

# LAMBDA

MODULE LAMBDA

SYNTAX     $Val ::= Id$   
          |  $\lambda Id.Exp$  [binder]

SYNTAX     $Exp ::= Val$   
          |  $Exp\ Exp$  [strict]  
          |  $(Exp)$  [bracket]

SYNTAX     $Variable ::= Id$

SYNTAX     $KResult ::= Val$

RULE    
$$\frac{(\lambda X:Id.E:Exp)\ V:Val}{E[V\ /\ X]}$$

SYNTAX     $Val ::= Int$   
          |  $Bool$

SYNTAX     $Exp ::= Exp * Exp$  [strict]  
          |  $Exp / Exp$  [strict]  
          |  $Exp + Exp$  [strict]  
          |  $Exp <= Exp$  [strict]

RULE    
$$\frac{I1:Int * I2:Int}{I1 *_{Int} I2}$$

RULE    
$$\frac{I1:Int / I2:Int}{I1 \div_{Int} I2}$$

RULE    
$$\frac{I1:Int + I2:Int}{I1 +_{Int} I2}$$

RULE    
$$\frac{I1:Int <= I2:Int}{I1 \leq_{Int} I2}$$

END MODULE