Alg2CP Unit 11 (Chapter 11): Probability

Content Area: **Math**
Course(s): **Level 1 Engineering Drawing, Algebra 2 CP, Algebra 2 A, Algebra 2 H**
Time Period: **Marking Period 4**
Length: **4 weeks**
Status: **Published**

Unit Introduction

Standards

MA.S-CP.A.5	Recognize and explain the concepts of conditional probability and independence in everyday language and everyday situations.
MA.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.
MA.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.
MA.S-CP.B.9	Use permutations and combinations to compute probabilities of compound events and solve problems.
MA.S-MD.A.2	Calculate the expected value of a random variable; interpret it as the mean of the probability distribution.
MA.S-MD.A.3	Develop a probability distribution for a random variable defined for a sample space in which theoretical probabilities can be calculated; find the expected value.
MA.S-MD.A.4	Develop a probability distribution for a random variable defined for a sample space in which probabilities are assigned empirically; find the expected value.

Essential Questions

- What is the difference between a permutation and a combination?
- What is the difference between experimental and theoretical probability?

Content

- Sec 11.1 - Permutations and Combinations (pg. 674)
- Sec 11.2 - Probability (pg. 681)
- Sec 11.3 - Probability of Multiple Events (pg. 688)
- Sec 11.4 - Conditional Probability (pg. 696)

Skills

- Calculate combinations

- Calculate permutations
- Find the probability of a single event
- Find the probability of multiple events
- Use the Fundamental Counting Principle