

A Venn diagram illustrating the relationship between a set  $E$  and two other sets,  $A_1$  and  $A_2$ . The diagram is enclosed in a rectangular frame. A large, light-gray oval represents the set  $E$ . A vertical, wavy black line divides this oval into two parts. The left part is labeled  $E \cap A_1$  and the right part is labeled  $E \cap A_2$ . The label  $A_1$  is placed to the left of the oval, and the label  $A_2$  is placed to the right of the oval. The label  $E$  is placed at the top right of the oval.

$A_1$

$E \cap A_1$

$E \cap A_2$

$E$

$A_2$