

## t16\_yellow16

(TMR9MNQaGyWczFyYE9KV6sZqjh99ixFfpmd)

October 27, 2020

Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v3\_orders\_2 : \iota \Rightarrow o$  be given. Let  $v4\_orders\_2 : \iota \Rightarrow o$  be given. Let  $v5\_orders\_2 : \iota \Rightarrow o$  be given. Let  $l1\_orders\_2 : \iota \Rightarrow o$  be given. Let  $r5\_waybel\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $v5\_orders\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r2\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $v23\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v2\_funct\_1 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v3\_orders\_2 X0) \wedge ((v4\_orders\_2 \\
 & X0) \wedge (l1\_orders\_2 X0)))) \Rightarrow (\forall X1.((\neg v2\_struct\_0 X1) \wedge ((v3\_orders\_2 \\
 & X1) \wedge ((v4\_orders\_2 X1) \wedge (l1\_orders\_2 X1)))) \Rightarrow (\forall X2.((v1\_funct\_1 \\
 & X2) \wedge ((v1\_funct\_2 X2 (u1\_struct\_0 X0) (u1\_struct\_0 X1)) \wedge (m1\_subset\_1 \\
 & X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 X0) (u1\_struct\_0 X1)))))) \Rightarrow \\
 & ((v23\_waybel\_0 X2 X0 X1) \Leftrightarrow ((v5\_orders\_3 X2 X0 X1) \wedge (\exists X3.( \\
 & (v1\_funct\_1 X3) \wedge ((v1\_funct\_2 X3 (u1\_struct\_0 X1) (u1\_struct\_0 \\
 & X0)) \wedge ((v5\_orders\_3 X3 X1 X0) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\
 & (u1\_struct\_0 X1) (u1\_struct\_0 X0)))))) \wedge ((r2\_funct\_2 (u1\_struct\_0 \\
 & X1) (u1\_struct\_0 X1) (k1\_partfun1 (u1\_struct\_0 X1) (u1\_struct\_0 \\
 & X0) (u1\_struct\_0 X0) (u1\_struct\_0 X1) X3 X2) (k3\_struct\_0 X1)) \wedge \\
 & (r2\_funct\_2 (u1\_struct\_0 X0) (u1\_struct\_0 X0) (k1\_partfun1 (u1\_struct\_0 \\
 & X0) (u1\_struct\_0 X1) (u1\_struct\_0 X1) (u1\_struct\_0 X0) X2 X3) (k3\_struct\_0 \\
 & X0)))))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.(l1\_orders\_2 X0) \Rightarrow (\forall X1.(l1\_orders\_2 X1) \Rightarrow (( \\
 & r5\_waybel\_1 X0 X1) \Leftrightarrow (\exists X2.((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 \\
 & X2 (u1\_struct\_0 X0) (u1\_struct\_0 X1)) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\
 & (k2\_zfmisc\_1 (u1\_struct\_0 X0) (u1\_struct\_0 X1)))))) \wedge (v23\_waybel\_0 \\
 & X2 X0 X1))))
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. (((\neg v2\_struct\_0 X0) \wedge (l1\_orders\_2 X0)) \wedge \\
& ((\neg v2\_struct\_0 X1) \wedge (l1\_orders\_2 X1))) \Rightarrow (\forall X2. (m1\_subset\_1 \\
& X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 X0) (u1\_struct\_0 X1)))) \Rightarrow \\
& (((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 (u1\_struct\_0 X0) (u1\_struct\_0 \\
& X1)) \wedge (v23\_waybel\_0 X2 X0 X1))) \Rightarrow ((v1\_funct\_1 X2) \wedge ((v2\_funct\_1 \\
& X2) \wedge ((v1\_funct\_2 X2 (u1\_struct\_0 X0) (u1\_struct\_0 X1)) \wedge (v5\_orders\_3 \\
& X2 X0 X1))))))
\end{aligned} \tag{3}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v3\_orders\_2 X0) \wedge ((v4\_orders\_2 \\
& X0) \wedge ((v5\_orders\_2 X0) \wedge (l1\_orders\_2 X0)))))) \Rightarrow (\forall X1. ((\neg \\
& v2\_struct\_0 X1) \wedge ((v3\_orders\_2 X1) \wedge ((v4\_orders\_2 X1) \wedge ((v5\_orders\_2 \\
& X1) \wedge (l1\_orders\_2 X1)))))) \Rightarrow ((r5\_waybel\_1 X0 X1) \Leftrightarrow (\exists X2. ( \\
& (v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 (u1\_struct\_0 X0) (u1\_struct\_0 \\
& X1)) \wedge ((v5\_orders\_3 X2 X0 X1) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\
& (u1\_struct\_0 X0) (u1\_struct\_0 X1)))))) \wedge (\exists X3. ((v1\_funct\_1 \\
& X3) \wedge ((v1\_funct\_2 X3 (u1\_struct\_0 X1) (u1\_struct\_0 X0)) \wedge ((v5\_orders\_3 \\
& X3 X1 X0) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 \\
& X1) (u1\_struct\_0 X0)))))) \wedge ((r2\_funct\_2 (u1\_struct\_0 X1) (u1\_struct\_0 \\
& X1) (k1\_partfun1 (u1\_struct\_0 X1) (u1\_struct\_0 X0) (u1\_struct\_0 \\
& X0) (u1\_struct\_0 X1) X3 X2) (k3\_struct\_0 X1)) \wedge (r2\_funct\_2 (u1\_struct\_0 \\
& X0) (u1\_struct\_0 X0) (k1\_partfun1 (u1\_struct\_0 X0) (u1\_struct\_0 \\
& X1) (u1\_struct\_0 X1) (u1\_struct\_0 X0) X2 X3) (k3\_struct\_0 X0))))))
\end{aligned}$$