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| **LG #** | **A210** | **Standards:** | **S-CP.1.1, S-CP.1.2, S-CP.1.3, S-CP.1.4, S-CP.1.5, S-CP.2.6, S-CP.2.7** |
| **4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond instruction to the standard.**  **The student will be able to:**   * Create a situation in which a two way table is an appropriate model. * Design a game that is fair and a game that is unfair.   **No major errors or omissions regarding the score 4.0 content.** | | |
| **3.5** | In addition to 3.0, in-depth inferences and applications with partial success. | | |
| **3.0** | **Students will be able to understand independence and conditional probability and use the rules of probability to compute and interpret data in a probability model.**  **The student will be able to:**   * Describe events as unions, intersections and complements of other events. (S-CP.1.1) * Use that two events A and B are independent if the probability of A and B occurring together is the product of their probabilities to determine if they are independent.   (S-CP.1.2)   * 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. (S-CP.1.3) * Construct and interpret a Two-Way Frequency table of data when two categories are associated with each object being classified. (S-CP.1.4) * Explain the concepts of conditional probability and independence in everyday language and everyday situations. (S-CP.1.5) * Interpret the conditional probability of A given B as the fraction of B’s outcomes that also belong to A in terms of a model. (S-CP.2.6) * Interpret the addition rule, P(A or B)=P(A)+P(B)-P(A and B) in terms of a model.   (S-CP.2.7)  **No major errors or omissions regarding the score 3.0 content (simple or complex).** | | |
| **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of 3.0 content. | | |
| **2.0** | **The student recognizes and describes specific terminology such as:**   |  |  |  | | --- | --- | --- | | * Subset | * Intersection | * Two-Way Table | | * Sample Space | * Complement | * Probability | | * Event | * Venn Diagram | * Conditional Probability | | * Union * Inclusive * Addition Rule | * Set Notation * Mutually Exclusive * Tree Diagram | * Independent * Dependent |   **The student will be able to:**   * Describe events as subsets of a sample space using characteristics of the outcomes. (S-CP.1.1) * Understand that two events A and B are independent if the probability of A and B occurring together is the product of their probabilities. (S-CP.1.2) * Understand the conditional probability of A given B as P(A and B)/P(B). (S-CP.1.3) * Use a two-way table to decide if events are independent and to approximate conditional probabilities. (S-CP.1.4) * Recognize the concepts of conditional probability and independence in everyday language and situations. (S-CP.1.5) * Find the conditional probability of A given B as the fraction of B’s outcomes that also belong to A. (S-CP.2.6) * Apply the addition rule, P(A or B)=P(A)+P(B)-P(A and B). (S-CP.2.7) | | |
| **1.5** | Partial knowledge of the score 2.0 content, but major errors or omissions regarding score 3.0 content. | | |
| **1.0** | With partial understanding of some of the simpler details and processes and some of the more complex ideas and processes. | | |
| **0.5** | With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes. | | |
| **0.0** | Even with help, no understanding or skill is demonstrated | | |