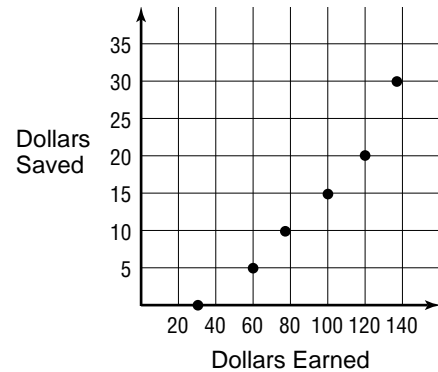**6-3**

Study Guide

Integration: Statistics
Scatter Plots and Best-Fit Lines

A **scatter plot** is a graph that shows the relationship between paired data. The scatter plot may reveal a pattern, or association, between the paired data. This association can be negative or positive. The association is said to be positive when a line suggested by the points slants upward.

The scatter plot at the right represents the relationship between the amount of money Carmen earned each week and the amount she deposited to her savings account. Since the points suggest a line that slants upward, there seems to be a positive relationship between the paired data. In general, the scatter plot seems to show that the more Carmen earned, the more she saved.
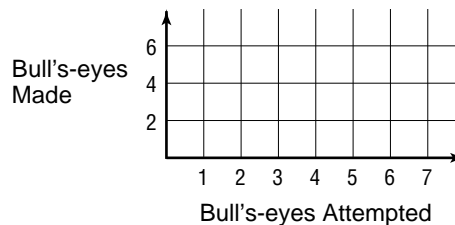
Solve each problem.

1. The table below shows the number of bull's-eyes attempted and the number of bull's-eyes made during a few dart games.

   a. Draw a scatter plot at the right from the data in the table.

Bull's-eyes		
Name	**Attempted**	**Made**
Darlene	5	4
Chris	7	7
Mark	5	1
Kathy	6	2

   b. What are the paired data?

   c. Is there a relationship between attempts and successes?

2. Anna's running speed after 5 minutes was 10 mi/h; at 10 minutes, 8 mi/h; at 15 minutes, 5 mi/h; and at 20 minutes, 4 mi/h.

   a. Make a scatter plot pairing time run with running speed.

   b. How is the data related, positively, negatively, or not at all?