Expressiveness

$$Add \quad (0, \qquad n) \quad = \quad n$$
$$Add \quad (Succ(m), \quad n) \quad = \quad Succ(Add(m,n))$$

$$Mult \quad (0, \qquad n) \quad = \quad 0$$
$$Mult \quad (Succ(m), \quad n) \quad = \quad Add(Mult(m,n),n)$$

We can show that $3 + 4 = 7$, as expected

$$
\begin{aligned}
Add(3,4) \quad &\triangleq\quad Add(S(S(S(0))),\ S(S(S(S(0))))) \\
&=\quad S(Add(S(S(0)),\ S(S(S(S(0)))))) \\
&=\quad S(S(Add(S(0),\ S(S(S(S(0))))))) \\
&=\quad S(S(S(Add(0,\ S(S(S(S(0)))))))) \\
&=\quad S(S(S(S(S(S(S(0))))))) \qquad \triangleq\quad 7
\end{aligned}
$$