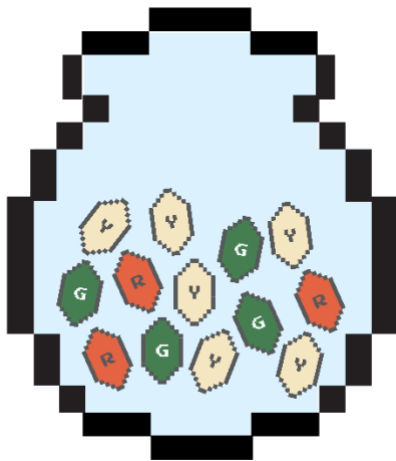


PROBABILIDAD: ESTUDIO CIENTÍFICO DE LA INCERTIDUMBRE



- **outcomes:** los resultados de un experimento
- **event:** conjunto de resultados; suele representarse con mayúsculas
- **probability:** posibilidad que ocurra un suceso
- Los sucesos son **mutuamente excluyentes (mutually exclusive)** si no pueden ocurrir al mismo tiempo.

Sucesos Mutuamente Excluyentes

Digamos que G = sacar una gema verde (marcadas con una G para green) de la bolsa de arriba.

Probabilidad de Suceso A

$$P(A) = \frac{\text{number of ways event A can occur}}{\text{total number of possible outcomes}} = \frac{\text{número de formas en que puede ocurrir el suceso A}}{\text{número total de resultados posibles}}$$

<p>What is the probability of drawing a green gem?</p> <p>¿Cuál es la probabilidad de sacar una gema verde?</p>	$P(G) =$	<p>Total Gems: ____</p>
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Probabilidad del Complemento de Suceso A

$$P(A') = 1 - P(A)$$

<p>What is the probability of drawing a gem that is not green?</p> <p>¿Cuál es la probabilidad de sacar una gema que no sea verde?</p>	$P(G') =$	<p>Total Gems: ____</p>
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Probabilidad de Suceso A o Suceso B

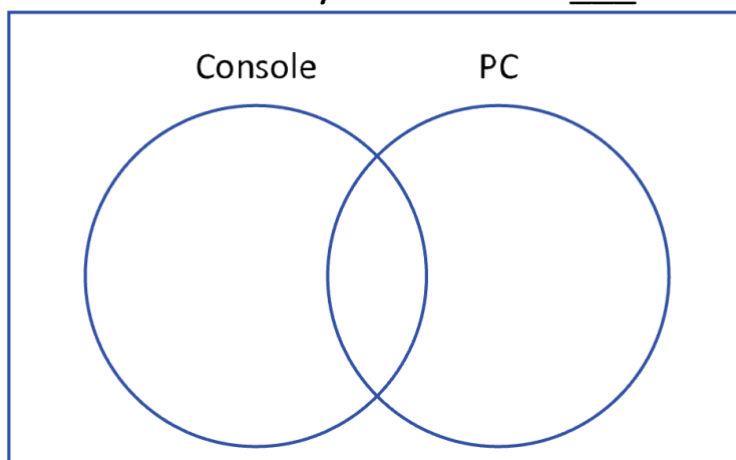
$$P(A \text{ or } B) = P(A) + P(B)$$

<p>What is the probability of drawing a green or red gem?</p> <p>¿Cuál es la probabilidad de sacar una gema verde o roja?</p>	$P(G \text{ or } R) =$	<p>Total Gems: ____</p>
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Total Surveyed Students: _____

NOT Mutually Exclusive Events

A survey asked 100 students on what device they played video games. The results showed that 50 students play video games on their console, 45 students play video games on their PC, and 15 students play video games on their console and PC.



- 1) What is the probability that a randomly chosen student neither plays video games on a console nor PC?

- 2) What is the probability that a randomly chosen student plays video games on either a console or PC?

- 3) What is the probability that a randomly chosen student plays video games either console or PC, but not both?

- 4) What is the probability that a randomly chosen student does not play video games on a console?