

## Tables and Figures Index

- Table 2.1: Hypothetical course offerings for an academic department 31
- Figure 4.1: Charts depicting typical salary increases at the end of each year 70
- Figure 4.2: Four different pictures of federal deficit spending 76
- Figure 4.3: Projection of the United States Gross Domestic Product 80
- Figure 4.4: Projection of the additional deficit if the tax cuts do not expire 81
- Figure 4.5: Projection of the total debt owed to the Social Security Trust Fund 83
- Figure 4.6: Projection of gross federal debt 87
- Figure 4.7: Comparison of the price movement for two stocks 89
- Figure 4.8: Split-adjusted price of Dell Computer stock compared with listed price for the same time period—January 2, 1997 to June 30, 1999 92
- Figure 4.9: Two different pictures of the growth in malpractice awards 97
- Figure 5.1: Comparison of two salary plans. Plan A increases by a fixed percentage each year while Plan B increases by a fixed amount each year. 102
- Table 5.1: Multipliers for the first 20 powers of 2 107
- Table 5.2: Future value of \$1 invested at a fixed rate of return 110
- Table 5.3: Total earnings per initial \$1 at a fixed rate of return. Each year an additional \$1 is added. 118
- Table 5.4: Comparison of daily, monthly, quarterly and yearly compounding intervals for different interest rates 127
- Figure 5.2: S-shaped or “logistic” curve that describes growth over time 129
- Table 6.1: The future value of \$1 for a fixed inflation 148
- Figure 6.1: The change in the value of \$1 arising from the combined effects of inflation and investment return over four different time periods 152
- Figure 6.2: Comparison over a 50-year time period of Alice’s investments that return 5% annually with Bob’s investments that earn 12% annually 157
- Table 6.2: Example of dollar-cost averaging into a hypothetical fund indexed to the Standard & Poors 500 164
- Table 7.1: Results of sorting the 32 possible five-member binary sequences into bins that contain a specific number of 1’s 177
- Table 7.2: Definitions of poker hands and their multiplicities (number possible) in order of rank from highest to lowest 178
- Figure 7.1: Zenith radio data. The frequency of use for each of the sixteen possible five-sequence patterns is shown. 181
- Figure 7.2: Comparison of the use of the six possible macro-states in the Zenith radio data with their predicted use from chance alone 183
- Table 9.1: Monthly loan payments per \$1000 borrowed 230
- Table 9.2: Total cost per \$1000 borrowed 238
- Table 9.3: Time in years to pay 20% of a loan balance 246
- Table 9.4: Time in years to pay 50% of a loan balance 248
- Table 9.5: Monthly loan payments per \$1000 borrowed for loans with less than a one-year duration 252

- Table 9.6: Total cost per \$1000 borrowed for loans with less than a one-year duration 256
- Table 9.7: Total one-time payment per \$1000 borrowed 260
- Table 10.1: Monthly loan payments per \$10,000 borrowed 281
- Table 10.2: Balance remaining per \$10,000 borrowed on a 30-year loan 284
- Table 10.3: Total interest paid per \$10,000 borrowed on a 30-year loan 288
- Table 10.4: Duration in years of a 30-year loan when extra payments are made to the principal each month 292
- Table 10.5: Total interest saved for a 30-year loan when extra payments are made to the principal each month 294
- Table 12.1: Comparison of decimal and scientific notation 339
- Table 12.2: Repeated multiplication/division by one thousand expressed in English words, decimal notation, the international prefix, international abbreviation, and scientific notation. 341
- Table 12.3: Representative values for various: speeds, distances, masses, times, populations, wealth, and causes of death. 348