

Intermediate Scala

Practical Exercises

Chapter 6: Functional Design Patterns

1. Set union is a Monoid. Is set intersection a Monoid? If not, why not?.

2. Consider the method

```
def sum(List[Int])
```

defined to work using one of the fold... methods. Modify the method so that it can add together instances of the **Option[Int]**.

Now change the code so that you can add together instances of the **Trade** class, shown in the slides, from a **List** containing all the buy or sell orders for a specific **Stock** symbol.

3. Use your ADT for the Binary Tree from the earlier exercise. Define a map method for the type, which will operate on all the leaf nodes.

Define an instance of the Functor typeclass for the tree and verify the operation of your map method.