

## **Venn Diagrams for Set Relationships**

A two set Venn Diagram



A three set Venn Diagram

The region coverage of a Venn Diagram.

The cardinality of a set and the notation of cardinality of a set.

Application Example (two set Venn Diagrams)

During an hour at Domino's Pizza, the following orders came in for delivery:

9 pepperoni pizza orders

12 mushroom pizza orders

2 both pepperoni and mushroom orders

Answer the following questions about the orders:

--How many orders wanted just one topping?

--How many orders did not want mushrooms on their pizza?

--How many orders did not want pepperoni or mushrooms on their pizza?

--How many did not want pepperoni on their pizza?

Application Example (three set Venn Diagram).

500 people were surveyed about how they followed the news. The results followed:

120 via TV

70 via radio

130 via online

40 both TV and radio

30 both radio and online

70 via TV and online

10 all three mediums

Answer the following questions:

--How many used just one medium?

--How many did not use radio?

--How many used radio or TV?

--How many used another method to follow the news (i.e. local newspaper)?