DETAILED SOLUTIONS AND CONCEPTS - READING BAR AND LINE GRAPHS

Prepared by Ingrid Stewart, Ph.D., College of Southern Nevada
Please Send Questions and Comments to ingrid.stewart@csn.edu. Thank you!

YOU MUST BE ABLE TO DO THE FOLLOWING PROBLEMS WITHOUT A CALCULATOR!

Reading Bar Graphs:

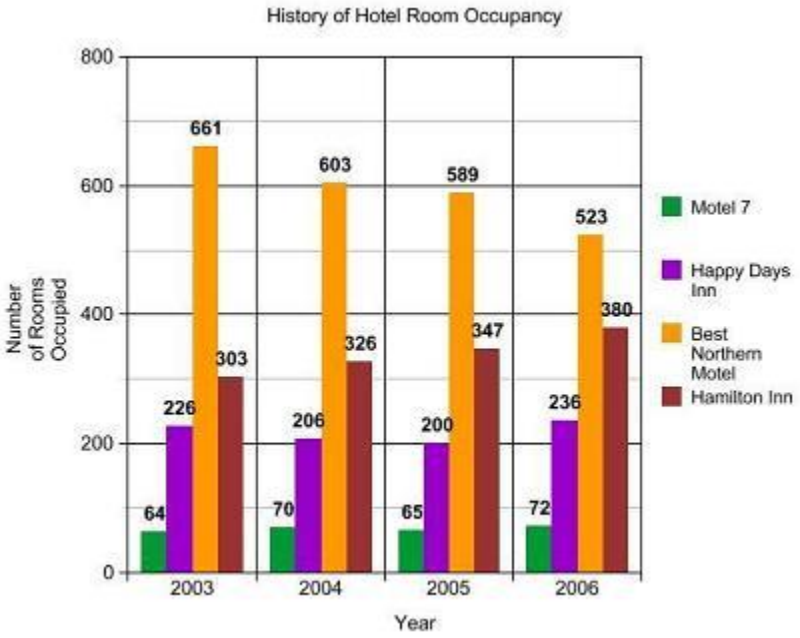
A bar graph utilizes two or more bars to compare data. In a vertical bar graph, the horizontal axis labels the bars and the vertical axis is a scale of the amounts being compared. In a horizontal bar graph, the horizontal axis is a scale of the amounts being compared and the vertical axis labels the bars. The lengths of the bars represent the amounts that are compared. The amounts are sometimes shown at the end of each bar. If this is not the case, starting at the end of a bar trace a horizontal line (horizontal bars) or a vertical line (vertical bars) back to the vertical axis (horizontal bars) or horizontal axis (horizontal bars) and read off the amounts there.

Reading Line Graphs:

A line graph utilizes one or more lines to illustrate a data change. The horizontal axis usually represents time. The vertical axis represents data related to the changes in time. To find a relationship between the time and data we trace a vertical line from the time in question to the graph and then trace a horizontal line back to the vertical axis where we read off the data.

Problem 1:

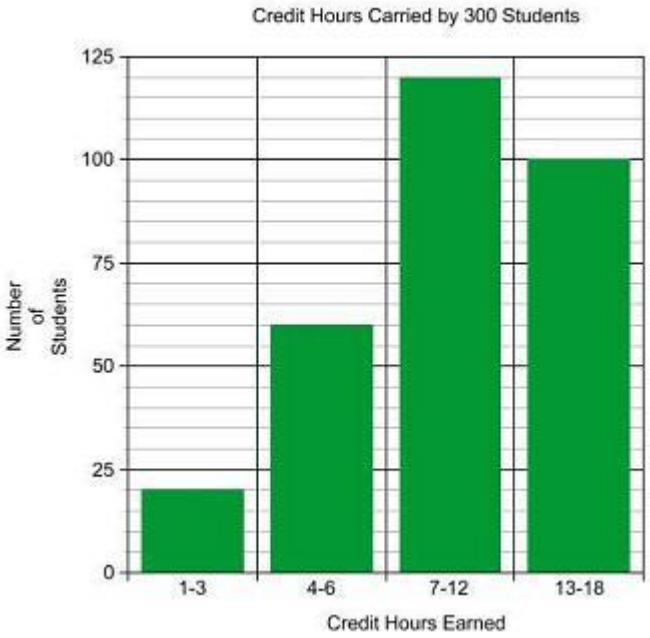
The following bar graphs shows the number of rooms occupied at 4 hotels from 2003 through 2006. Which hotel had a continuously decreasing occupancy over the time period?



Answer: Best Northern Motel. It is the only hotel that shows a continuously decreasing occupancy rate. The occupancy rate of Motel 7 and Happy Days Inn rises and falls over the 4-year period and the occupancy rate of the Hamilton Inn rises.

Problem 2:

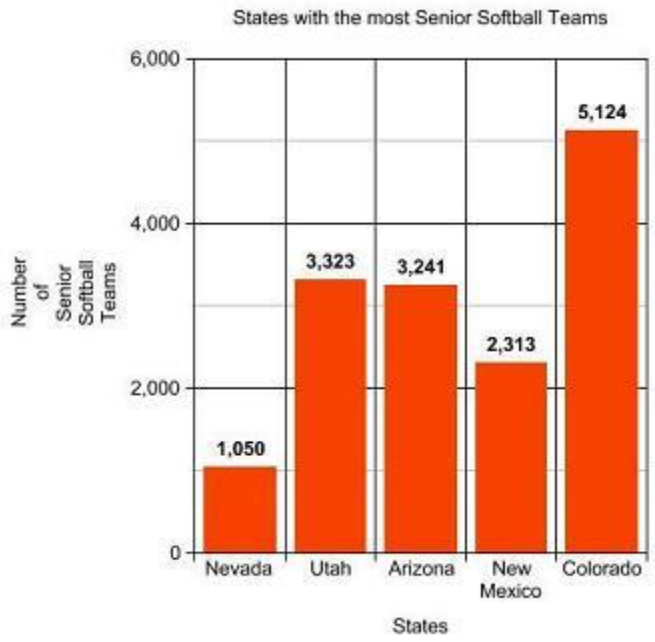
How many students carried less than 7 credit hours?



Answer: 80 students. This is the sum of 20 students who take between 1 and 3 credits and the 60 students who take between 4 and 6 credits.

Problem 3:

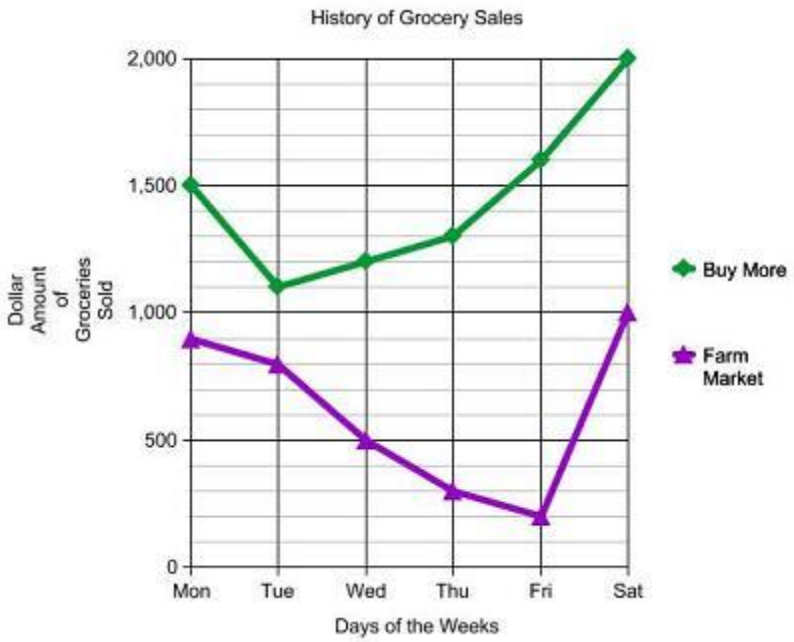
Which states have nearly the same number of Senior Softball teams?



Answer: Utah and Arizona. This should be obvious by inspecting the numbers above the bars.

Problem 4:

Which grocery store had more sales on Monday? Buy More or Farm Market?



Answer: Buy More. It had $1,500 in sales whereas Farm Market had $900 in sales.

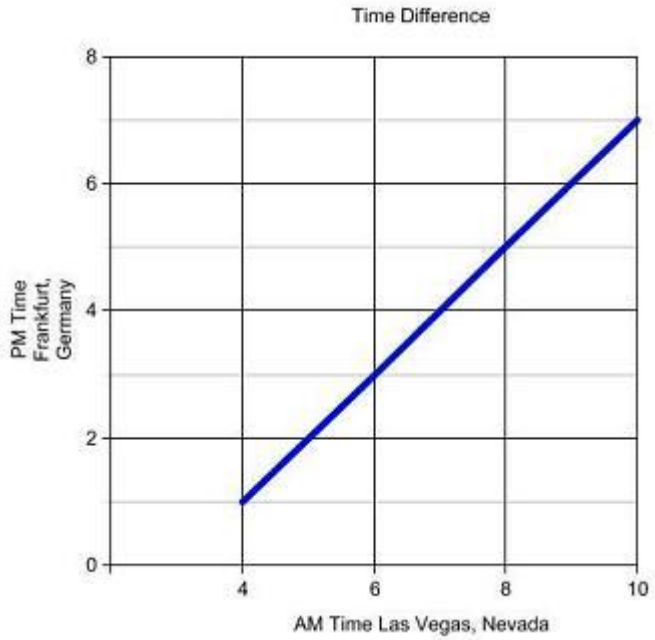
Problem 5:

Given the graph below, find the day a National Chain sold the least amount of refrigerators and state this amount.

Answer: Wednesday the store sold 1,100 refrigerators. In this case, we look for the biggest dip in the graph. At this point, we trace a vertical line to the horizontal axis and find "Wed". Again, at the point of the biggest dip, we trace the horizontal line back to the vertical axis. It intersects the vertical axis at 1,100.

Problem 6:

Given the graph below, state the PM time in Frankfurt, Germany when it is 8 AM in Las Vegas, Nevada.



Answer: 5 PM. In this case, we traced the vertical line labeled "8" to the graph. At this intersection, we trace the equally intersecting horizontal line back to the vertical axis. It intersects the vertical axis at 5 PM.