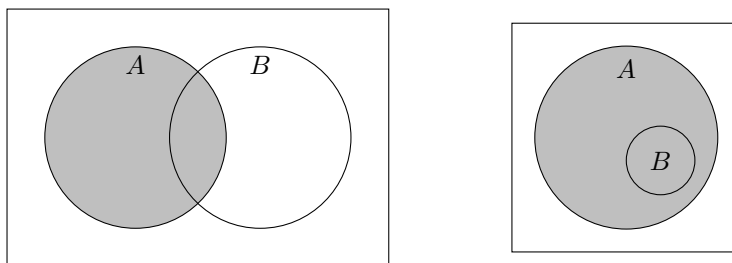


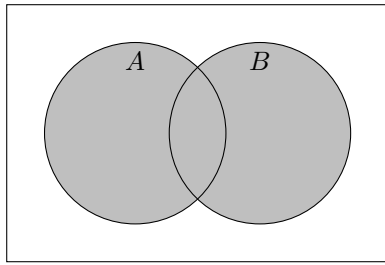
Venn diagrams

Peter Rowlett

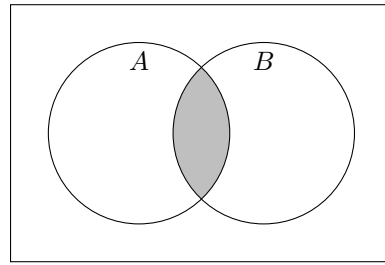
A *Venn diagram* is used to show the relationship between sets, which are represented by closed curves, often circles or ellipses. A zone occupied by one or more sets may be empty on a Venn diagram. Often in popular culture we see representations called Venn diagrams which only include the relevant relationships, but these are in fact Euler diagrams, a different but similar concept. For example, Venn and Euler diagrams for $B \subset A$ are shown below. The area $B - A$ is shown in the Venn diagram even though it is empty.



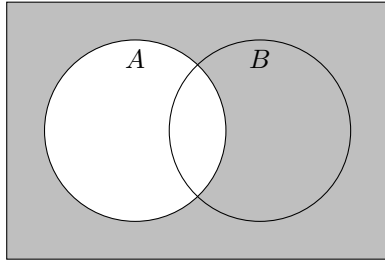
Some examples of Venn diagrams are shown below.



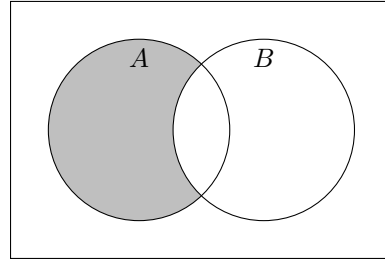
$$A \cup B$$



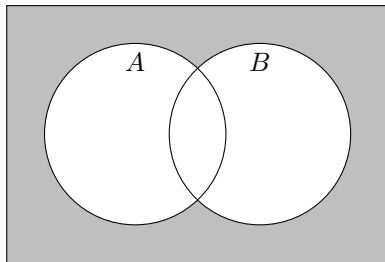
$$A \cap B$$



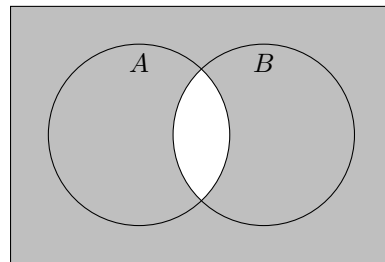
$$A'$$



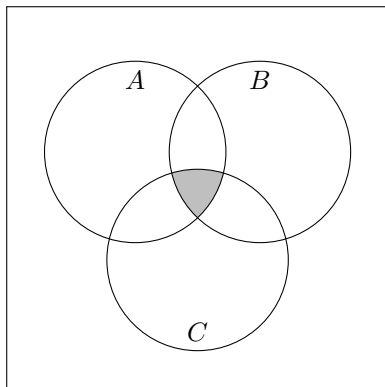
$$A - B$$



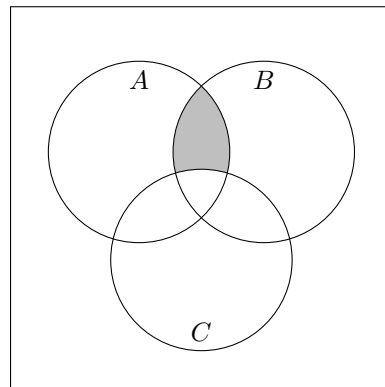
$$(A \cup B)' = A' \cap B'$$



$$(A \cap B)' = A' \cup B'$$



$$A \cap B \cap C$$



$$(A \cap B) - C$$