

A

Ω

B

$A \cap B$



A Venn diagram illustrating the intersection of two sets, A and B, within a universal set Ω . The universal set Ω is represented by the entire area within the frame. Set A is depicted by a dotted ellipse on the left, and Set B is depicted by a solid ellipse on the right. The intersection of A and B, labeled $A \cap B$, is the shaded gray region where the two ellipses overlap. The label A is positioned to the left of the dotted ellipse, B is to the right of the solid ellipse, and Ω is in the top right corner.