

## t12\_yellow16

(TMMWNjK4h4xquc2JC7gCMZzn4Xex8uNohsx)

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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  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $r1\_yellow16 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  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  $v11\_quantal1 : \iota \Rightarrow o$  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  $k3\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_yellow\_9 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $m1\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow o$  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  $l1\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v22\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v4\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v4\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v3\_orders\_2 X0) \wedge ((v4\_orders\_2 \\ & \quad X0) \wedge ((v5\_orders\_2 X0) \wedge (l1\_orders\_2 X0)))))) \Rightarrow (\forall X1. ((\neg \\ & \quad v2\_struct\_0 X1) \wedge ((v3\_orders\_2 X1) \wedge ((v4\_orders\_2 X1) \wedge ((v5\_orders\_2 \\ & \quad X1) \wedge (l1\_orders\_2 X1)))))) \Rightarrow (\forall X2. ((v1\_relat\_1 X2) \wedge (v1\_funct\_1 \\ & \quad X2)) \Rightarrow ((r1\_yellow16 X0 X1 X2) \Rightarrow (k3\_relat\_1 (k1\_yellow\_9 X1 X0) X2 = \\ & \quad k3\_struct\_0 X0)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge (l1\_orders\_2 X0)) \Rightarrow (\forall X1. \\ & \quad ((\neg v2\_struct\_0 X1) \wedge (m1\_yellow\_0 X1 X0)) \Rightarrow (\forall X2. ((v1\_funct\_1 \\ & \quad X2) \wedge ((v1\_funct\_2 X2 (u1\_struct\_0 X0) (u1\_struct\_0 X1)) \wedge (m1\_subset\_1 \\ & \quad X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 X0) (u1\_struct\_0 X1)))))) \Rightarrow \\ & \quad ((r2\_funct\_2 (u1\_struct\_0 X1) (u1\_struct\_0 X1) (k1\_partfun1 ( \\ & \quad u1\_struct\_0 X1) (u1\_struct\_0 X0) (u1\_struct\_0 X0) (u1\_struct\_0 \\ & \quad X1) (k1\_yellow\_9 X0 X1) X2) (k3\_struct\_0 X1)) \Rightarrow ((v1\_funct\_1 X2) \wedge \\ & \quad ((v1\_funct\_2 X2 (u1\_struct\_0 X0) (u1\_struct\_0 X0)) \wedge ((v11\_quantal1 \\ & \quad X2) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 X0) \\ & \quad (u1\_struct\_0 X0)))))))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.(((v1\_funct\_1 X2)\wedge \\ & ((v1\_funct\_2 X2 X0 X1)\wedge(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & X0 X1)))))\wedge((v1\_funct\_1 X3)\wedge((v1\_funct\_2 X3 X0 X1)\wedge(m1\_subset\_1 \\ & X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))))))\Rightarrow(r2\_funct\_2 X0 X1 X2 X2) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5. \\ & (((v1\_funct\_1 X4)\wedge(m1\_subset\_1 X4 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & X0 X1))))\wedge((v1\_funct\_1 X5)\wedge(m1\_subset\_1 X5 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & X2 X3)))))\Rightarrow(k1\_partfun1 X0 X1 X2 X3 X4 X5 = k3\_relat\_1 X4 X5) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.(l1\_orders\_2 X0)\Rightarrow(l1\_struct\_0 X0) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1\_struct\_0 X0)\Rightarrow((v1\_funct\_1 (k3\_struct\_0 X0))\wedge \\ & ((v1\_funct\_2 (k3\_struct\_0 X0) (u1\_struct\_0 X0) (u1\_struct\_0 X0))\wedge \\ & (m1\_subset\_1 (k3\_struct\_0 X0) (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 \\ & X0) (u1\_struct\_0 X0)))))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((l1\_struct\_0 X0)\wedge(l1\_struct\_0 X1))\Rightarrow( \\ & (v1\_funct\_1 (k1\_yellow\_9 X0 X1))\wedge((v1\_funct\_2 (k1\_yellow\_9 X0 \\ & X1) (u1\_struct\_0 X1) (u1\_struct\_0 X0))\wedge(m1\_subset\_1 (k1\_yellow\_9 \\ & X0 X1) (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 X1) (u1\_struct\_0 \\ & X0)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0)\wedge((v3\_orders\_2 X0)\wedge((v4\_orders\_2 \\ & X0)\wedge((v5\_orders\_2 X0)\wedge(l1\_orders\_2 X0)))))\Rightarrow(\forall X1.((\neg \\ & v2\_struct\_0 X1)\wedge((v3\_orders\_2 X1)\wedge((v4\_orders\_2 X1)\wedge((v5\_orders\_2 \\ & X1)\wedge(l1\_orders\_2 X1))))))\Rightarrow(\forall X2.((v1\_relat\_1 X2)\wedge(v1\_funct\_1 \\ & X2))\Rightarrow((r1\_yellow16 X0 X1 X2)\Leftrightarrow(((v1\_funct\_1 X2)\wedge((v1\_funct\_2 \\ & X2 (u1\_struct\_0 X1) (u1\_struct\_0 X0))\wedge((v22\_waybel\_0 X2 X1 X0)\wedge \\ & (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 X1) (u1\_struct\_0 \\ & X0))))))\wedge((k5\_relat\_1 X2 (u1\_struct\_0 X0) = k3\_struct\_0 X0)\wedge \\ & ((v4\_yellow\_0 X0 X1)\wedge((v4\_waybel\_0 X0 X1)\wedge(m1\_yellow\_0 X0 X1)))))) \end{aligned} \quad (8)$$

**Theorem 1**

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