

**Signature 1.** Let  $L$  be a list.  $\text{length}(L)$  is a natural number.

**Axiom 2.**  $\text{length}([]) = 0$ .

**Axiom 3.** Let  $a$  be an object and  $L$  be a list. Then  $\text{length}(a :: L) = \text{length}(L) + 1$ .