

# t12\_waybel\_0 (TM- SWtvWv5yHqcD96mNixhrD9xi2hCDJHvZ6)

October 27, 2020

Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l1\_orders\_2 : \iota \Rightarrow o$  be given. Let  $l1\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v11\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $r1\_orders\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0 : \iota \Rightarrow o. \forall X1. \forall X2. (((\neg v2\_struct\_0 X2) \wedge \\
 & (l1\_orders\_2 X2)) \wedge ((\neg v2\_struct\_0 X1) \wedge (l1\_waybel\_0 X1 X2))) \Rightarrow \\
 & ((r1\_waybel\_0 X2 X1 (ReplSep (toset (\lambda X3 : \iota. m1\_subset\_1 X3 \\
 & (u1\_struct\_0 X1)))) (\lambda X3 : \iota. X0 (k2\_waybel\_0 X2 X1 X3)) (\lambda X3 : \\
 & \iota. k2\_waybel\_0 X2 X1 X3))) \Leftrightarrow (\exists X3. (m1\_subset\_1 X3 (u1\_struct\_0 \\
 & X1)) \wedge (\forall X4. (m1\_subset\_1 X4 (u1\_struct\_0 X1)) \Rightarrow ((r1\_orders\_2 \\
 & X1 X3 X4) \Rightarrow (X0 (k2\_waybel\_0 X2 X1 X4))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2\_struct\_0 X0) \wedge (l1\_orders\_2 X0)) \Rightarrow (\forall X1. \\
 & ((\neg v2\_struct\_0 X1) \wedge (l1\_waybel\_0 X1 X0)) \Rightarrow ((v11\_waybel\_0 X1 X0) \Leftrightarrow \\
 & (\forall X2. (m1\_subset\_1 X2 (u1\_struct\_0 X1)) \Rightarrow (r1\_waybel\_0 X0 \\
 & X1 (ReplSep (toset (\lambda X3 : \iota. m1\_subset\_1 X3 (u1\_struct\_0 X1)))) \\
 & (\lambda X3 : \iota. r1\_orders\_2 X0 (k2\_waybel\_0 X0 X1 X3) (k2\_waybel\_0 \\
 & X0 X1 X2)) (\lambda X3 : \iota. k2\_waybel\_0 X0 X1 X3))))))
 \end{aligned} \tag{2}$$

## Theorem 1

$$\begin{aligned}
 & \forall X0. ((\neg v2\_struct\_0 X0) \wedge (l1\_orders\_2 X0)) \Rightarrow (\forall X1. \\
 & ((\neg v2\_struct\_0 X1) \wedge (l1\_waybel\_0 X1 X0)) \Rightarrow ((v11\_waybel\_0 X1 X0) \Leftrightarrow \\
 & (\forall X2. (m1\_subset\_1 X2 (u1\_struct\_0 X1)) \Rightarrow (\exists X3. (m1\_subset\_1 \\
 & X3 (u1\_struct\_0 X1)) \wedge (\forall X4. (m1\_subset\_1 X4 (u1\_struct\_0 \\
 & X1)) \Rightarrow ((r1\_orders\_2 X1 X3 X4) \Rightarrow (r1\_orders\_2 X0 (k2\_waybel\_0 X0 X1 \\
 & X4) (k2\_waybel\_0 X0 X1 X2)))))))))
 \end{aligned}$$