Unit 1 Set Theory — Introduction

Learning objectives

This unit aims to give participants an understanding of

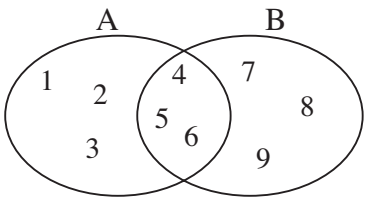
- the concept of sets in mathematics
- the use of Venn diagrams to illustrate 2 or more sets
- the intersection and union of sets.

Facts to remember

Venn diagrams are used to illustrate sets: for example, if

A is the set of elements (in this case, numbers) {1, 2, 3, 4, 5, 6}; that is, A = {1, 2, 3, 4, 5, 6} and B is the set of elements {4,5, 6, 7, 8, 9}; that is, B = {4, 5, 6, 7, 8, 9}

then the elements can be illustrated as in the Venn diagram below.



The ***intersection*** of two sets, A and B, consists of elements that are members of both sets. The intersectionfor the example above is given by the set {4, 5, 6}

The ***union*** of two sets, A and B, consists of elements that are members of both the sets. The union is for the example above is given by the set {1, 2, 3, 4, 5, 6, 7, 8, 9}