Data

Activity 9 Assessment

Probability of Two Dependent Events

Probability of Two Dependent Events

Calculates theoretical probability for 2 dependent events

Two tiles are removed from the bag.

Sample space:

	R	B	G
R		**R, B**	R, G
B	**B, R**		B, G
G	G, R	G, B	

For red and blue, there are 2 favourable outcome and 6 possible outcomes, so
the theoretical probability of red and blue is: $\frac{2}{6}$ or $\frac{1}{3}$

Calculates experimental probability for 2 dependent events

Two tiles are removed from the bag.

The results for 10 trials:

G	B
G	B
G	R
R	B
G	B
B	G
G	B
B	R
B	R
R	G

The outcome, red and blue, occurred 3 times, and the experiment was conducted 10 times, so the experimental probability of red and blue is:

$\frac{3}{10}$ = 0.3 = 30%

Compares experimental and theoretical probabilities for 2 dependent events

Two cards are removed.
Sample space for two dependent events

	A	K	Q	J
A		A, K	A, Q	**A, J**
K	K, A		K, Q	K, J
Q	Q, A	Q, K		Q, J
J	**J, A**	J, K	J, Q	

Theoretical probability for an Ace and a Jack is: $\frac{2}{12} = \frac{1}{6}$

The results for 12 trials:

A	K
J	Q
A	J
A	Q
A	J
A	J
K	A
A	K
Q	J
K	Q
J	Q
J	A

Understands how the experimental and theoretical probabilities are 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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Activity 9 Assessment

Probability of Two Dependent Events

		Experimental probability for an Ace and a Jack is: $\frac{4}{12} = \frac{1}{3}$ The experimental probability is greater than the theoretical probability.	
Observations/Documentation			