t30_orders_2 (TMaiK58y4hq87JmseSy82AbHboG7j2Whb5w)

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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 $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k1\_xboole\_0 : \iota$ be given. Let $m1\_orders\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3\_orders\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v3\_orders\_2\ X0) \wedge ((v4\_orders\_2\ X0) \wedge ((v5\_orders\_2\ X0) \wedge (l1\_orders\_2\ X0))))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))) \Rightarrow (\neg X1 \in k3\_orders\_2\ X0\ X2\ X1))) \tag{1}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v3\_orders\_2\ X0) \wedge ((v4\_orders\_2\ X0) \wedge ((v5\_orders\_2\ X0) \wedge (l1\_orders\_2\ X0))))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))) \Rightarrow (((X1 \neq k1\_xboole\_0) \Rightarrow ((m1\_orders\_2\ X2\ X0\ X1) \Leftrightarrow (\exists X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0)) \wedge ((X3 \in X1) \wedge (X2 = k3\_orders\_2\ X0\ X1\ X3))))) \wedge ((X1 = k1\_xboole\_0) \Rightarrow ((m1\_orders\_2\ X2\ X0\ X1) \Leftrightarrow (X2 = k1\_xboole\_0))))) \tag{2}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v3\_orders\_2\ X0) \wedge ((v4\_orders\_2\ X0) \wedge ((v5\_orders\_2\ X0) \wedge (l1\_orders\_2\ X0))))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))) \Rightarrow ((\neg(X1 \neq k1\_xboole\_0) \wedge (m1\_orders\_2\ X1\ X0\ X1)) \wedge (\neg(\neg m1\_orders\_2\ X1\ X0\ X1) \wedge (X1 = k1\_xboole\_0))))$$