

```
species Setoid =
  inherit Basic_object;
  signature element : Self;
  signature equal : Self -> Self -> bool;
  property equal_reflexive : all x : Self, equal(x,x);
  property equal_symmetric : all x y : Self, equal(x,y) -> equal(y,x);
  property equal_transitive : all x y z : Self, equal(x,y) -> equal(y,z) -> equal(x,z);}
  let different (x, y) = not (equal(x,y));
  theorem same_is_not_different : all x y : Self, different(x,y) <-> not (equal(x,y))
  proof = by definition of different;
end;;
```