



A03 Sets

Set ADT
A Set interface

The Set ADT

The **set** ADT corresponds to a mathematical set. A set has these fundamental properties:

- duplicates are not allowed
- order is not preserved

A **set** may support operations such as these:

- *create*: construct an empty set
- *add*: add an element to the set
- *contains*: does the set contain a given element
- *remove*: remove an element from the set

Our Set Interface

We will explore sets using a simple interface:

```
public interface Set<T> {  
    boolean add(T value);  
    boolean contains(T value);  
    int size();  
    boolean remove(T value);  
}
```