Ch. 5

Chapter Summary: Probability – What Are the Chances?

① Probability describes the long-term behavior of chance processes. Since chance occurrences display patterns of regularity after many repetitions, we can use the rules of probability to determine the likelihood of observing particular results. At this point, you should be comfortable with the basic definition and rules of probability. In the next two chapters, you will study some further concepts in probability so we can build the foundation necessary for statistical inference.

Note that the AP exam may contain several questions about the probability of particular events. Make sure you understand how and when to apply each formula. More importantly, make sure you show your work when calculating probabilities so anyone reading your response understands exactly how you arrived at your answer!

After You Read: What Have I Learned?

② ⟶ Complete the vocabulary puzzle, multiple-choice questions, and FRAPPY. Check your answers and performance on each of the learning targets. Be sure to get extra help on any targets that you identify as needing more work!

③

Target	Got It!	Almost There	Needs Some Work
I can interpret probability as a long-run relative frequency.			
I can use simulation to model chance behavior.			
I can give a probability model for a chance process with equally likely outcomes and use it to find the probability of an event.			
I can use basic probability rules, including the complement rule and addition rule for mutually exclusive events.			
I can use a two-way table or Venn diagram to model a chance process and calculate probabilities involving two events.			
I can use the general addition rule to calculate probabilities.			
I can use a tree diagram to describe chance behavior.			
I can use the general multiplication rule to solve probability questions.			
I can calculate and interpret conditional probabilities.			
I can determine if two events are independent.			
I can use the general multiplication rule to calculate probabilities.			
I can use a tree diagram to model a chance process involving a sequence of outcomes and to calculate probabilities.			
I can use the multiplication rule for independent events to calculate probabilities, when appropriate.			

④ As you feel it is best, do the check for understanding questions

Note: There will be an LCQ on reviews from ch. 4 and 5.

Chapter 5: Probability
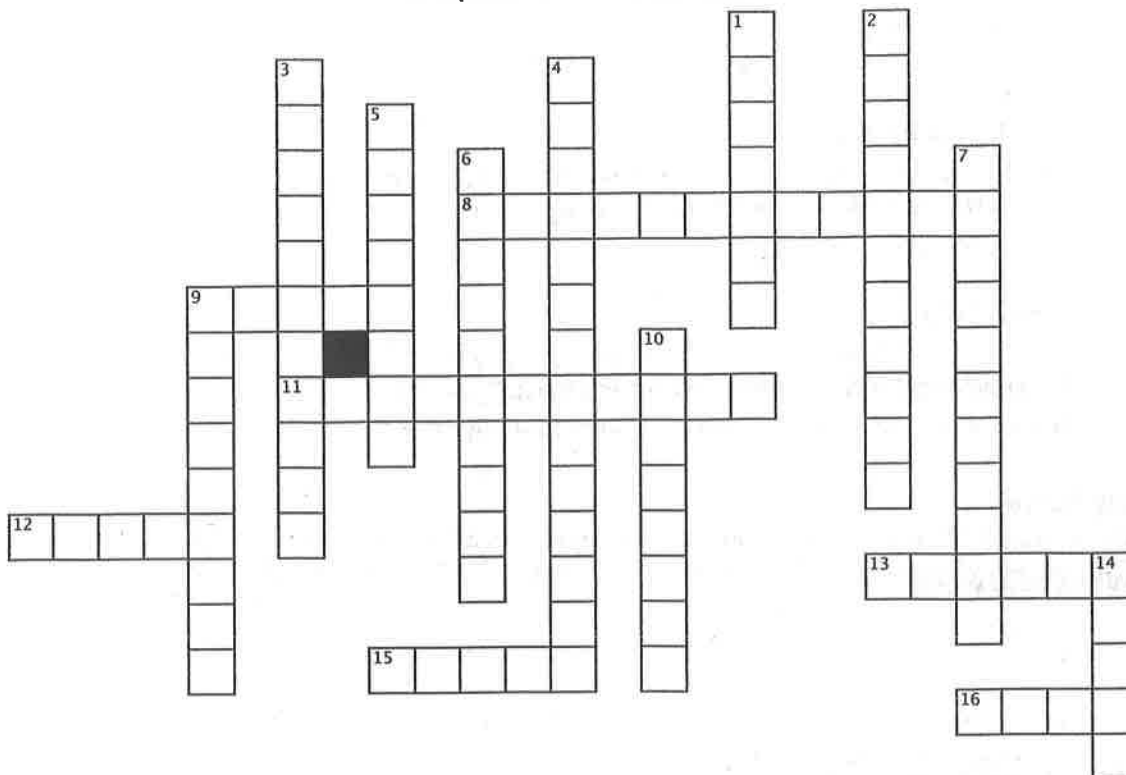
Across

8. The collection of outcomes that occur in both of two events.
9. A collection of outcomes from a chance process.
11. The proportion of times an outcome would occur in a very long series of repetitions.
12. _____ Theorem can be used to find probabilities that require going "backward" in a tree diagram.
13. In statistics, this doesn't mean "haphazard." It means "by chance."
15. The collection of outcomes that occur in either of two events.
16. A _____ diagram can help model chance behavior that involves a sequence of outcomes.

Down

1. The law of large _____ states that the proportion of times an outcome occurs in many repetitions will approach a single value.
2. The probability that one event happens given another event is known to have happened.
3. The set of all possible outcomes for a chance process (two words).
4. The probability that two events both occur can be found using the general _____ rule.
5. P(A or B) can be found using the general _____ rule.
6. The imitation of chance behavior, based on a model that reflects the situation.
7. The occurrence of one event has no effect on the chance that another event will happen.
9. Another term for disjoint: Mutually _____.
10. Two events that have no outcomes in common and can never occur together.
14. A probability _____ describes a chance process and consists of two parts.