

**int\_ring**<sup>13,42</sup>

$\mathbb{Z}\text{-rng}$   
 $\equiv_{\text{def}} < \mathbb{Z}$   
  ,  $\lambda u,v. (u =_0 v)$   
  ,  $\lambda u,v. u \leq_z v$   
  ,  $\lambda u,v. u+v$   
  , 0  
  ,  $\lambda u. \neg u$   
  ,  $\lambda u,v. u * v$   
  , 1  
  ,  $\lambda u,v. \text{if } (v =_0 0) \text{ then } \text{inr} \cdot \text{else } \text{inl } (u \div v) \text{ fi} >$