

lib/main/ring_unittest.ath

```

1 load "ring.ath"
2
3 #####
4
5 module Test-Ring {
6 open Ring
7
8 define Ring1 := no-renaming
9
10 assert (theory-axioms Ring.theory)
11
12 (!prove-property Group.left-inverse Ring1 Ring.theory)
13
14 (!prove-property Group.neg-plus no-renaming Group.theory)
15
16 (!prove-property Abelian-Group.neg-plus no-renaming Abelian-Group.theory)
17
18 } # Test-Ring
19
20 #####
21
22 module Test-Commutative-Ring {
23
24 open Commutative-Ring
25
26 declare Times1: (T) [T T] -> T
27
28 declare Plus1: (T) [T T] -> T
29
30 declare Zerol: (T) [] -> T
31
32 declare Negatel: (T) [T] -> T
33
34 define Ring2 := (renaming |{Ring.* := Times1, Group.+ := Plus1,
35                               Group.<0> := Zerol, Group.U- := Negatel}|)
36
37 assert (Ring2 (theory-axioms Commutative-Ring.theory))
38
39 (!prove-property Group.left-inverse Ring2 Commutative-Ring.theory)
40
41 } # Test-Commutative-Ring
42
43 (!prove-property Group.left-inverse no-renaming Commutative-Ring.theory)
44
45 (!prove-property Group.left-inverse no-renaming Commutative-Ring.theory)
46
47 (!prove-property Abelian-Group.neg-plus no-renaming Commutative-Ring.theory)

```