

A Venn diagram illustrating set theory. A large light gray oval represents a set  $E$ . A black curve, representing a partition, divides the interior of  $E$  into two regions. The left region is labeled  $E \cap A_1$  and the right region is labeled  $E \cap A_2$ . The label  $E$  is placed in the upper right portion of the oval. Outside the oval, the label  $A_1$  is on the left and  $A_2$  is on the right. The entire diagram is enclosed in a black rectangular border.

$A_1$

$E \cap A_1$

$E \cap A_2$

$E$

$A_2$