

l18_orders_3

(TMcN9Uc9prSu9YXVSrcwkzqUPPUriZQbufJ)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v4_orders_3 : \iota \Rightarrow o$ be given. Let $m1_orders_3 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k2_orders_3 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. 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 $l1_struct_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (1)$$

Assume the following.

$$\forall X0. ((\neg v1_xboole_0 X0) \wedge (v4_orders_3 X0)) \Rightarrow (\forall X1. (m1_orders_3 X1 X0) \Leftrightarrow (m1_subset_1 X1 X0)) \quad (2)$$

Assume the following.

$$\forall X0. ((\neg v1_xboole_0 X0) \wedge (v4_orders_3 X0)) \Rightarrow (\forall X1. (m1_orders_3 X1 X0) \Rightarrow ((\neg v2_struct_0 X1) \wedge ((v3_orders_2 X1) \wedge ((v4_orders_2 X1) \wedge ((v5_orders_2 X1) \wedge (l1_orders_2 X1)))))) \quad (3)$$

Assume the following.

$$\forall X0. (l1_orders_2 X0) \Rightarrow (l1_struct_0 X0) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (X1 = k2_orders_3 X0) \Leftrightarrow (\forall X2. (X2 \in X1) \Leftrightarrow (\exists X3. (l1_struct_0 X3) \wedge ((X3 \in X0) \wedge (X2 = u1_struct_0 X3)))) \quad (5)$$

Theorem 1

$$\forall X0. ((\neg v1_xboole_0 X0) \wedge (v4_orders_3 X0)) \Rightarrow (\forall X1. (m1_orders_3 X1 X0) \Rightarrow (u1_struct_0 X1 \in k2_orders_3 X0))$$