Unit 0 - Background Material

- Adding and Subtracting Fractions (Notes p. 2)
- Multiplying and Dividing Fractions (Notes p. 3)
- Order of Operations (Notes p. 4)
- Rounding Numerical Values (Notes p. 5)
- Working with Powers of Ten (Notes pp. 6 & 7)
- Scientific Notation (Notes p. 8)
Unit 1 - Growth Models
(Sections 6.1, 9.1, 9.3, 6.3)

- Linear Growth
  (Notes pp. 2–9; Section 6.1, pp. 284–288)

- Review of Percent and Percent Change
  (Notes pp. 10–12; Section 9.1, pp. 484–489)

- Exponential Growth
  (Notes pp. 13–20)

- Compound Interest
  (Notes pp. 21–23; Section 9.3, pp. 497–499)

- General Exponential Functions
  (Notes pp. 24–27; Section 6.3, pp. 304–310)

- “Exponential” In Everyday English
  (Notes p. 28)
Unit 2 - Probability and Counting
(Sections 4.1, 4.3, 3.4, 4.2, 4.6)

- Probability Basics
  (Notes pp. 2–9; Section 4.1, pp. 155–159)

- Computing Odds
  (Notes pp. 10–13; Section 4.3, pp. 172–174)

- Basic Counting Principles
  (Notes pp. 14–16; Section 3.4, pp. 135–137)

- Permutations and Combinations
  (Notes pp. 17–19; Section 3.4, pp. 137–141)

- Applications of Counting to Probability
  (Notes pp. 20–24; Section 4.2, pp. 163–168)

- Expected Value
  (Notes pp. 25–29; Section 4.6, pp. 195–197)
Unit 3 - Working With Numerical Data  
(Sections 5.1, 5.2, 5.3, 5.4, 5.5)

- Describing Data Graphically  
  (Notes pp. 2–5; Section 5.1, pp. 215–221)

- Describing Data Numerically  
  (Notes pp. 6–11; Section 5.2, pp. 226–231)

- Modeling Data With a Normal Curve  
  (Notes pp. 12–21; Section 5.3, pp. 236 & 237;  
  Section 5.4, pp. 245–250)

- Interpreting Polling Results  
  (Notes pp. 22–27; Section 5.5, pp. 257–260)

- Conducting Opinion Polls  
  (Notes pp. 28–30)
Unit 4 - The Mathematics of Choice  
(Notes, Section 10.4)

- Decision Theory  
  (Notes pp. 2–8; Section 4.6, pp. 198 & 199)

  Often times we can quantify the benefit of making a certain decision if we know what will happen in the future. However suppose the future is uncertain. How can we then make the best decision?

- Methods of Voting  
  (Notes pp. 9–17; FAPP Video #12; Section 10.4, pp. 556–562)

  Is there only one way for a group of people to conduct an election? How does the method we use for voting affect the final outcome? Is there one method which is “the best” in some sense? One which is the “fairest?”

- Game Theory  
  (Notes pp. 18–22; FAPP Video #15)

  In a game or competition we often must make a choice without knowing what our opponent or partner will do. The payoff to us may depend on both the choice we make and the choice the other person makes. For example, in baseball the pitcher must decide where to throw the pitch and, simultaneously, the batter must choose whether or not to swing. What should each person do?