

## Phase 11 . 9 : Generic Type Instantiation

### Example 1 : Basic Generic Instantiation

(a)

$\emptyset[\mathbb{N}]$

(b)

$\text{seq } \mathbb{N}$

(c)

$\mathbb{P} X$

### Example 2 : Complex Type Parameters

(a)

$\emptyset[\mathbb{N} \times \mathbb{N}]$

(b)

$\mathbb{P}(\mathbb{P} X)$

(c)

$\text{seq}(\mathbb{N} \times \mathbb{N})$

### Example 3 : Multiple Type Parameters

(a)

$\text{Type}[A, B]$

(b)

$\text{Container}[X, Y, \mathbb{Z}]$

### Example 4 : Nested Generic Instantiation

(a)

$\text{Type}[\text{List}[\mathbb{N}]]$

(b)

$\text{Container}[\text{seq } \mathbb{N}]$

### Example 5 : Chained Generic Instantiation

(a)

$\text{Type}[\mathbb{N}][M]$

## Example 6 : Generic Types elem Expressions

(a)

$$x \in \textit{Type}[\mathbb{N}]$$

(b)

$$A \subseteq \mathbb{P} X$$

(c)

$$\emptyset[\mathbb{N}] \cup \{x\}$$

## Example 7 : Generic Types elem Set Comprehensions

(a)

$$\{ s : \mathbb{P} \mathbb{N} \mid s = \emptyset[\mathbb{N}] \}$$

(b)

$$\{ x : \text{seq } \mathbb{N} \mid \#x > 0 \}$$