Let \( L \) be a list-of-integers state variable (program variable) \( L: [* \text{int}] \). Formalize the specification “sort list \( L \)”.

§ First, I expand the informal specification as follows:

\(\textit{(each integer occurs the same number of times as an item in } L \text{ as it does in } L'\)\
\(\land (L' \text{ is monotonic})\)

Now formally:

\(\forall i: \text{int} \cdot \varphi(\xi j: \square L \cdot L j = i) = \varphi(\xi j: \square L' \cdot L j = i)\)
\(\land (\forall i, j: \square L' \cdot i \leq j \Rightarrow L' i \leq L' j)\)