

$$\forall x, y \in \mathbb{N}$$

$$\text{add}(x, y) := \begin{cases} x & \text{iff } y = 0 \\ \text{Succ}(\text{add}(x, z)) & \text{iff } y = \text{Succ}(z) \end{cases}$$

$$\text{mul}(x, y) := \begin{cases} 0 & \text{iff } x = 0 \vee y = 0 \\ x & \text{iff } y = 1 \\ \text{add}(x, \text{mul}(x, z)) & \text{iff } y = \text{Succ}(z) \end{cases}$$

$$\text{power}(x, y) := \begin{cases} 1 & \text{iff } y = 0 \\ x & \text{iff } y = 1 \\ \text{mul}(x, \text{power}(z)) & \text{iff } y = \text{Succ}(z) \end{cases}$$