

# Venn Diagrams

by Wade Jackson

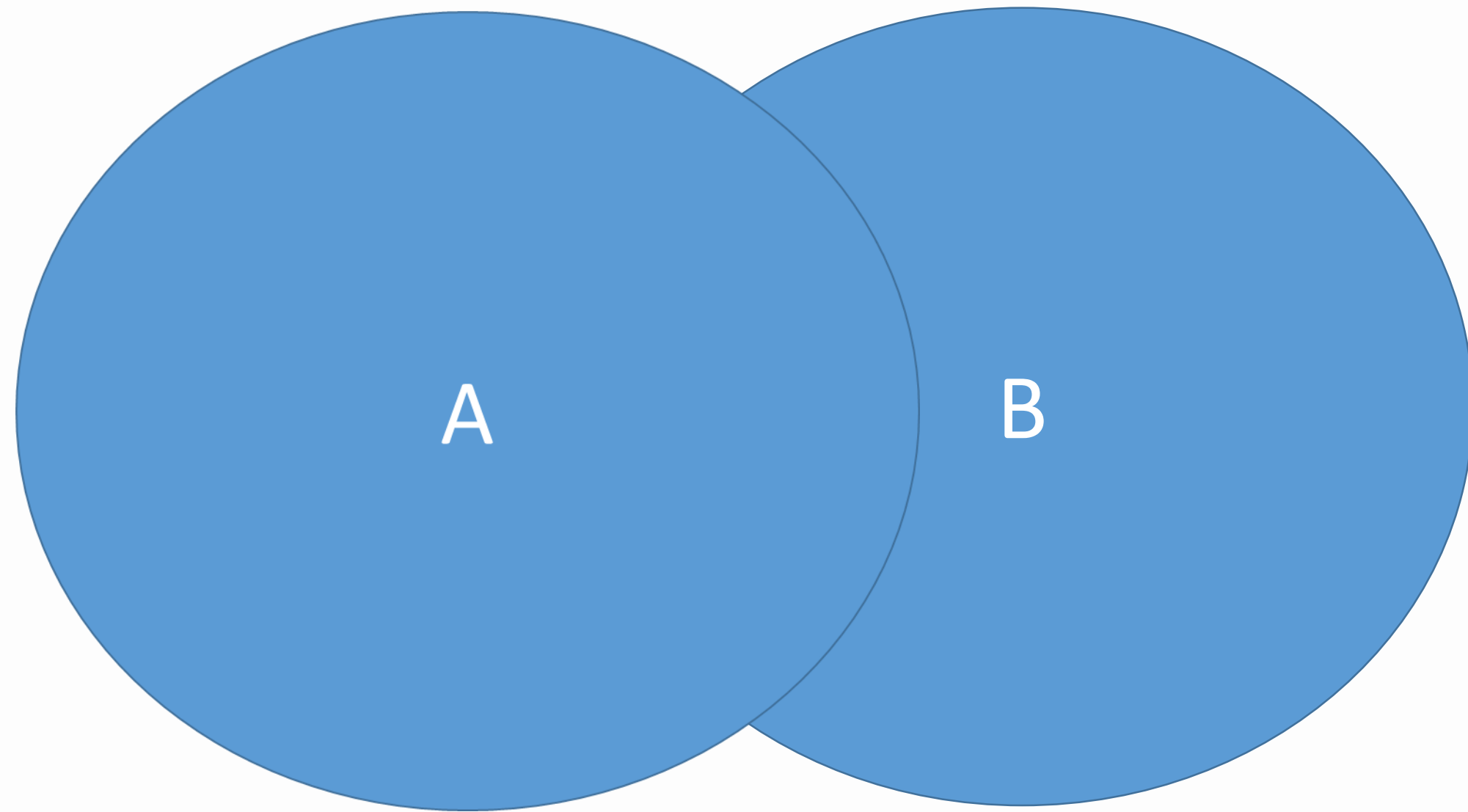
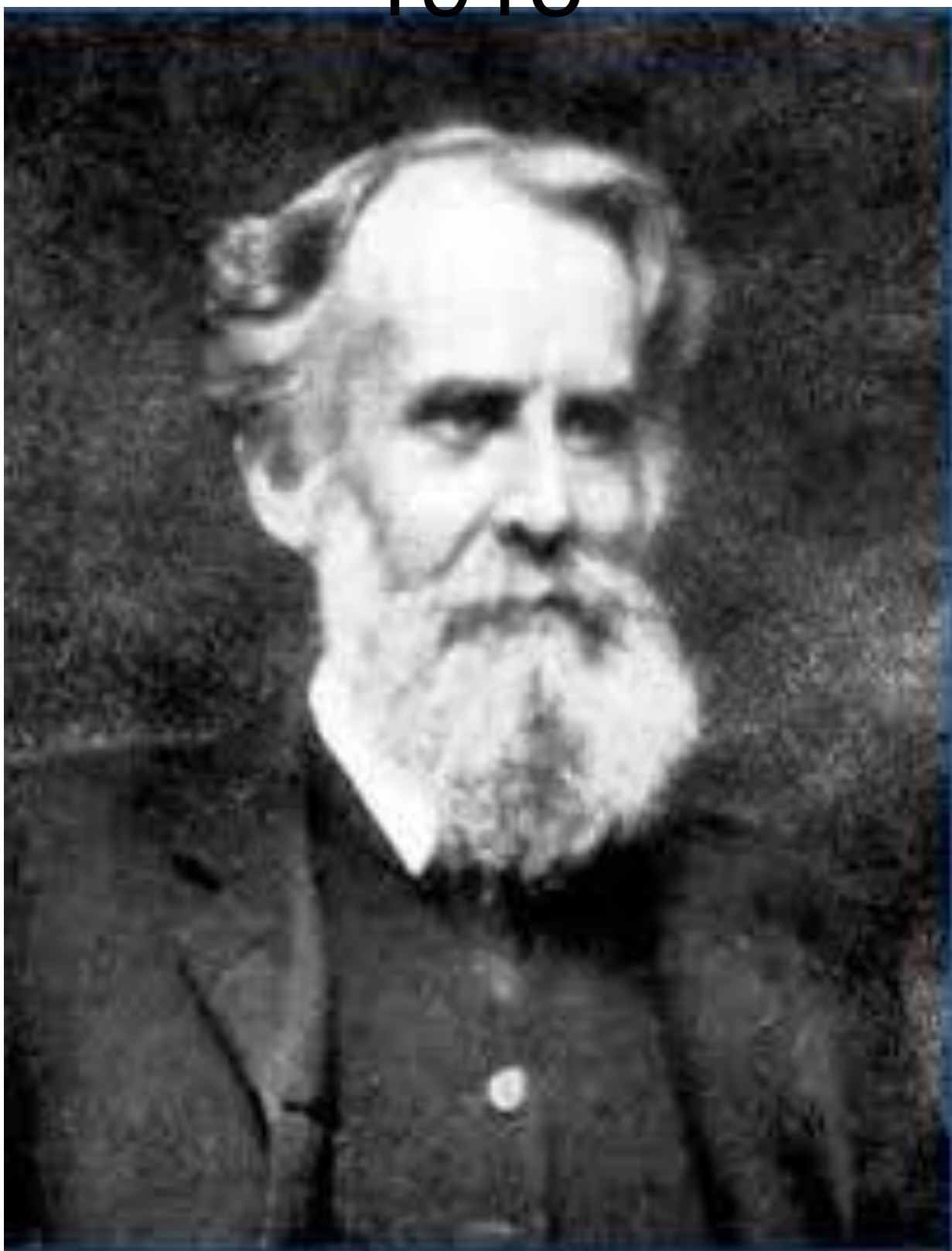
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## Definition:

Venn Diagrams are a schematic diagram used in logic theory to depict collections of sets and represent their relationships

## History:

- Created by John Venn
- Similar to diagram created by Gottfried Wilhelm von Leibnitz
  - created in 1866
  - Were not called Venn diagrams until 1918



Boolean logic

**Intercept:**  $A \cap B$  or A and B

An Element in both A and B

**Union:**  $A \cup B$  or A or B

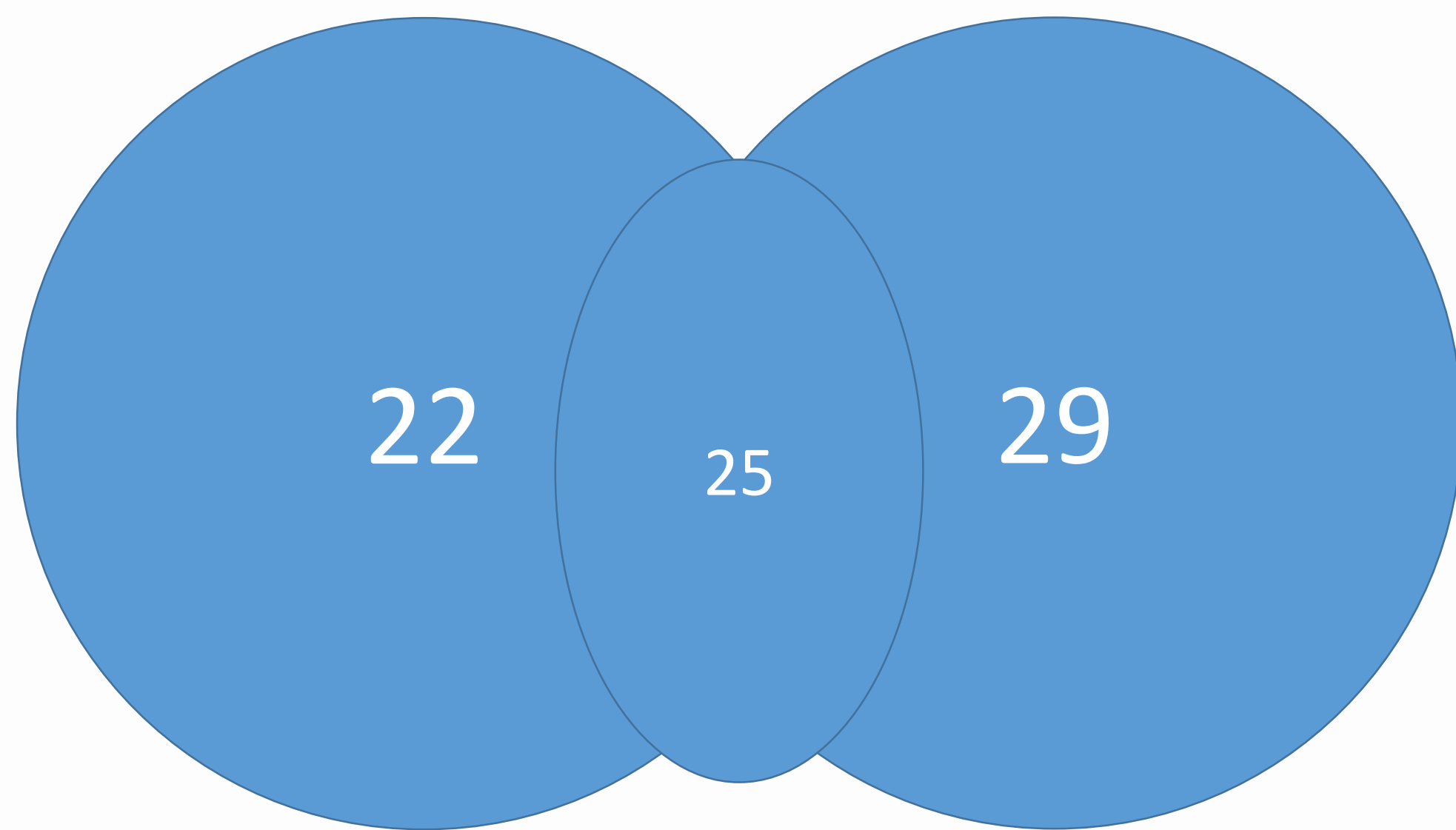
An Element in either A or B

**Difference:**  $A - B$

An Element in A that is not in B

## Example

100 students were interviewed  
 47 like Ice Cream  
 54 like Cookies  
 25 like both Ice cream and cookies

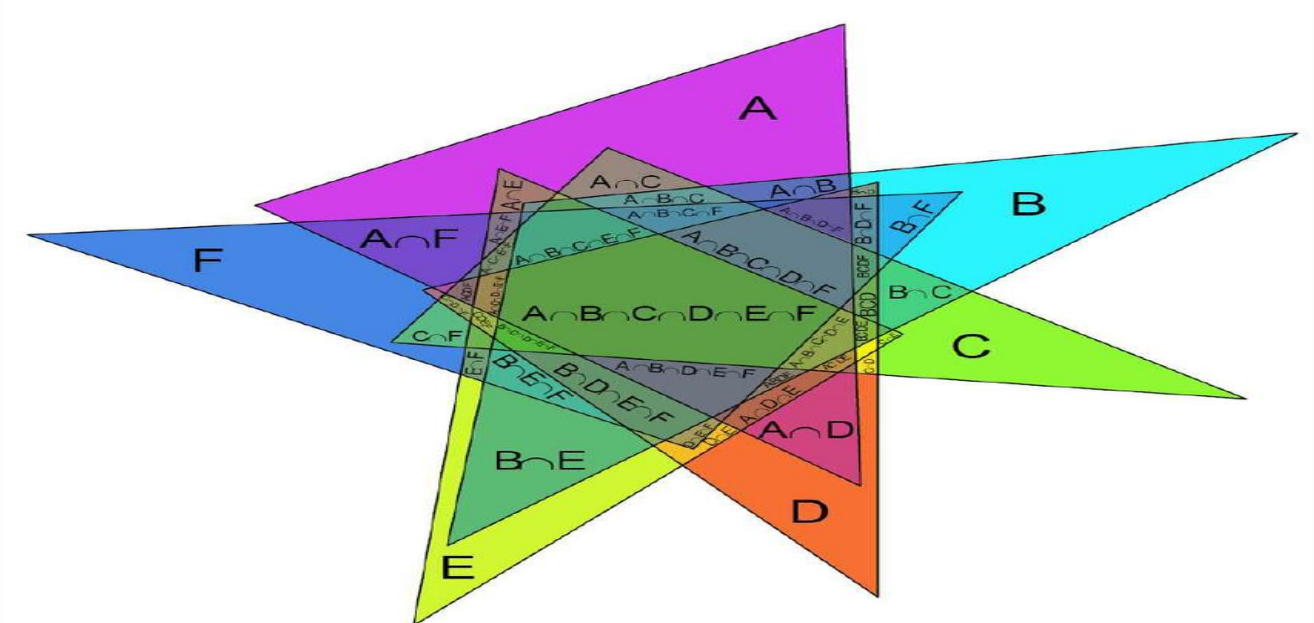


- Formed by Universal Set "U"
- Testing if a categorical argument is a logical

## Resources

- Duignan, Brian. "Venn Diagram." *Encyclopædia Britannica*, Encyclopædia Britannica, Inc., 22 May 2014, [www.britannica.com/topic/Venn-diagram](http://www.britannica.com/topic/Venn-diagram).
- "Find and Share Research." ResearchGate, [www.researchgate.net/](http://www.researchgate.net/).
- "John Venn." *Biography.com*, A&E Networks Television, 15 May 2019, [www.biography.com/scientist/john-venn](http://www.biography.com/scientist/john-venn).
- Carroll, Jeremy. December 2005. Research Gate. Document. 8th February 2020.
- Tietz, Tabea. "SciHI Blog." 4 August 2015. *John Venn and the Venn Diagram*. Document. 7 February 2020

## Triangular Venn Diagram



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