CHAPTER 8
Hypothesis Testing for Population Proportions

Section 8.1 The Essential Ingredients of Hypothesis Testing

Write the vocabulary terms in this section on 3 x 5 cards and study them. Important terms include **hypothesis test, null hypothesis, alternative hypothesis, one-sided hypotheses, two-sided hypotheses, significance level, test statistic, one-proportion z-statistic, p-value.**

Be sure to also read and study the key points, highlighted in the blue boxes in the text.

The reading quiz on this section covers mainly the vocabulary, so be sure you study the words mentioned above thoroughly. Specifically, know:

- Which of the hypotheses gives the "status-quo" and which is the research hypothesis, which is what the researcher believes is true
- Are the hypotheses about sample data or the population?
- The notation used for the null hypothesis and alternative hypothesis
- Try to understand the difference between the **significance level** and the **p-value**. They are both probabilities!   (See pp. 386 and 389)
- Know the formula for the one-proportion z-test statistic

Section 8.2 Hypothesis Testing in Four Steps

Write the vocabulary terms in this section on 3 x 5 cards and study them. Important terms include: **two-tailed p-value**

Be sure to also read and study the key points, highlighted in the blue boxes in the text.

- Know the four steps of hypothesis testing.
- Read the examples carefully and try to understand the four steps.
- Review the vocabulary from section 8.1 above

Section 8.3 Hypothesis Tests in Detail

This section pulls together the ideas of hypothesis testing. You might again review the vocabulary from section 8.1
Be sure to also read and study the key points, highlighted in the blue boxes in the text.

Be able to:

- What does a small p-value mean?
- What's the relationship between a p-value and the z-statistic?
- What two types of errors can occur during a hypothesis test?
- Explain the difference between statistical significance and practical significance.
- Be sure to use proper words when interpreting the results of an hypothesis test. Please note the blue box on p 404.   Can we ever say we "proved" something after doing the hypothesis test?