Moore SCC 8e

Chapter 10

1. The most effective way to communicate data is through a:

a. Table

b. Chart

c. List of raw data

*d. Graph

A. Incorrect. Although a table is a good way to communicate and organize data, graphs are the most effective way to communicate data.
B. Incorrect. Although a chart is a good way to communicate and organize data, graphs are the most effective way to communicate data.
C. Incorrect. A list of raw data is sometimes not organized or categorized. Graphs are the most effective way to communicate data.
D. Correct.

Text Reference: Section 10.1: Data tables

2. A good table:

a. Has clear labels

b. States the units in which data is measured

c. States the source of data

*d. All of the choices are correct.

A. Incorrect. Clear labels are a part of a good table, but so are the other two statements.
B. Incorrect. Stating the units is a part of a good table, but so are the other two statements.
C. Incorrect. The source is always part of a good table, but so are the other two statements.
D. Correct.

Text Reference: Section 10.1: Data tables

3. Brian gathers data from his classmates about the computers they own:

Name	Operating System	Amount of Memory	Year Purchased
Joe	Windows XP Pro	256 mb	2003
Max	Windows ME	128 mb	2000
Sue	Mac OS X	640 mb	2004
Jean	Windows 2000	256 mb	2002
Bill	Mac OS X	1 GB	2005

Which of the variables are *not* considered to be numerical?

a. Brian's classmates

*b. The type of operating system

c. The amount of memory

d. The year purchased

A. Incorrect. This is not a variable. These are individuals.
B. Correct.
C. Incorrect. This is categorical.
D. Incorrect. This is categorical.

Text Reference: Section 10.2: Pie charts and bar graphs

4. Pie charts, bar graphs, and pictograms best graph:

a. Numerical variables

*b. Categorical variables

c. Averages

d. Percentages

e. None of the choices are correct.

A. Incorrect. Numerical variables have their own set of graphs to display and illustrate data.
B. Correct. These graphs illustrate categorical data.
C. Incorrect. Although they may appear on these graphs, averages may be better displayed through a graph associated with quantitative variables. See Chapter 11.
D. Incorrect. Although they may appear on these graphs, percentages may be better displayed through a graph associated with quantitative variables. See Chapter 11.
E. Incorrect. Categorical variables are graphed through pie charts, bar graphs, and pictograms.

Text Reference: Section 10.2: Pie charts and bar graphs

5. The graph which best shows percentages as part of a whole is:

a. Bar graph

*b. Pie chart

c. Pictogram

d. Line graph

A. Incorrect. Pie charts show percentages as part of a whole.
B. Correct.
C. Incorrect. Pie charts show percentages as part of a whole.
D. Incorrect. Pie charts show percentages as part of a whole.

Text Reference: Section 10.2: Pie charts and bar graphs

6. The graph which best shows a trend over a period of time is:

a. Bar graph

b. Pie chart

c. Pictogram

*d. Line graph

A. Incorrect. A line graph best shows a trend over a period of time.
B. Incorrect. A line graph best shows a trend over a period of time.
C. Incorrect. A line graph best shows a trend over a period of time.
D. Correct.

Text Reference: Section 10.4: Change over time: line graphs

7. To avoid misleading, pictograms must:

*a. Use proportional height and width to avoid distortion

b. Use proportional heights to avoid distortion

c. Use proportional widths to avoid distortion

d. None of the choices are correct.

A. Correct. The area (width x height) varies in proportion to the height and our eyes receive the right impression.
B. Incorrect. The area which contains BOTH width x height varies in proportion to the height and our eyes receive the right impression.
C. Incorrect. The area which contains BOTH width x height varies in proportion to the height and our eyes receive the right impression.
D. Incorrect. The area (width x height) varies in proportion to the height and our eyes receive the right impression.

Text Reference: Section 10.3: Beware the pictogram

8. A pattern that repeats itself at known regular intervals of time is:

a. Seasonal adjustment

*b. Seasonal variation

c. Deviation

d. Trend

A. Incorrect. We are not adjusting or shifting values. Seasonal variation refers to the pattern at intervals.
B. Correct. Seasonal variation refers to the pattern at intervals.
C. Incorrect. Seasonal variation refers to the pattern at intervals.
D. Incorrect. Although we may be looking at trends, seasonal variation refers to the pattern at intervals.

Text Reference: Section 10.4: Change over time: line graphs

9. One way to dramatically mislead the intent/impression of a line graph is:

a. Change the horizontal axis scale

b. Change the vertical axis scale

c. Change the timeframe shown

*d. All of the choices are correct.

A. Incorrect. Although this is one possible way, you can also change the vertical axis and timeframe to mislead the intent or impression of a graph.
B. Incorrect. Although this is one possible way, you can also change the horizontal axis and timeframe to mislead the intent or impression of a graph.
C. Incorrect. Although this is one possible way, you can change the scale of the horizontal and vertical axis to mislead the intent or impression of a graph.
D. Correct. Be careful not to mislead or misrepresent data through a graph.

Text Reference: Section 10.5: Watch those scales!

10. One characteristic of a good graph is:

a. Three-dimensional effects

b. Labels, grids, and backgrounds that capture viewers' attentions

*c. Labels and legends that tell what variables are plotted

d. All of the choices are correct.

A. Incorrect. Although three-dimensional effects are cool, a good graph always has labels and legends to tell what variables are being displayed.
B. Incorrect. Although it is important to capture attention, a good graph always has labels and legends to tell what variables are being displayed.
C. Correct. A good graph always has labels and legends to tell what variables are being displayed.
D. Incorrect. A good graph always has labels and legends to tell what variables are being displayed.

Text Reference: Section 10.6: Making good graphs