Chapter 9 Summary

	Section Objectives	How does it apply to you?
Section 1	Use stacked area graphs to represent the changing parts of a whole.	You can see how related variables graphically change over time. *(See Examples 1 and 2.)*
	Use a radar graph and an area graph to represent data.	There are many creative and unique ways to help people understand and use information. *(See Examples 3 and 4.)*
	Graphically represent data sets that have several variables.	Not all information is represented with simple types of information design, such as bar graphs, circle graphs, and scatter plots. *(See Examples 5 and 6.)*
Section 2	Use mean, median, and mode to describe the average value of a data set.	Measures of central tendency are used to compare and communicate data in real life. *(See Examples 1 and 2.)*
	Read and understand box-and-whisker plots and histograms.	You can use box-and-whisker plots and histograms to analyze the variability and distribution of data sets. *(See Examples 3 and 4.)*
	Understand the effect of outliers on averages.	Outliers can significantly change measures of central tendency. This could lead to using bad information for decision making. *(See Examples 5 and 6.)*
Section 3	Use standard deviation to describe the dispersion of a data set.	Standard deviation allows you to determine whether data values are clustered around the mean or spread out over a large range. *(See Examples 1 and 2.)*
	Use standard deviation to describe a data set that is normally distributed.	Many naturally occurring data sets have a normal distribution. You can use standard deviation to determine whether a data set is normal. *(See Examples 3 and 4.)*
	Compare different types of distributions.	Not all data distributions are normal. There are other types of distributions. *(See Examples 5 and 6.)*
Section 4	Use a randomly chosen sample to describe a population.	If a sample is randomly taken from a population, then you can use the sample mean to estimate the population mean. *(See Examples 1 and 2.)*
	Determine whether a sample is representative of a population.	If your sample is too small, not random, or biased, the statistics from the sample will not represent the population. *(See Examples 3 and 4.)*
	Determine a sample size to obtain valid inferences.	The minimum sample size depends on the confidence level and the margin of error chosen. *(See Examples 5 and 6.)*

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