

# t22\_yellow16 (TMRebcbXg- BeT3yC2o5xHDGcRuN7xNbbsG7W)

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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  $v1\_lattice3 : \iota \Rightarrow o$  be given. Let  $v2\_lattice3 : \iota \Rightarrow o$  be given. Let  $v3\_lattice3 : \iota \Rightarrow o$  be given. Let  $v3\_waybel\_3 : \iota \Rightarrow o$  be given. Let  $l1\_orders\_2 : \iota \Rightarrow o$  be given. Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $r3\_yellow16 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $g1\_orders\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $u1\_orders\_2 : \iota \Rightarrow \iota$  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  $v6\_waybel\_1 : \iota \Rightarrow \iota \Rightarrow o$  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  $v22\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_yellow\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v24\_waybel\_0 : \iota \Rightarrow o$  be given. Let  $r1\_yellow16 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v11\_quantal1 : \iota \Rightarrow o$  be given. Let  $v1\_orders\_2 : \iota \Rightarrow o$  be given. Let  $v4\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v2\_waybel\_3 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v3\_orders\_2 X0) \wedge ((v5\_orders\_2 \\
 & \quad X0) \wedge ((v3\_waybel\_3 X0) \wedge (l1\_orders\_2 X0)))))) \Rightarrow (\forall X1. ((\neg \\
 & v2\_struct\_0 X1) \wedge ((v3\_orders\_2 X1) \wedge (l1\_orders\_2 X1)))) \Rightarrow ((g1\_orders\_2 \\
 & (u1\_struct\_0 X0) (u1\_orders\_2 X0) = g1\_orders\_2 (u1\_struct\_0 X1) \\
 & \quad (u1\_orders\_2 X1)) \Rightarrow (v3\_waybel\_3 X1))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. ((v3\_orders\_2 X0) \wedge ((v4\_orders\_2 X0) \wedge ((v5\_orders\_2 \\
 & \quad X0) \wedge ((v1\_lattice3 X0) \wedge ((v2\_lattice3 X0) \wedge ((v3\_lattice3 X0) \wedge \\
 & \quad ((v3\_waybel\_3 X0) \wedge (l1\_orders\_2 X0)))))))))) \Rightarrow (\forall X1. ((v1\_funct\_1 \\
 & X1) \wedge ((v1\_funct\_2 X1 (u1\_struct\_0 X0) (u1\_struct\_0 X0)) \wedge ((v6\_waybel\_1 \\
 & \quad X1 X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 \\
 & \quad X0) (u1\_struct\_0 X0)))))) \Rightarrow ((v22\_waybel\_0 X1 X0 X0) \Rightarrow ((v3\_orders\_2 \\
 & \quad (k1\_yellow\_2 X0 X0 X1)) \wedge ((v4\_orders\_2 (k1\_yellow\_2 X0 X0 X1)) \wedge \\
 & \quad ((v5\_orders\_2 (k1\_yellow\_2 X0 X0 X1)) \wedge ((v1\_lattice3 (k1\_yellow\_2 \\
 & \quad X0 X0 X1)) \wedge ((v2\_lattice3 (k1\_yellow\_2 X0 X0 X1)) \wedge ((v3\_waybel\_3 \\
 & \quad (k1\_yellow\_2 X0 X0 X1)) \wedge (l1\_orders\_2 (k1\_yellow\_2 X0 X0 X1))))))))))
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v3\_orders\_2 X0) \wedge ((v4\_orders\_2 \\
& X0) \wedge ((v5\_orders\_2 X0) \wedge ((v24\_waybel\_0 X0) \wedge (l1\_orders\_2 X0)))))) \Rightarrow \\
& (\forall X1.((\neg v2\_struct\_0 X1) \wedge ((v3\_orders\_2 X1) \wedge ((v4\_orders\_2 \\
& X1) \wedge ((v5\_orders\_2 X1) \wedge (l1\_orders\_2 X1)))))) \Rightarrow (\forall X2.((v1\_funct\_1 \\
& X2) \wedge ((v1\_funct\_2 X2 (u1\_struct\_0 X0) (u1\_struct\_0 X0)) \wedge (m1\_subset\_1 \\
& X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 X0) (u1\_struct\_0 X0)))))) \Rightarrow \\
& ((r1\_yellow16 X1 X0 X2) \Rightarrow ((v22\_waybel\_0 X2 X0 X0) \wedge (v6\_waybel\_1 \\
& X2 X0))))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v3\_orders\_2 X0) \wedge ((v4\_orders\_2 \\
& X0) \wedge ((v5\_orders\_2 X0) \wedge (l1\_orders\_2 X0)))))) \Rightarrow (\forall X1.((\neg \\
& v2\_struct\_0 X1) \wedge ((v3\_orders\_2 X1) \wedge ((v4\_orders\_2 X1) \wedge ((v5\_orders\_2 \\
& X1) \wedge (l1\_orders\_2 X1)))))) \Rightarrow (\forall X2.((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 \\
& X2 (u1\_struct\_0 X0) (u1\_struct\_0 X0)) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\
& (k2\_zfmisc\_1 (u1\_struct\_0 X0) (u1\_struct\_0 X0)))))) \Rightarrow ((r1\_yellow16 \\
& X1 X0 X2) \Rightarrow (k1\_yellow\_2 X0 X0 X2 = g1\_orders\_2 (u1\_struct\_0 X1) (u1\_orders\_2 \\
& X1))))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v3\_orders\_2 X0) \wedge ((v4\_orders\_2 \\
& X0) \wedge ((v5\_orders\_2 X0) \wedge (l1\_orders\_2 X0)))))) \Rightarrow (\forall X1.((\neg \\
& v2\_struct\_0 X1) \wedge ((v3\_orders\_2 X1) \wedge ((v4\_orders\_2 X1) \wedge ((v5\_orders\_2 \\
& X1) \wedge (l1\_orders\_2 X1)))))) \Rightarrow (\forall X2.((v1\_relat\_1 X2) \wedge (v1\_funct\_1 \\
& X2)) \Rightarrow ((r1\_yellow16 X0 X1 X2) \Rightarrow ((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 \\
& (u1\_struct\_0 X1) (u1\_struct\_0 X1)) \wedge ((v11\_quantal1 X2) \wedge (m1\_subset\_1 \\
& X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 X1) (u1\_struct\_0 X1))))))))))
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. (((\neg v2\_struct\_0 X0) \wedge (l1\_orders\_2 \\
& X0)) \wedge (((\neg v2\_struct\_0 X1) \wedge (l1\_orders\_2 X1)) \wedge ((v1\_funct\_1 X2) \wedge \\
& ((v1\_funct\_2 X2 (u1\_struct\_0 X0) (u1\_struct\_0 X1)) \wedge (m1\_subset\_1 \\
& X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 X0) (u1\_struct\_0 X1))))))) \Rightarrow \\
& ((\neg v2\_struct\_0 (k1\_yellow\_2 X0 X1 X2)) \wedge ((v1\_orders\_2 (k1\_yellow\_2 \\
& X0 X1 X2)) \wedge (v4\_yellow\_0 (k1\_yellow\_2 X0 X1 X2) X1)))
\end{aligned} \tag{6}$$

Assume the following.

$$\forall X0. (l1\_orders\_2 X0) \Rightarrow (m1\_subset\_1 (u1\_orders\_2 X0) (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 X0) (u1\_struct\_0 X0)))) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X0)))\Rightarrow((v1\_orders\_2 (g1\_orders\_2 X0 X1))\wedge(l1\_orders\_2 (g1\_orders\_2 X0 X1))) \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0)\wedge((v3\_orders\_2 X0)\wedge((v4\_orders\_2 X0)\wedge((v5\_orders\_2 X0)\wedge(l1\_orders\_2 X0))))))\Rightarrow(\forall X1.((\neg v2\_struct\_0 X1)\wedge((v3\_orders\_2 X1)\wedge((v4\_orders\_2 X1)\wedge((v5\_orders\_2 X1)\wedge(l1\_orders\_2 X1))))))\Rightarrow((r3\_yellow16 X0 X1)\Leftrightarrow(\exists X2.(v1\_funct\_1 X2)\wedge((v1\_funct\_2 X2 (u1\_struct\_0 X1) (u1\_struct\_0 X0))\wedge(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 X1) (u1\_struct\_0 X0))))))\wedge(r1\_yellow16 X0 X1 X2)))) \quad (9) \end{aligned}$$

Assume the following.

$$\forall X0.(l1\_orders\_2 X0)\Rightarrow(((\neg v2\_struct\_0 X0)\wedge((v3\_orders\_2 X0)\wedge(v3\_waybel\_3 X0)))\Rightarrow((\neg v2\_struct\_0 X0)\wedge((v3\_orders\_2 X0)\wedge((v24\_waybel\_0 X0)\wedge(v2\_waybel\_3 X0)))))) \quad (10)$$

Assume the following.

$$\forall X0.(l1\_orders\_2 X0)\Rightarrow((v2\_lattice3 X0)\Rightarrow(\neg v2\_struct\_0 X0)) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow(v1\_relat\_1 X2) \quad (12)$$

Assume the following.

$$\forall X0.(l1\_orders\_2 X0)\Rightarrow((v1\_orders\_2 X0)\Rightarrow(X0 = g1\_orders\_2 (u1\_struct\_0 X0) (u1\_orders\_2 X0))) \quad (13)$$

**Theorem 1**

$$\begin{aligned} \forall X0.((v3\_orders\_2 X0)\wedge((v4\_orders\_2 X0)\wedge((v5\_orders\_2 X0)\wedge((v1\_lattice3 X0)\wedge((v2\_lattice3 X0)\wedge((v3\_lattice3 X0)\wedge((v3\_waybel\_3 X0)\wedge(l1\_orders\_2 X0))))))))\Rightarrow(\forall X1.((\neg v2\_struct\_0 X1)\wedge((v3\_orders\_2 X1)\wedge((v4\_orders\_2 X1)\wedge((v5\_orders\_2 X1)\wedge(l1\_orders\_2 X1))))))\Rightarrow((r3\_yellow16 X1 X0)\Rightarrow(v3\_waybel\_3 X1))) \end{aligned}$$