

t58_orders_1
(TMKpcsD9inX3YDiXJh55fg7T2DQgNGiD6D6)

October 27, 2020

Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $r9_orders_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_relat_1 : \iota \Rightarrow \iota$ be given. Let $v1_relat_2 : \iota \Rightarrow o$ be given. Let $r5_orders_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_orders_1 : \iota \Rightarrow o$ be given. Let $k2_wellord1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow ((v1_relat_2 X0) \Leftrightarrow (\forall X1.(X1 \in k1_relat_1 X0) \Rightarrow (k4_tarski X1 X1 \in X0))) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(r1_tarski X0 X1) \Leftrightarrow (\forall X2.(X2 \in X0) \Rightarrow (X2 \in X1)) \quad (2)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.(r9_orders_1 X0 X1) \Leftrightarrow ((X1 \in k1_relat_1 X0) \wedge (\forall X2.(X2 \in k1_relat_1 X0) \Rightarrow ((X2 = X1) \vee (k4_tarski X1 X2 \in X0)))))) \quad (3)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.(r5_orders_1 X0 X1) \Leftrightarrow (\forall X2.\neg(r1_tarski X2 X1) \wedge ((v3_orders_1 (k2_wellord1 X0 X2)) \wedge (\forall X3.\neg(X3 \in X1) \wedge (\forall X4.(X4 \in X2) \Rightarrow (k4_tarski X3 X4 \in X0)))))) \quad (4)$$

Theorem 1

$$\forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.\forall X2.((X1 \in X2) \wedge ((r9_orders_1 X0 X1) \wedge (r1_tarski X2 (k1_relat_1 X0)) \wedge (v1_relat_2 X0)))) \Rightarrow (r5_orders_1 X0 X2))$$