MathFLIX CHALLENGE
Successive Events: Independent and Dependent

In order to find the probability of several events occurring in succession, ***multiply*** the probabilities of the individual events.

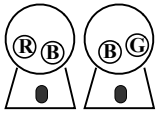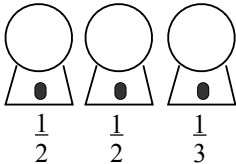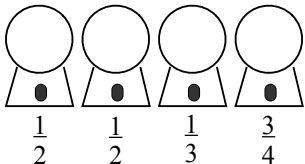### Successive events can be *Independent* or *Dependent.*

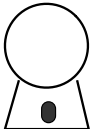| **Independent** events are **not** affected by each other. *Example: answers for a multiple choice test* | **Dependent** events are affected by each other. *Example: answers for a matching test* |

Successive Independent Events

Successive Events	Gumball Machine	Multiplication Problem	Probability Fraction	Probability Decimal	Probability %
p (red, green)	Red $\frac{1}{2}$ Green $\frac{1}{2}$	$\frac{1}{2}$ x $\frac{1}{2}$	$\frac{1}{4}$	0.25	25%
p (r, g, b)	$\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{3}$				
p (g ,b, r, r)	$\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{3}$ $\frac{3}{4}$				

Successive Dependent Events

Successive Events	Gumball Machine	Multiplication Problem	Probability Fraction	Probability Decimal	Probability %
p (y,y)	$\frac{2}{6}$ $\frac{1}{5}$	$\frac{2}{6}$ x $\frac{1}{5}$			
p (y,b,g)					
p (y,y,b,b)					