

t1_orders_4
(TMWDiugaC8579pfVFfyX1k3oYRwRGJrei52)

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Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_yellow_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_yellow_1 : \iota \Rightarrow \iota$ be given. Let $m1_yellow_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_wellord1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_wellord2 : \iota \Rightarrow \iota$ be given. Let $r1_ordinal1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $u1_orders_2 : \iota \Rightarrow \iota$ be given. Let $k1_yellow_1 : \iota \Rightarrow \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $k1_toler_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_orders_2 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_card_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. (r1_tarski X0 X1) \Rightarrow (k2_wellord1 (k1_wellord2 X1) X0 = k1_wellord2 X0) \quad (1)$$

Assume the following.

$$\forall X0. (v7_ordinal1 X0) \Rightarrow (\forall X1. (v7_ordinal1 X1) \Rightarrow ((r1_xxreal_0 X0 X1) \Leftrightarrow (r1_ordinal1 X0 X1))) \quad (2)$$

Assume the following.

$$\forall X0. (u1_struct_0 (k2_yellow_1 X0) = X0) \wedge (u1_orders_2 (k2_yellow_1 X0) = k1_yellow_1 X0) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. ((v3_ordinal1 X0) \wedge (v3_ordinal1 X1)) \Rightarrow ((r1_ordinal1 X0 X1) \Leftrightarrow (r1_tarski X0 X1)) \quad (4)$$

Assume the following.

$$\forall X0. k1_yellow_1 X0 = k1_wellord2 X0 \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. (v1_relat_1 X0) \Rightarrow (k1_toler_1 X0 X1 = k2_wellord1 X0 X1) \quad (6)$$

Assume the following.

$$\forall X0.(v1_orders_2 (k2_yellow_1 X0)) \wedge (l1_orders_2 (k2_yellow_1 X0)) \quad (7)$$

Assume the following.

$$\forall X0.v1_relat_1 (k1_wellord2 X0) \quad (8)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.k2_wellord1 X0 X1 = k3_xboole_0 X0 (k2_zfmisc_1 X1 X1)) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k3_xboole_0 X0 X1) \Leftrightarrow (\forall X3.(X3 \in X2) \Leftrightarrow ((X3 \in X0) \wedge (X3 \in X1))) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.(r1_tarski X0 X1) \Leftrightarrow (\forall X2.(X2 \in X0) \Rightarrow (X2 \in X1)) \quad (11)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow (\forall X1.(m1_yellow_0 X1 X0) \Rightarrow ((v4_yellow_0 X1 X0) \Leftrightarrow (u1_orders_2 X1 = k1_toler_1 (u1_orders_2 X0) (u1_struct_0 X1)))) \quad (12)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow (\forall X1.(l1_orders_2 X1) \Rightarrow ((m1_yellow_0 X1 X0) \Leftrightarrow ((r1_tarski (u1_struct_0 X1) (u1_struct_0 X0)) \wedge (r1_tarski (u1_orders_2 X1) (u1_orders_2 X0)))))) \quad (13)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (v1_card_1 X0) \quad (14)$$

Assume the following.

$$\forall X0.(v1_card_1 X0) \Rightarrow (v3_ordinal1 X0) \quad (15)$$

Theorem 1

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow ((r1_xxreal_0 X0 X1) \Rightarrow ((v4_yellow_0 (k2_yellow_1 X0) (k2_yellow_1 X1)) \wedge (m1_yellow_0 (k2_yellow_1 X0) (k2_yellow_1 X1))))))$$