



Algebra II Pacing & Assessment Guide

JMCSS DEPARTMENT OF CURRICULUM & INSTRUCTION

Unit VIII – Probability

Description: Students last formally studied probability in Grade 7, when they found probabilities of simple and compound events and designed and used simulations. This unit builds on these concepts, as well as fundamental counting principles and the notion of independence, to develop rules for probability and conditional probability. It is important that the standards are taught in a timely manner because the majority of the standards in Units VII and VIII are major content for Algebra II.

Domain	Tennessee State Standards	Assessed on TNReady	
		Part I	Part II
Understand Independence and Conditional Probability and use them to Interpret Data (CP.A)	S-CP.A.1. Describe events as subsets of a sample space (the set of outcomes) using characteristics (or categories) of the outcomes, or as unions, intersections, or complements of other events (“or,” “and,” “not”).		X
	S-CP.A.2. Understand that two events A and B are independent if the probability of A and B occurring together is the product of their probabilities, and use this characterization to determine if they are independent.		X
	S-CP.A.3. Understand the conditional probability of A given B as $P(A \text{ and } B)/P(B)$, and interpret independence of A and B as saying that the conditional probability of A given B is the same as the probability of A, and the conditional probability of B given A is the same as the probability of B.		X
	S-CP.A.4. Construct and interpret two-way frequency tables of data when two categories are associated with each object being classified. Use the two-way table as a sample space to decide if events are independent and to approximate conditional probabilities. For example, collect data from a random sample of students in your school on their favorite subject among math, science, and English. Estimate the probability that a randomly selected student from your school will favor science given that the student is in tenth grade. Do the same for other subjects and compare the results.		X
	S-CP.A.5. Recognize and explain the concepts of conditional probability and independence in everyday language and everyday situations. For example, compare the chance of having lung cancer if you are a smoker with the chance of being a smoker if you have lung cancer.		X
Use the Rules of Probability to Compute Probabilities of Compound Events in a Uniform Probability Model (CP.B)	S-CP.B.6. Find the conditional probability of A given B as the fraction of B’s outcomes that also belong to A, and interpret the answer in terms of the model.		X
	S-CP.B.7. Apply the Addition Rule, $P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B)$, and interpret the answer in terms of the model.		X