CPALMS

Standard #: MAFS.912.S-CP.2.6

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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. ★

	Grade: 912
Cluster: Use the rules of probability to compute probabilities of compound events in a uniform probability model. (Algebra 2 - Additional Cluster) - Clusters should not be sorted from Major to Supporting and then taught in that order. To do so would strip the coherence of the mathematical ideas and miss the opportunity to enhance the major work of the grade with the supporting clusters.	**Date Adopted or Revised:** 02/14
Content Complexity Rating: Level 2: Basic Application of Skills & Concepts - More Information	**Date of Last Rating:** 02/14
Status: State Board Approved	

Related Courses

Course Number	Course Title
1200330:	Algebra 2 (Specifically in versions: 2014 - 2015, 2015 and beyond (current))
1200340:	Algebra 2 Honors (Specifically in versions: 2014 - 2015, 2015 and beyond (current))
1210300:	Probability & Statistics with Applications Honors (Specifically in versions: 2014 - 2015, 2015 and beyond (current))
1298310:	Advanced Topics in Mathematics (formerly 129830A) (Specifically in versions: 2014 - 2015, 2015 and beyond (current))
1200335:	Algebra 2 for Credit Recovery (Specifically in versions: 2014 - 2015, 2015 - 2019 (course terminated))

Related Access Points

Access Point

Access Points Number	Access Points Title
MAFS.912.S-CP.2.AP.6a:	Using a two-way table, find the conditional probability of A given within the context of the model.

Related Resources

Teaching Idea

Name	Description
Conditional Probability and Probability of Simultaneous Events:	This lesson is designed to further students' practice with probability as well as introduce them to conditional probability and probabilities of simultaneous independent events. The lesson provides links to discussions and activities related to conditional and simultaneous probabilities as well as suggested ways to integrate them into the lesson. Finally, this lesson provides links to follow-up lessons designed for use in succession with this one.

Problem-Solving Task

Name	Description
How Do You Get to School?:	This task requires students to use information in a two-way table to calculate a probability and a conditional probability.
The Titanic 1:	This task asks students to calculate probabilities using information presented in a two-way frequency table.
The Titanic 2:	This task lets students explore the concepts of probability as a fraction of outcomes and using two-way tables of data.
The Titanic 3:	This problem solving task asks students to determine probabilities and draw conclusions about the survival rates on the Titanic by consulting a table of data.
Unexpected Answers:	This lesson is designed to introduce students to statistical situations where the probabilities or outcomes might not be what is first expected. The lesson provides links to discussions and activities motivated by the idea of unexpected answers. Finally, the lesson provides links to follow-up lessons designed for use in succession with an introduction to probability and unexpected answers in probability.

Lesson Plan

Name	Description
	This lesson unit is intended to help you assess how well students are able to:

Medical Testing:	• make sense of a real life situation and decide what math to apply to the problem • understand and calculate the conditional probability of an event A, given an event B, and interpret the answer in terms of a model • represent events as a subset of a sample space using tables, tree diagrams, and Venn diagrams • interpret the results and communicate their reasoning clearly

Worksheet

Name	Description
Replacement and Probability:	This lesson is designed to develop students' understanding of sampling with and without replacement and its effects on the probability of drawing a desired object. The lesson provides links to discussions and activities related to replacement and probability as well as suggested ways to work them into the lesson. Finally, the lesson provides links to follow-up lessons that are designed to be used in succession with the current one.

Assessment

Name	Description
Sample 4 - High School Algebra 2 State Interim Assessment:	This is a State Interim Assessment for 9th-12th grade.

Text Resource

Name	Description
The Logic of Drug Testing:	This informational text resource is intended to support reading in the content area. This article explores the reliability of drug tests for athletes, using mathematics. The author attempts to address this issue by relating drug tests to conditional probability. Throughout the text, various numbers that affect the calculation of a reliable probability are discussed. Numbers such as test sensitivity, test specificity, and weight of evidence are related to Bayes' theorem, which is ultimately used to calculate the conditional probability.

Student Resources

Name	Description
The Titanic 1:	This task asks students to calculate probabilities using information presented in a two-way frequency table.
The Titanic 2:	This task lets students explore the concepts of probability as a fraction of outcomes and using two-way tables of data.
The Titanic 3:	This problem solving task asks students to determine probabilities and draw conclusions about the survival rates on the Titanic by consulting a table of data.

Parent Resources

Name	Description
The Titanic 1:	This task asks students to calculate probabilities using information presented in a two-way frequency table.
The Titanic 2:	This task lets students explore the concepts of probability as a fraction of outcomes and using two-way tables of data.
The Titanic 3:	This problem solving task asks students to determine probabilities and draw conclusions about the survival rates on the Titanic by consulting a table of data.