

t38_card_5

(TMFDJw3oEbdXhgyAEDHux1Z4wUe1759zB2u)

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Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k3_wellord1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_wellord2 : \iota \Rightarrow \iota$ be given. Let $k2_wellord2 : \iota \Rightarrow \iota$ be given. Let $k16_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $v2_wellord1 : \iota \Rightarrow o$ be given. Let $np_1 : \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $r4_wellord1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $r3_wellord1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_relat_1 : \iota \Rightarrow \iota$ be given. Let $v2_funct_1 : \iota \Rightarrow o$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v3_ordinal1 X0) \Rightarrow (\forall X1.(r1_tarski X1 X0) \Rightarrow (v2_wellord1 (k1_wellord2 X1))) \quad (1)$$

Assume the following.

$$np_1 = k1_tarski k1_xboole_0 \quad (2)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.(v1_relat_1 X1) \Rightarrow ((r4_wellord1 X0 X1) \Rightarrow (r4_wellord1 X1 X0))) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(v3_ordinal1 X1) \Rightarrow ((r1_tarski (k1_tarski X0) X1) \Rightarrow (k2_wellord2 (k1_wellord2 (k1_tarski X0)) = np_1)) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(v1_relat_1 X2) \Rightarrow (((k9_xtuple_0 X2 = k1_tarski X0) \wedge (k10_xtuple_0 X2 = k1_tarski X1)) \Rightarrow (X2 = k16_funcop_1 X0 X1)) \quad (5)$$

Assume the following.

$$\begin{aligned} & ((v2_xreal_0 \ np_1) \wedge (m2_subset_1 \ np_1 \ k1_numbers \ k5_numbers)) \wedge \\ & ((m1_subset_1 \ np_1 \ k5_numbers) \wedge (m1_subset_1 \ np_1 \ k1_numbers)) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0. \forall X1. r1_tarski \ X0 \ X0 \quad (7)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (8)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1_relat_1 \ X0) \wedge (v1_relat_1 \ X1)) \Rightarrow ((v1_relat_1 \\ & (k3_wellord1 \ X0 \ X1)) \wedge (v1_funct_1 \ (k3_wellord1 \ X0 \ X1))) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0. v1_relat_1 \ (k1_wellord2 \ X0) \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0. (v1_relat_1 \ X0) \Rightarrow (\forall X1. (v1_relat_1 \ X1) \Rightarrow (((v2_wellord1 \\ & X0) \wedge (r4_wellord1 \ X0 \ X1)) \Rightarrow (\forall X2. ((v1_relat_1 \ X2) \wedge (v1_funct_1 \\ & X2)) \Rightarrow ((X2 = k3_wellord1 \ X0 \ X1) \Leftrightarrow (r3_wellord1 \ X0 \ X1 \ X2)))))) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0. (v1_relat_1 \ X0) \Rightarrow (\forall X1. (v1_relat_1 \ X1) \Rightarrow (\forall X2. \\ & ((v1_relat_1 \ X2) \wedge (v1_funct_1 \ X2)) \Rightarrow ((r3_wellord1 \ X0 \ X1 \ X2) \Leftrightarrow ((\\ & k9_xtuple_0 \ X2 = k1_relat_1 \ X0) \wedge ((k10_xtuple_0 \ X2 = k1_relat_1 \\ & X1) \wedge (v2_funct_1 \ X2) \wedge (\forall X3. \forall X4. (k4_tarski \ X3 \ X4 \in \\ & X0) \Leftrightarrow ((X3 \in k1_relat_1 \ X0) \wedge ((X4 \in k1_relat_1 \ X0) \wedge (k4_tarski \ (k1_funct_1 \\ & X2 \ X3) \ (k1_funct_1 \ X2 \ X4) \in X1)))))))))) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0. (v1_relat_1 \ X0) \Rightarrow ((v2_wellord1 \ X0) \Rightarrow (\forall X1. (v3_ordinal1 \\ & X1) \Rightarrow ((X1 = k2_wellord2 \ X0) \Leftrightarrow (r4_wellord1 \ X0 \ (k1_wellord2 \ X1)))))) \end{aligned} \quad (14)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (v1_relat_1 \ X1) \Rightarrow ((X1 = k1_wellord2 \ X0) \Leftrightarrow \\ & ((k1_relat_1 \ X1 = X0) \wedge (\forall X2. \forall X3. ((X2 \in X0) \wedge (X3 \in X0)) \Rightarrow \\ & ((k4_tarski \ X2 \ X3 \in X1) \Leftrightarrow (r1_tarski \ X2 \ X3)))))) \end{aligned} \quad (15)$$

Assume the following.

$$\forall X0.(m1_subset.1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \quad (16)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (v3_ordinal1 X0) \quad (17)$$

Theorem 1

$$\begin{aligned} \forall X0.\forall X1.(v3_ordinal1 X1) \Rightarrow ((r1_tarski (k1_tarski \\ X0) X1) \Rightarrow (k3_wellord1 (k1_wellord2 (k2_wellord2 (k1_wellord2 \\ (k1_tarski X0)))) (k1_wellord2 (k1_tarski X0)) = k16_funcop.1 \\ k6_numbers X0)) \end{aligned}$$