Name: _____     Date: _____

# Chapter 11 Problems of the Week

**1. a)** The price of a stock went up from $20.25 to $20.30 over the period of a year. Sketch a graph that could be used to mislead people into thinking that the value of the stock rose significantly. Title and label your graph.

 **b)** Describe how your graph is misleading.

**2.** Principal Standard is comparing student attendance over two years. This year, there are 560 registered students and, so far, the average absentee rate per month is 36 students. Last year, there were 490 registered students, and an average of 7% of students absent each month.

 **a)** Principal Standard says that the attendance has improved. Do you agree or disagree? Explain.

 **b)** What questions about absentee rate do you have for the principal?

**3.** Three of your friends recorded their math quiz scores. Each quiz is worth 100 points.

 Amy: 90  90  90  90  90  45
  45  35  35  20

 Peter: 65  65  65  65  65  61
  61  61  61  61

 Molly: 100  95  95  80  73
  63  52  52  20

 Which of the following measures would you use to most accurately reflect the math scores: mean, median, or mode? Defend your choice.

**4.** Alan wants to determine the market for a product aimed at working adults. He knows that using a biased sample will produce biased results.

 **a)** Explain how each of the following samples might be biased. Give a reason for each. Create a chart to record your responses.

| Sample | Likely Bias | Reason |
| --- | --- | --- |
| Current customers | | |
| Ex-customers | | |
| Daytime phone | | |
| E-mail | | |

 **b)** For each situation, explain if Alan needs to be concerned about bias.

  • an e-mail survey for Internet products

  • a phone survey after lunch for a product aimed at retired adults