

Exercise 130 | Base case:  $Iv Z = vZ$

Step case: ?  $Iv(\neg A) = \neg Iv A$   $Iv(A \vee B) = Iv A \vee Iv B$   
 ?  $Iv(A \wedge B) = Iv A \wedge Iv B$   $Iv(A \rightarrow B) = Iv A \rightarrow Iv B$

Exercise 133 | a) Base step:  $m + 0 = m$  Because

The base step for recursive definition on addition for complex numbers has the 0 addition, it can be regarded as successor of m and thus, the unit for it.

b)  $m + 1 = Sm = 1 + m$  Where 1 is a shortcut for  $S0$ .

We define Successor of m as  $1 + m$  itself. Now we need to show the associativity of the addition. ???

c) ??

Exercise 136 | a) Base step:  $dl(0) = 0$

Step case:  $dl(m) = S(dm-1)$

c).  $dl = S0 \cdot n \neq S n \cdot S0$

~~Step case:  $S0 \cdot (n+1) = S0 \cdot 1 + S0 \cdot n$~~

Step case:  $S(n+1) \cdot S0 ?$