Sets may be used to represent sequences with no duplicates. Unlike a sequence, a set is not enumerable; but any conceivable representation of a set is. This demands the ability to convert a set into a sequence, for operations where a sequence is more suitable. The following definitions provide support for such an operation.

*take*1 takes an arbitrary element out of a set and returns a pair consisting of the element and the remaining set.

$$[T]$$

$$take1 : \mathbb{P}_1\ T \twoheadrightarrow T \times \mathbb{P}\ T$$

$$\forall\ ts : \mathbb{P}_1\ T \bullet \exists\ t : ts \bullet take1(ts) = (t, ts \setminus \{t\})$$

takeAll iteratively applies *take*1 until the set is empty, and constructs a sequence from the resulting elements.

$$[T]$$

$$takeAll : \mathbb{P}\ T \rightarrow \mathrm{seq}\ T$$

$$\begin{array}{l} \forall\ ts, s : \mathbb{P}\ T \bullet \forall\ t : T \bullet \\ \quad (t, s) = take1(ts) \Rightarrow takeAll(ts) = \langle t \rangle \frown takeAll(s) \end{array}$$