

Phase 11 c Function Type Arrows

*Total
function*
 $X \rightarrow Y$

*Partial
function*
 $N \nrightarrow N$

*Total
injection*
 $A \rightarrowtail B$

*Partial
injection*
 $X \rightarrowtail Y$

*Total
surjection*
 $A \twoheadrightarrow B$

*Partial
surjection*
 $X \twoheadrightarrow Y$

Bijection
 $A \rightleftarrows B$

*Higher
order
function
type*
 $N \rightarrow N \rightarrow N$

*Right
associative*

*function
types*
 $A \rightarrow (B \rightarrow C)$
 $X \rightarrow (Y \rightarrow Z)$

| $\text{square} : N \rightarrow N \text{pdiv} : N \nrightarrow N \text{bmap} : A \rightsquigarrow B$