

Ω

A

B

$A \cap B$



A Venn diagram illustrating the relationship between two sets, A and B , within a universal set Ω . The universal set Ω is represented by the entire area of the diagram. Two overlapping ellipses represent sets A and B . The intersection of A and B , denoted as $A \cap B$, is shaded in light gray. The labels A and B are placed above their respective ellipses, and the label Ω is placed in the top right corner. The intersection label $A \cap B$ is centered within the shaded region.