

Since the laws are the same for every state-based CRDT, I can reuse my tests

```
spec =  
  describe "State-based CRDTs" do  
    stateBasedCRDTLaws "GSet of integers" (Proxy :: Proxy (GSet Int))  
    stateBasedCRDTLaws "GSet of strings" (Proxy :: Proxy (GSet String))  
    stateBasedCRDTLaws "GCounter" (Proxy :: Proxy GCounter)  
    stateBasedCRDTLaws "2PSet of integers" (Proxy :: Proxy (TwoPhaseSet Int))  
    stateBasedCRDTLaws "2PSet of strings" (Proxy :: Proxy (TwoPhaseSet String))  
    -- and so on
```

```
> spago test
```

GSet - Grow-only set » Int laws

- ✓ should be associative
- ✓ should be commutative
- ✓ should be idempotent
- ✓ should have a neutral element

GSet - Grow-only set » String laws

- ✓ should be associative
- ✓ should be commutative
- ✓ should be idempotent
- ✓ should have a neutral element

2PSet - Two-phase Set » Int laws

- ✓ should be associative
- ✓ should be commutative
- ✓ should be idempotent
- ✓ should have a neutral element

2PSet - Two-phase Set » String laws

- ✓ should be associative
- ✓ should be commutative
- ✓ should be idempotent
- ✓ should have a neutral element

GCounter - Grow-only counter » laws

- ✓ should be associative
- ✓ should be commutative
- ✓ should be idempotent
- ✓ should have a neutral element

OPCounter - Operation-based counter » laws

- ✓ should be commutative
- ✓ should have complementary generateOperations / applyOperation functions

A single test run generates hundreds of test cases, giving us a reasonable level of confidence that our implementation is correct

Operation-based CRDTs can be tested the same way

