

function $\text{if}_{\text{bool}} : \text{bool} \times \text{bool} \times \text{bool} \rightarrow \text{bool}$

$\text{if}_{\text{bool}}(\text{true}, b, c) \equiv b$

$\text{if}_{\text{bool}}(\text{false}, b, c) \equiv c$

function $\text{eq} : \text{number} \times \text{number} \rightarrow \text{bool}$

$\text{eq}(\mathcal{O}, \mathcal{O}) \equiv \text{true}$

$\text{eq}(\text{succ}(x), \mathcal{O}) \equiv \text{false}$

$\text{eq}(\mathcal{O}, \text{succ}(y)) \equiv \text{false}$

$\text{eq}(\text{succ}(x), \text{succ}(y)) \equiv \text{eq}(x, y)$

function $\text{member} : \text{number} \times \text{list} \rightarrow \text{bool}$

$\text{member}(x, \text{nil}) \equiv \text{false}$

$\text{member}(x, \text{cons}(y, l)) \equiv \text{if}_{\text{bool}}(\text{eq}(x, y), \text{true}, \text{member}(x, l))$

function $\text{sublist} : \text{list} \times \text{list} \rightarrow \text{bool}$

$\text{sublist}(\text{nil}, k) \equiv \text{true}$

$\text{sublist}(\text{cons}(x, l), k) \equiv \text{if}_{\text{bool}}(\text{member}(x, k), \text{sublist}(l, k), \text{false})$