

## l57\_orders\_2

(TMF1Xy9Tpk4ppqh9wJ5ZJ3jqjLpKpu7MZwA)

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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  $m1\_orders\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_orders\_1 : \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_tarski : \iota \Rightarrow \iota$  be given. Let  $k4\_orders\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m2\_orders\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v6\_orders\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. (\forall X2. (X2 \in X0) \Rightarrow (r1\_tarski X2 X1)) \Rightarrow (r1\_tarski (k3\_tarski X0) X1) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X0 (k1\_zfmisc\_1 X1)) \Leftrightarrow (r1\_tarski X0 X1) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2\_struct\_0 X0) \wedge (v3\_orders\_2 X0) \wedge \\ & ((v4\_orders\_2 X0) \wedge ((v5\_orders\_2 X0) \wedge (l1\_orders\_2 X0)))) \wedge \\ & (m1\_orders\_1 X1 (k1\_orders\_1 (u1\_struct\_0 X0)))) \Rightarrow (\forall X2. \\ & (m2\_orders\_2 X2 X0 X1) \Rightarrow ((v6\_orders\_2 X2 X0) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & (u1\_struct\_0 X0)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v3\_orders\_2 X0) \wedge ((v4\_orders\_2 \\ & X0) \wedge ((v5\_orders\_2 X0) \wedge (l1\_orders\_2 X0)))) \Rightarrow (\forall X1. (m1\_orders\_1 \\ & X1 (k1\_orders\_1 (u1\_struct\_0 X0))) \Rightarrow (\forall X2. (X2 = k4\_orders\_2 \\ & X0 X1) \Leftrightarrow (\forall X3. (X3 \in X2) \Leftrightarrow (m2\_orders\_2 X3 X0 X1)))))) \end{aligned} \quad (4)$$

### Theorem 1

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v3\_orders\_2 X0) \wedge ((v4\_orders\_2 \\ & X0) \wedge ((v5\_orders\_2 X0) \wedge (l1\_orders\_2 X0)))) \Rightarrow (\forall X1. (m1\_orders\_1 \\ & X1 (k1\_orders\_1 (u1\_struct\_0 X0))) \Rightarrow (m1\_subset\_1 (k3\_tarski ( \\ & k4\_orders\_2 X0 X1)) (k1\_zfmisc\_1 (u1\_struct\_0 X0)))))) \end{aligned}$$