

library librarySet

from Basic/Numbers **get** *Int*

```
spec Set0[sort Elem] =  
  generated type Set[Elem] ::= setVide | ajouter(Set[Elem]; Elem)  
  pred appartient : Elem * Set[Elem]  
  forall x, y : Elem; M, N : Set[Elem]  
    . not appartient(x, setVide)  
    . appartient(x, ajouter(M, y)) <=> x = y  $\vee$  appartient(x, M)  
    . M = N  
      <=> forall x : Elem  
        . appartient(x, M) <=> appartient(x, N)  
end
```

```
spec Set[sort Elem] =  
  Set0[sort Elem]  
then preds estVide : Set[Elem];  
  inclut : Set[Elem] * Set[Elem]  
  op   enlever : Set[Elem] * Elem -> Set[Elem]  
  forall x, y : Elem; M, N : Set[Elem]  
    . estVide(M) <=> M = setVide  
    . inclut(M, N)  
      <=> forall x : Elem . appartient(x, M) => appartient(x, N)  
    . enlever(setVide, y) = setVide  
    . enlever(ajouter(M, x), y)  
      = enlever(M, y) when x = y else ajouter(enlever(M, y), x)  
end
```