CHAPTER 6
Modeling Random Events: The Normal and Binomial Models

Section 6.1 Probability Distributions are Models of Random Experiments
Write the vocabulary terms in this section on 3 x 5 cards and study them. Important terms include probability model, probability distribution, discrete outcomes (discrete variables), and continuous outcomes (continuous variables), probability density curve.

Be sure to also read and study the key points, highlighted in the blue boxes in the text.
Be able to
- Explain what two things a probability distribution tells us
- Determine if a given variable is discrete or continuous
- Explain why the area under a probability density curve is 1
- Know the different ways that probability density functions can be displayed

Section 6.2 The Normal Model
Write the vocabulary terms in this section on 3 x 5 cards and study them. Important terms include: normal model, normal curve, normal distribution, mean of a probability distribution, standard deviation of a probability distribution, standard Normal model, and percentile.
Be sure to also read and study the key points, highlighted in the blue boxes in the text.

- Know when the normal model applies and what the density curve looks like
- What is the big idea in the section? What do we use the Normal distribution for?
- Find at least two ways of finding probabilities with the normal model
- What is the mean and standard deviation of the standard normal model?

Section 6.3 The Binomial Model
Write the vocabulary terms in this section on 3 x 5 cards and study them. Important terms include binomial probability model, binomial probability, and cumulative probability.
Be sure to also read and study the key points, highlighted in the blue boxes in the text.
Be able to:
- List the 4 characteristics of a binomial model
- Determine if the binomial model applies to a given random experiment
- Recognize the wording that would indicate using binomialpdf or binomialcdf when calculating binomial probabilities
- Know the mean and standard deviation in a binomial experiment