Lesson 8-9

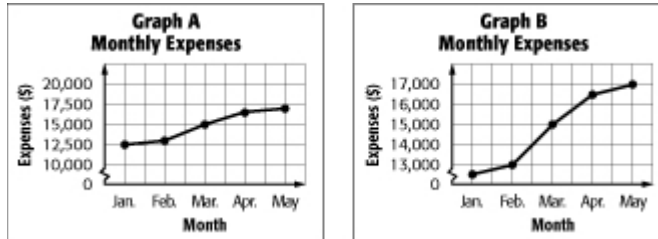**Example 1 Drawing Conclusions from Graphs**
BUSINESS   The line graphs below show monthly expenses of a company from January to May. Which graph is misleading? Explain.

Graph B is misleading because of the break in the vertical scale. The result is expenses appear to be rising more rapidly than they actually are.

Example 2 Changing the Interval of Graphs
THEATER The graphs shows how the average attendance at a popular theater has decreased.

Do the graphs show the same data? If so, explain how the graphs differ.

The graphs show the same data. However, the graphs differ in that Graph A uses an interval of 4 and Graph B uses an interval of 2.

Which graph makes it appear that the attendance figures have decreased more rapidly?

Graph B makes the drop in attendance look more dramatic because the vertical scale is more compact.

Example 3 Misleading Statistics
SALARY   A magazine article states that the typical annual income of a full-time employee of the Taylor Tool Company is $31,417. Use the data in the table below to determine if this is an accurate statement.

Annual Income ($)			
25,000	18,000	32,000	28,000
22,000	19,000	34,000	92,000
29,000	31,000	21,000	26,000

The magazine article has used the mean of the incomes as its statement of the typical annual income. However, all but three of the reported incomes are below this "typical" value. The income of 92,000 has distorted the value of the mean. A better measure of the typical annual income would be the median, $27,000.