t13_yellow_3 (TMQcu568vxvvnVCHsfBtd8dJTi88wKzBKRg)

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Let $l1\_orders\_2 : \iota \Rightarrow o$ be given. Let $v2\_struct\_0 : \iota \Rightarrow o$ 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 $k3\_yellow\_3 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k1\_binop\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_orders\_2 : \iota \Rightarrow o$ be given. Let $u1\_orders\_2 : \iota \Rightarrow \iota$ be given. Let $k2\_yellow\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1\_subset\_1\ X0\ X1) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v1\_funct\_1\ X3) \wedge ((v1\_funct\_2\ X3\ (k2\_zfmisc\_1\ X0\ X1)\ X2) \wedge (m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)\ X2))))) \Rightarrow (\forall X4.((v1\_funct\_1\ X4) \wedge ((v1\_funct\_2\ X4\ (k2\_zfmisc\_1\ X0\ X1)\ X2) \wedge (m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)\ X2))))) \Rightarrow ((\forall X5.\forall X6.((X5 \in X0) \wedge (X6 \in X1)) \Rightarrow (k1\_binop\_1\ X3\ X5\ X6 = k1\_binop\_1\ X4\ X5\ X6)) \Rightarrow (r2\_funct\_2\ (k2\_zfmisc\_1\ X0\ X1)\ X2\ X3\ X4))) \tag{2}$$

Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.((l1\_orders\_2\ X0) \wedge (l1\_orders\_2\ X1)) \Rightarrow ((v1\_orders\_2\ (k3\_yellow\_3\ X0\ X1)) \wedge (l1\_orders\_2\ (k3\_yellow\_3\ X0\ X1))) \tag{4}$$

Assume the following.

$$\forall X0.(l1\_orders\_2\ X0)\Rightarrow(\forall X1.(l1\_orders\_2\ X1)\Rightarrow(\forall X2.((v1\_orders\_2\ X2)\wedge(l1\_orders\_2\ X2))\Rightarrow((X2 = k3\_yellow\_3\ X0\ X1)\Leftrightarrow((u1\_struct\_0\ X2 = k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1))\wedge(u1\_orders\_2\ X2 = k2\_yellow\_3\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1)\ (u1\_struct\_0\ X1)\ (u1\_orders\_2\ X0)\ (u1\_orders\_2\ X1)))))) \tag{5}$$

Theorem 1

$$\forall X0.(l1\_orders\_2\ X0)\Rightarrow(\forall X1.(l1\_orders\_2\ X1)\Rightarrow(\forall X2.((\neg v2\_struct\_0\ X2)\wedge(l1\_orders\_2\ X2))\Rightarrow(\forall X3.((v1\_funct\_1\ X3)\wedge((v1\_funct\_2\ X3\ (u1\_struct\_0\ (k3\_yellow\_3\ X0\ X1))\ (u1\_struct\_0\ X2))\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ (k3\_yellow\_3\ X0\ X1))\ (u1\_struct\_0\ X2))))))\Rightarrow(\forall X4.((v1\_funct\_1\ X4)\wedge((v1\_funct\_2\ X4\ (u1\_struct\_0\ (k3\_yellow\_3\ X0\ X1))\ (u1\_struct\_0\ X2))\wedge(m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ (k3\_yellow\_3\ X0\ X1))\ (u1\_struct\_0\ X2))))))\Rightarrow((\forall X5.(m1\_subset\_1\ X5\ (u1\_struct\_0\ X0))\Rightarrow(\forall X6.(m1\_subset\_1\ X6\ (u1\_struct\_0\ X1))\Rightarrow(k1\_binop\_1\ X3\ X5\ X6 = k1\_binop\_1\ X4\ X5\ X6)))\Rightarrow(r2\_funct\_2\ (u1\_struct\_0\ (k3\_yellow\_3\ X0\ X1))\ (u1\_struct\_0\ X2)\ X3\ X4))))))$$