

```
data Order :  $\mathbb{N} \rightarrow \mathbb{N} \rightarrow \text{Set}$  where  
  leq :  $\forall \{m\ n : \mathbb{N}\} \rightarrow m \leq n \rightarrow \text{Order } m\ n$   
  geq :  $\forall \{m\ n : \mathbb{N}\} \rightarrow n \leq m \rightarrow \text{Order } m\ n$ 
```

```
 $\leq$ -compare :  $\forall \{m\ n : \mathbb{N}\} \rightarrow \text{Order } m\ n$   
 $\leq$ -compare {zero} {n} = leq z≤n  
 $\leq$ -compare {suc m} {zero} = geq z≤n  
 $\leq$ -compare {suc m} {suc n} with  $\leq$ -compare {m} {n}
```