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| **Probability of Multiple Independent Events** | | | |
| Calculates theoretical probability for 3 independent events    A pointer is spun 3 times.  Sample space:  R, R, R G, G, G R, R, G G, G, R R, G, R G, R, G R, G, G G, R, R  There are 8 possible outcomes.  For 2 reds and 1 green, in any order, there are 3 favourable outcomes so the theoretical probability of 2 reds  and 1 green is: = 0.375  For red, red, green, in that order, there is 1 favourable outcome so  the theoretical probability of red, red,  green is: = 0.125 | Calculates experimental probability for 3 independent events    A pointer is spun 3 times.  The results for 10 trials:  G, R, G G, G, R R, R, G R, R, R G, R, G R, R, R G, R, G R, G, R R, G, G G, R, R  For 2 reds and 1 green, in any order, the outcome occurred 3 times so the experimental probability of 2 reds  and 1 green is: = 0.3  For red, red, green, in that order, the outcome occurred 1 time, so  the experimental probability of red,  red, green is: = 0.1 | Compares theoretical and experimental probabilities for 3 independent events    Theoretical probability of 2 reds and  1 green is: = 0.375  Experimental probability of 2 reds  and 1 green is: = 0.3  The theoretical probability of red,  red, green is: = 0.125  The experimental probability of red,  red, green is: = 0.1  For each multiple event, the theoretical probability is greater than the experimental probability, but the probabilities are close in value. | Understands how the experimental probability is affected by many trials  For 100s of trials of an experiment, the experimental probability of an outcome may approach its theoretical probability. |

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| **Observations/Documentation** | | | |
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