

t1_yellow_6

(TMWRaruZyD7YMcvhgLBWe9p871XNMxhXQhS)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_classes2 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k4_card_3 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_ordinal1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $k9_setfam_1 : \iota \Rightarrow \iota$ be given. Let $k3_tarski : \iota \Rightarrow \iota$ be given. Let $k1_setfam_1 : \iota \Rightarrow \iota$ be given. Let $k3_card_3 : \iota \Rightarrow \iota$ be given. Let $v1_classes1 : \iota \Rightarrow o$ be given. Let $r2_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_classes1 : \iota \Rightarrow o$ be given. Let $v1_ordinal1 : \iota \Rightarrow o$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_card_1 : \iota \Rightarrow o$ be given. Let $v2_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((\neg v1_xboole_0 X2) \wedge (v1_classes2 X2)) \Rightarrow (((X0 \in X2) \wedge (X1 \in X2)) \Rightarrow ((k2_zfmisc_1 X0 X1 \in X2) \wedge (k1_funct_2 X0 X1 \in X2))) \quad (1)$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (r1_ordinal1 (k1_card_1 (k10_xtuple_0 X0)) (k1_card_1 (k9_xtuple_0 X0))) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v1_xboole_0 X1) \wedge (v1_classes2 X1)) \Rightarrow ((X0 \in X1) \Rightarrow ((k9_setfam_1 X0 \in X1) \wedge ((k3_tarski X0 \in X1) \wedge (k1_setfam_1 X0 \in X1)))) \quad (3)$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (r1_tarski (k4_card_3 X0) (k1_funct_2 (k9_xtuple_0 X0) (k3_card_3 X0))) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_classes1 X0) \wedge (X1 \in X0)) \Rightarrow ((\neg r2_tarski X1 X0) \wedge (k1_card_1 X1 \in k1_card_1 X0)) \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.(v2_classes1\ X0) \Leftrightarrow ((v1_classes1\ X0) \wedge (\forall X1. \\ (X1 \in X0) \Rightarrow (k9_setfam_1\ X1 \in X0)) \wedge (\forall X1. ((r1_tarski\ X1\ X0) \wedge \\ (k1_card_1\ X1 \in k1_card_1\ X0)) \Rightarrow (X1 \in X0)))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_ordinal1\ X0) \Rightarrow (\forall X1.(v3_ordinal1\ X1) \Rightarrow (\forall X2. \\ (v3_ordinal1\ X2) \Rightarrow (((r1_tarski\ X0\ X1) \wedge (X1 \in X2)) \Rightarrow (X0 \in X2)))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((v3_ordinal1\ X0) \wedge (v3_ordinal1\ X1)) \Rightarrow (\\ (r1_ordinal1\ X0\ X1) \Leftrightarrow (r1_tarski\ X0\ X1)) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.v1_card_1\ (k1_card_1\ X0) \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1\ X0) \wedge (v1_funct_1\ X0)) \Rightarrow (k3_card_3\ X0 = \\ k3_tarski\ (k10_xtuple_0\ X0)) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_classes1\ X0) \Leftrightarrow (\forall X1.\forall X2.((X1 \in X0) \wedge \\ (r1_tarski\ X2\ X1)) \Rightarrow (X2 \in X0)) \end{aligned} \quad (11)$$

Assume the following.

$$\forall X0.(v1_classes2\ X0) \Rightarrow ((v1_ordinal1\ X0) \wedge (v2_classes1\ X0)) \quad (12)$$

Assume the following.

$$\forall X0.(v3_ordinal1\ X0) \Rightarrow ((v1_ordinal1\ X0) \wedge (v2_ordinal1\ X0)) \quad (13)$$

Assume the following.

$$\forall X0.(v2_classes1\ X0) \Rightarrow (v1_classes1\ X0) \quad (14)$$

Assume the following.

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

Theorem 1

$$\begin{aligned} \forall X0.((\neg v1_xboole_0\ X0) \wedge (v1_classes2\ X0)) \Rightarrow (\forall X1. \\ ((v1_relat_1\ X1) \wedge (v1_funct_1\ X1)) \Rightarrow (((k9_xtuple_0\ X1 \in X0) \wedge (r1_tarski \\ (k10_xtuple_0\ X1)\ X0)) \Rightarrow (k4_card_3\ X1 \in X0))) \end{aligned}$$