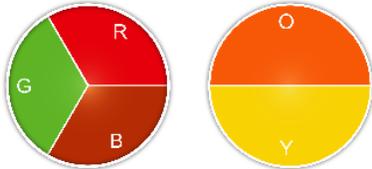# Activity 8 Assessment
Probability of Two Independent Events

Probability of Two Independent Events

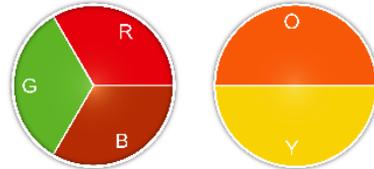| Calculates theoretical probability for 2 independent events	Calculates experimental probability for 2 independent events	Compares experimental and theoretical probabilities for the same experiment	Understands how the experimental and theoretical probabilities are affected by many trials

Spinner 1   Spinner 2

Spinning the pointer on each spinner once

Sample space:

	Spinner 2	
	O	Y
Spinner 1 R	R, O	R, Y
B	B, O	B, Y
G	G, O	G, Y

For green and orange, there is 1 favourable outcome and 6 possible outcomes, so
the theoretical probability of green and orange is: $\frac{1}{6}$

Spinner 1   Spinner 2

Spinning the pointer on each spinner once

The results for 10 trials:

Spinner 1	Spinner 2
R	O
G	**O**
G	**O**
B	Y
G	Y
R	O
G	**O**
B	Y
G	Y
R	Y

The outcome, green and orange, occurred 3 times, and the experiment was conducted 10 times, so the experimental probability of green and orange is:
$\frac{3}{10}$ = 0.3 = 30%

Tossing two coins

The results for 10 trials

Nickel	Dime
T	H
T	H
H	H
H	T
H	T
H	H
T	H
T	H
H	H
H	H

Sample space

	Nickel	
	H	T
Dime H	H, H	H, T
T	T, H	T, T

Experimental probability of 2 heads is: $\frac{4}{10}$ = 0.4 = 40%
Theoretical probability of 2 heads is: $\frac{1}{4}$ = 0.25 = 25%
The experimental probability is greater than the theoretical probability.

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

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Observations/Documentation			