

Activity 9 Assessment

Probability of Multiple Dependent Events

Probability of Multiple Dependent Events

Calculates theoretical probability for 3 dependent events



One tile is taken from the bag, then another tile is taken, then the third tile is taken.

Sample space:

R, B, G

R, G, B

B, G, R

B, R, G

G, B, R

G, R, B

For the probability that the tiles are removed in the order red, blue, green, there is 1 favourable outcome and 6 possible outcomes. So, the theoretical probability of red, blue,

green is: $\frac{1}{6} \approx 0.17$, or about 17%

Calculates experimental probability for 3 dependent events



One tile is taken from the bag, then another tile is taken, then the third tile is taken.

The results for 10 trials:

R, G, B B, R, G

G, B, R R, G, B

R, B, G R, B, G

G, B, R G, B, R

G, R, B R, G, B

The outcome red, brown, green occurred 2 times, and the experiment was conducted 10 times, so the experimental probability of

red, blue, green is: $\frac{2}{10} = 0.2 = 20\%$

Compares probabilities for 3 dependent events



The theoretical probability of red, blue, green is: $\frac{1}{6} \approx 0.17$, or about 17%

The experimental probability of red, blue, green is: $\frac{2}{10} = 0.2$, or 20%

The probabilities are close in value. The experimental probability is slightly greater than the theoretical probability.

Understands how the experimental probabilities are affected by many trials

For 100s of trials of an experiment, the experimental probability of an outcome may closely approach its theoretical probability.



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Observations/Documentation			