

Engineering Mathematics

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Chapter 1

Basic mathematical Concepts

1.1 Sets

Definition 1 *A set is a well defined collection or group of objects.*

Chapter 2

Cartesian Products and Relations

For two sets A and B , the Cartesian Product of A and B is

$$A \times B = \{(a, b); a \in A, b \in B\}$$

We say that the elements of $A \times B$ are ordered pairs

Definition 2 : For sets A, B , any subset of $A \times B$ is called a binary relation from A to B . Any subset of $A \times A$ is called a **binary relation** on A .