$
$80 - 19 = 80 - 20 + 1$ $= 60 + 1$ $= 61$
$80 - 17 = 80 - 20 + 3$ $= 60 + 3$ $= 63$
$83 - 17 = 83 - 20 + 3$ $= 63 + 3$ $= 66$
$83 - 38 = 83 - 40 + 2$ $= 43 + 2$ $= 45$
16. (a) 37 (b) 24 (c) 44
17. 72
18. (a) 2 (b) 4 (c) 5 (d) 33 (e) 11 (f) 22 (g) 24 (h) 23 (i) 51 (j) 12