

Abstract Data Types: Sets

A3

The 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);  
}
```