

Algebraic vs. Model-based Specification

MODEL-BASED (Z)	ALGEBRAIC
Basic types	Sorts
State space: variables/ arguments/ results	Immutable objects -- variables must be simulated by extra arguments to all functions
Power set, $T \in \mathbb{P}(S)$	function, $P: S \rightarrow \text{Boolean}$ $P(s) = \text{true} \Leftrightarrow s \in T$
Relation, $R \in S \leftrightarrow T$	function, $R: S \times T \rightarrow \text{Boolean}$ $R(s,t) = \text{true} \Leftrightarrow (s,t) \in R$
Function	Function
Partial function	Function on ordered sorts
Pre/post-conditions: predicate logic	Conditional equations