

# t4\_orders\_4 (TMUyQGJTGur- bgibg1YpiEQSCaFF4UQWcryg)

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Let  $l1\_orders\_2 : \iota \Rightarrow o$  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  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v23\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l1\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v2\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v5\_orders\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_funct\_1 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. \neg(v1\_xboole\_0 X0) \wedge ((X0 \neq X1) \wedge (v1\_xboole\_0 X1)) \quad (1)$$

Assume the following.

$$\forall X0. ((\neg v2\_struct\_0 X0) \wedge (l1\_struct\_0 X0)) \Rightarrow (\neg v1\_xboole\_0 (u1\_struct\_0 X0)) \quad (2)$$

Assume the following.

$$v1\_xboole\_0 k1\_xboole\_0 \quad (3)$$

Assume the following.

$$\forall X0. ((v2\_struct\_0 X0) \wedge (l1\_struct\_0 X0)) \Rightarrow (v1\_xboole\_0 (u1\_struct\_0 X0)) \quad (4)$$

Assume the following.

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

Assume the following.

$$\begin{aligned}
& \forall X0.(l1\_orders\_2 X0) \Rightarrow (\forall X1.(l1\_orders\_2 X1) \Rightarrow (\forall X2. \\
& ((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 (u1\_struct\_0 X0) (u1\_struct\_0 \\
& X1)) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 \\
& X0) (u1\_struct\_0 X1)))))) \Rightarrow ((\neg(\neg v2\_struct\_0 X0) \wedge (\neg v2\_struct\_0 \\
& X1) \wedge (\neg(v23\_waybel\_0 X2 X0 X1) \Leftrightarrow ((v2\_funct\_1 X2) \wedge ((v5\_orders\_3 \\
& X2 X0 X1) \wedge (\exists X3.((v1\_funct\_1 X3) \wedge ((v1\_funct\_2 X3 (u1\_struct\_0 \\
& X1) (u1\_struct\_0 X0)) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\
& (u1\_struct\_0 X1) (u1\_struct\_0 X0)))))) \wedge ((X3 = k2\_funct\_1 X2) \wedge \\
& (v5\_orders\_3 X3 X1 X0)))))) \wedge (\neg(\neg v2\_struct\_0 X0) \wedge (\neg v2\_struct\_0 \\
& X1)) \Rightarrow ((v23\_waybel\_0 X2 X0 X1) \Leftrightarrow ((v2\_struct\_0 X0) \wedge (v2\_struct\_0 \\
& X1))))))
\end{aligned} \tag{6}$$

**Theorem 1**

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