

t20_card_5 (TM-
MXmgk1JkWE1KPP62Rfo5fDwbnKwCoioDd)

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Let $v1_card_1 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $r1_ordinal1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_card_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $np_1 : \iota$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1_card_1 X0) \Rightarrow (\forall X1.(v1_card_1 X1) \Rightarrow (\forall X2. \\ & (v1_card_1 X2) \Rightarrow (\neg((X0 \in X1) \vee (r1_ordinal1 X0 X1)) \wedge ((X2 \neq k6_numbers) \wedge \\ & (\neg(r1_ordinal1 (k3_card_2 X2 X0) (k3_card_2 X2 X1)) \wedge (r1_ordinal1 \\ & (k3_card_2 X0 X2) (k3_card_2 X1 X2))))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_card_1 X0) \Rightarrow (\forall X1.(v1_card_1 X1) \Rightarrow ((v1_finset_1 \\ & X0) \Rightarrow (((\neg r1_ordinal1 X1 X0) \wedge (\neg X1 \in X0)) \vee (v1_finset_1 X1)))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.(v3_ordinal1 X0) \Rightarrow ((X0 \neq k1_xboole_0) \Rightarrow (k1_xboole_0 \in X0)) \quad (3)$$

Assume the following.

$$\forall X0.(v1_card_1 X0) \Rightarrow ((k6_numbers \in X0) \Leftrightarrow (r1_ordinal1 np_1 X0)) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_card_1 X0) \Rightarrow (\forall X1.(v1_card_1 X1) \Rightarrow ((X0 \in X1) \Leftrightarrow \\ & (\neg r1_ordinal1 X1 X0))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_card_1 X0) \Rightarrow (\forall X1.(v1_card_1 X1) \Rightarrow ((X0 \in X1) \Leftrightarrow \\ & ((r1_ordinal1 X0 X1) \wedge (X0 \neq X1)))) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.k1_card_1 (k1_tarski X0) = np_1 \quad (7)$$

Assume the following.

$$\forall X0.(v1_card_1 X0) \Rightarrow ((k3_card_2 X0 \text{ np_1} = X0) \wedge (k3_card_2 \text{ np_1} X0 = \text{np_1})) \quad (8)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (9)$$

Assume the following.

$$v1_xboole_0 \text{ k1_xboole_0} \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.((v1_card_1 X0) \wedge (v1_card_1 X1)) \Rightarrow (v1_card_1 (k3_card_2 X0 X1)) \quad (11)$$

Assume the following.

$$\forall X0.v1_card_1 (k1_card_1 X0) \quad (12)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (v1_card_1 X0) \quad (13)$$

Assume the following.

$$\forall X0.(\neg v1_finset_1 X0) \Rightarrow (\neg v1_xboole_0 X0) \quad (14)$$

Assume the following.

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

Theorem 1

$$\forall X0.(v1_card_1 X0) \Rightarrow (\forall X1.((\neg v1_finset_1 X1) \wedge (v1_card_1 X1)) \Rightarrow (r1_ordinal1 X0 (k3_card_2 X0 X1)))$$