

Student name: _____

Managers need to know the mathematical theory behind the techniques of management science so that they can lead management science teams.

true

false

Management scientists use mathematical techniques to make and implement decisions.

true

false

Business analytics refers to the process of transforming data into insight.

true

false

Managers must rely on management science experts to create and understand managerial problems.

true

false

Management science is a discipline that attempts to aid managerial decision making by applying a scientific approach to managerial problems that involve quantitative factors.

true

false

The discovery of the simplex method in 1947 was the beginning of management science as a discipline.

true

false

The rapid growth of computing capability and power has led to a corresponding rapid growth of the management science discipline.

true

false

Managers make decisions based solely on the quantitative factors involved in the problem.

true

false

A management science team will try to conduct a systematic investigation of a problem that includes careful data gathering, developing and testing hypotheses, and then applying sound logic in the analysis.

true

false

The mathematical model of a business problem is the system of equations and related mathematical expressions that describes the essence of the problem.

true

false

A mathematical model of a business problem allows a manager to evaluate both quantitative and qualitative aspects of the problem.

true

false

Once management makes its decisions, the management science team typically is finished with its involvement in the problem.

true

false

The term “big data” refers to the collection of large data sets from computer tracking of activities such as sales, web traffic, and social network postings.

true

false

A decision variable is an algebraic variable that represents a quantifiable decision to be made.

true

false

Business analytics has developed completely new and unique techniques for analyzing data.

true

false

Business analytics draws upon a variety of quantitative decision sciences for techniques that are useful for analyzing data.

true

false

Descriptive, predictive, and prescriptive analytics have the same goal.

true

false

Descriptive analytics is the process of describing what may happen in the future.

true

false

Prescriptive analytics uses analytical techniques to determine the best option for future decisions.

true

false

Enlightened future managers should know which of the following?

The power and relevance of management science

When management science can and cannot be applied

How to apply the major techniques of management science

How to interpret the results of a management science study

All of the answer choices are correct.

The rapid development of the management science discipline can be credited in part to:

World War I

George Dantzig

The computer revolution

George Dantzig and the computer revolution

World War I, George Dantzig, and the computer revolution

Managers may base their decisions on which of the following?

Quantitative factors

Their best judgment

Opinions from other managers

Past experience

All of the answer choices are correct.

Management science is based strongly on which of the following fields?

Mathematics

Computer science

Business administration

Mathematics and Computer science

All of the above

Which of these statements about business analytics is FALSE?

Business analytics uses data analysis tools.

Business analytics and data science are the same thing.

Business analytics can be descriptive, predictive or prescriptive.

Business analytics is a relatively new field (less than 20 years old).

All of the above are true.

Which of the following are steps in a typical management science study?

Define the problem and gather data.

Formulate a model to represent the problem.

Test the model and refine it as needed.

Help to implement the recommendations.

All of the answer choices are correct.

Business analytics is a field which

is the same as operations research.

aids managerial decision making through the use of data.

uses descriptive analytics to predict the future.

uses prescriptive analytics to analyze trends.

uses predictive analytics to determine the best course of action.

Descriptive analytics is the process of using data to

analyze trends.

predict what will happen in the future.

determine the break-even point.

solve linear programming problems.

determine the best course of action for the future.

Predictive analytics is the process of using data to

analyze trends.

predict what will happen in the future.

determine the break-even point.

solve linear programming problems.

determine the best course of action for the future.

Prescriptive analytics is the process of using data to
analyze trends.

predict what will happen in the future.

determine the break-even point.

solve linear programming problems.

determine the best course of action for the future.

In general, business analysts are likely to use _____ tools when performing descriptive analytics, but are more likely to use _____ tools when performing prescriptive analytics.

management science, business analytics

business analytics, management science

management science, data visualization

business analytics, data visualization

forecasting, data visualization

Answer Key

Test name: Ch1_Introduction to Management Science_7e

FALSE

FALSE

TRUE

FALSE

TRUE

FALSE

TRUE

FALSE

TRUE

TRUE

FALSE

FALSE

TRUE

TRUE

FALSE

TRUE

FALSE

FALSE

TRUE

E

D

E

D

B

E

B

A

B

E

B