

SUPPLEMENTS AVAILABLE ON THE TEXT WEBSITE www.mhhe.com/hillier

ADDITIONAL CASES

Case 3.2 Cutting Cafeteria Costs
Case 3.3 Staffing a Call Center
Case 3.4 Promoting a Breakfast Cereal
Case 4.2 New Frontiers
Case 4.3 Assigning Students to Schools
Case 6.2 Farm Management
Case 6.3 Assigning Students to Schools, Revisited
Case 6.4 Writing a Nontechnical Memo
Case 8.2 Continuation of the Texago Case Study
Case 8.3 Project Pickings
Case 9.2 Aiding Allies
Case 9.3 Steps to Success
Case 11.2 Assigning Art
Case 11.3 Stocking Sets
Case 11.4 Assigning Students to Schools, Revisited Again
Case 12.2 International Investments
Case 12.3 Promoting a Breakfast Cereal, Revisited
Case 15.2 Smart Steering Support
Case 15.3 Who Wants to be a Millionaire?
Case 15.4 University Toys and the Engineering Professor Action Figures
Case 17.2 Queueing Quandary
Case 18.2 TNT: Tackling Newsboy's Teachings
Case 18.3 Jettisoning Surplus Stock
Case 20.3 Planning Planers
Case 20.4 Pricing under Pressure

SUPPLEMENT 1 TO CHAPTER 3 The LINGO Modeling Language

SUPPLEMENT 2 TO CHAPTER 3 More about LINGO

SUPPLEMENT TO CHAPTER 7 Linear Goal Programming and Its Solution Procedures

Problems

Case 7S.1 A Cure for Cuba
Case 7S.2 Airport Security

SUPPLEMENT TO CHAPTER 8
A Case Study with Many Transportation Problems

SUPPLEMENT 1 TO CHAPTER 18
**Derivation of the Optimal Policy for the Stochastic Single-Period Model
for Perishable Products**

Problems

SUPPLEMENT 2 TO CHAPTER 18
Stochastic Periodic-Review Models

Problems

SUPPLEMENT 1 TO CHAPTER 20
Variance-Reducing Techniques

Problems

SUPPLEMENT 2 TO CHAPTER 20
Regenerative Method of Statistical Analysis

Problems

SUPPLEMENT 3 TO CHAPTER 20
Optimizing with OptQuest

Problems

CHAPTER 21
The Art of Modeling with Spreadsheets

21.1 A Case Study: The Everglade Golden Years Company Cash Flow Problem

21.2 Overview of the Process of Modeling with Spreadsheets

21.3 Some Guidelines for Building “Good” Spreadsheet Models

21.4 Debugging a Spreadsheet Model

21.5 Conclusions

Selected References

Learning Aids for This Chapter on Our Website

Problems

Case 21.1 Prudent Provisions for Pensions

CHAPTER 22
Project Management with PERT/CPM

22.1 A Prototype Example—The Reliable Construction Co. Project

22.2 Using a Network to Visually Display a Project

22.3 Scheduling a Project with PERT/CPM

22.4 Dealing with Uncertain Activity Durations

22.5 Considering Time-Cost Trade-Offs

22.6 Scheduling and Controlling Project Costs

22.7 An Evaluation of PERT/CPM

22.8 Conclusions

Selected References
Learning Aids for This Chapter on Our Website
Problems
Case 22.1 “School’s out forever . . .”

CHAPTER 23

Additional Special Types of Linear Programming Problems

23.1 The Transshipment Problem
23.2 Multidivisional Problems
23.3 The Decomposition Principle for Multidivisional Problems
23.4 Multitime Period Problems
23.5 Multidivisional Multitime Period Problems
23.6 Stochastic Programming
23.7 Chance-Constrained Programming
23.8 Conclusions
Selected References
Problems

CHAPTER 24

Probability Theory

24.1 Sample Space
24.2 Random Variables
24.3 Probability and Probability Distributions
24.4 Conditional Probability and Independent Events
24.5 Discrete Probability Distributions
24.6 Continuous Probability Distributions
24.7 Expectation
24.8 Moments
24.9 Bivariate Probability Distribution
24.10 Marginal and Conditional Probability Distributions
24.11 Expectations for Bivariate Distributions
24.12 Independent Random Variables and Random Samples
24.13 Law of Large Numbers
24.14 Central Limit Theorem
24.15 Functions of Random Variables
Selected References
Problems

CHAPTER 25

Reliability

25.1 Structure Function of a System
25.2 System Reliability
25.3 Calculation of Exact System Reliability
25.4 Bounds on System Reliability
25.5 Bounds on Reliability Based upon Failure Times
25.6 Conclusions
Selected References
Problems

CHAPTER 26**The Application of Queueing Theory**

- 26.1 Examples
- 26.2 Decision Making
- 26.3 Formulation of Waiting-Cost Functions
- 26.4 Decision Models
- 26.5 The Evaluation of Travel Time
- 26.6 Conclusions
- Selected References
- Learning Aids for This Chapter on Our Website
- Problems

CHAPTER 27**Forecasting**

- 27.1 Some Applications of Forecasting
- 27.2 Judgmental Forecasting Methods
- 27.3 Time Series
- 27.4 Forecasting Methods for a Constant-Level Model
- 27.5 Incorporating Seasonal Effects into Forecasting Methods
- 27.6 An Exponential Smoothing Method for a Linear Trend Model
- 27.7 Times Series Forecasting with CB Predictor
- 27.8 Forecasting Errors
- 27.9 Box-Jenkins Method
- 27.10 Causal Forecasting with Linear Regression
- 27.11 Forecasting in Practice
- 27.12 Conclusions
- Selected References
- Learning Aids for This Chapter on Our Website
- Problems
- Case 27.1 Finagling the Forecasts

CHAPTER 28**Examples of Performing Simulations on Spreadsheets with Crystal Ball**

- 28.1 Bidding for a Construction Project
- 28.2 Project Management
- 28.3 Cash Flow Management
- 28.4 Financial Risk Analysis
- 28.5 Revenue Management in the Travel Industry
- 28.6 Choosing the Right Distribution
- 28.7 Decision Making with Decision Tables
- 28.8 Conclusions
- Selected References
- Learning Aids for This Chapter on Our Website
- Problems

APPENDIX 6**Simultaneous Linear Equations**