Ficha 10 22/23

(3.) (Resolução melhor)

$length = \mathbb{I}[zero, succ \cdot \Pi_2]\mathbb{I}$

$\Leftrightarrow length \cdot in_2 = [zero, succ \cdot \Pi_2] \cdot F_2\ length$ {46}

$\Leftrightarrow length = [zero, succ \cdot \Pi_2] \cdot (id + id \times length) \cdot out_2$ {33}

$\Leftrightarrow out_{iN_0} \cdot length = out_{iN_0} \cdot [zero, succ \cdot \Pi_2] \cdot (id + id \times length) \cdot out_2$ {34}

$\Leftrightarrow out_{iN_0} \cdot length = out_{iN_0} \cdot in_{iN_0} \cdot (id + \Pi_2) \cdot (id + id \times length) \cdot out_2$ {1, 22}

$\Leftrightarrow out_{iN_0} \cdot length = (id + (\Pi_2 \cdot (id \times length))) \cdot out_2$ {25, 1}

$\Leftrightarrow out_{iN_0} \cdot length = (id + (length \cdot \Pi_2)) \cdot out_2$ {13}

$\Leftrightarrow out_{iN_0} \cdot length = (id + length) \cdot (id + \Pi_2) \cdot out_2$ {1, 25}

$\Leftrightarrow out_{iN_0} \cdot length = F_{Nat}\ length \cdot (id + \Pi_2) \cdot out_2)$ {2}

$\Leftrightarrow length = [\![(id + \Pi_2) \cdot out_2]\!]$ {55}