Phase 10 a : Relation Operators

Example 1 : Relation Type

$R \leftrightarrow S$

Example 2 : Maplet Constructor

$x \mapsto y$
$1 \mapsto 2$

Example 3 : Domain Restriction

$S \lhd R$

Example 4 : Range Restriction

$R \rhd T$

Example 5 : Relational Composition

$R \mathbin{;} S$
$R \mathbin{;} S$

Example 6 : Relation Functions

$\operatorname{dom} R$
$\operatorname{ran} R$

Example 7 : Complex Expressions

$\operatorname{dom}(S \lhd R)$
$\operatorname{ran}(R \rhd T)$
$A \lhd R \mathbin{;} R \rhd B$

Example 8 : Chained Relations

$R \mathbin{;} S \mathbin{;} T$
$A \lhd R \rhd B$

Example 9 : Relations with Set Operations

$(x \mapsto y) \in R$
$\operatorname{dom} R \subseteq S$
$\operatorname{ran} R \cup \operatorname{ran} S$