Sets & Venn Diagrams

A **set** is a collection or group of elements.

The **universal set** is symbolised by  and is the set of all possibilities.

The **null** or **empty set** is a set containing **no** elements and is symbolised by ∅.

A **Venn diagram** is a pictorial representation of a set or group of sets.

Eg

All elements that belong to **both** A **and** B make up the **intersection**: 

Eg

All elements that belong to **either** events A **or** B make up the **Union**: 

Eg

Events that have **no** elements in **common** are said to be **mutually exclusive**. I.e. they **don’t** intersect. ( = ∅)

Eg

The **complement** of A symbolised by **** or **not A** includes all the elements **not** contained within A

Eg

 = number of elements in set A

Eg

 = number of elements in A but **not** in any other set.

Eg

 = number of elements **not** in either set.

Eg

**Three Sets**

$A∩C$.



$$B only$$

 

$$A∩B∩C$$

 

$$\left(A∩B\right) only$$

 

