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Large samples could be taken of wheelchair widths and the space needed on either side, and averages could be computed. Statistics can then be applied to find the 99th percentiles.
One way is to measure the widths of major brands of wheelchairs currently being sold, being sure that people are sitting in them and using their hands to move the wheels to measure the necessary clearance. Then take a similar survey of older wheelchairs that still are used. Estimate the proportion of each type of wheelchair in use, to determine what width is required for 99% to meet the requirement. You might also find that some wheelchair users carry a cane in their laps, which may protrude. How would this be handled? Good students may raise other issues. To learn how to estimate percentiles, you need a basic class in statistics.

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A single physician might feel that such a small improvement in medical diagnostics might not help very much in predicting a particular patient's chances of getting heart disease. However, in tests involving millions of patients, even a slightly improved test might benefit many individuals. It is a question of perspective (micro versus macro). Also, as medical tests improve, the potential incremental gains become smaller.

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Bob is correct in saying that we usually cannot prove cause-and-effect using statistics alone. But probabilities and correlations between events can point researchers in a certain direction. And many people do accept that statistics is a guide to action, if there is some logical reason to suppose that cause-and-effect may exist, even if the science hasn't yet proven the case fully. Think how many people purchase health food and vitamin supplements, or seek holistic treatments for various diseases.

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Bob is correct in that organizations consist of people, and their interactions and decisions determine the company's financial well-being and future. However, he is missing something essential. All organizations rely on statistics and data to keep track of their operations and financial progress. Without statistics and math, no company can exist. And human resources professionals use data just as much as any other business specialty. In fact, many statistical techniques were developed by psychologists in order to help understand humans and their interactions.

1 **Summary**

Category	# of Questions
AACSB Knowledge: Analytical skills	17
AACSB Knowledge: Communication abilities	9
AACSB Knowledge: Ethical understanding and reasoning	8
AACSB Knowledge: Reflective thinking	21
Blooms Taxonomy: Analysis	4
Blooms Taxonomy: Application	4
Blooms Taxonomy: Evaluation	25
Blooms Taxonomy: Knowledge	26
Blooms Taxonomy: Synthesis	25
Blooms Taxonomy: Understanding	26
Difficulty: Easy	27
Difficulty: Medium	28
Doane - Chapter 001	55
Learning Objective: Define statistics and explain some of its uses in business.	13
Learning Objective: Explain why written communication is important.	3
Learning Objective: Know the basic rules for effective writing and oral presentations.	3
Learning Objective: List and explain common statistical pitfalls.	18
Learning Objective: List reasons for a business student to study statistics.	4
Learning Objective: State the common challenges facing data analysts.	11
Learning Objective: Tell what an executive summary is and why its important.	3
Topic: statistical basics and uses in business	21
Topic: statistical challenges and logical pitfalls	24
Topic: written and oral communication in statistics	10