

t16_card_4

(TMKk1HHApagYMGvLZfFZrCWTq9n4HukAyJb)

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Let $v1_card_1 : \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $r1_ordinal1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_card_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v1_card_1 X0) \Rightarrow (\forall X1.(v1_card_1 X1) \Rightarrow ((X0 \neq k6_numbers) \Rightarrow ((r1_ordinal1 X1 (k2_card_2 X1 X0)) \wedge (r1_ordinal1 X1 (k2_card_2 X0 X1)))))) \quad (1)$$

Assume the following.

$$\forall X0.(v1_card_1 X0) \Rightarrow (\forall X1.(v1_card_1 X1) \Rightarrow (\forall X2.(v1_card_1 X2) \Rightarrow (((X0 \in X1) \vee (r1_ordinal1 X0 X1)) \Rightarrow ((r1_ordinal1 (k2_card_2 X2 X0) (k2_card_2 X2 X1)) \wedge ((r1_ordinal1 (k2_card_2 X2 X0) (k2_card_2 X1 X2)) \wedge ((r1_ordinal1 (k2_card_2 X0 X2) (k2_card_2 X2 X1)) \wedge (r1_ordinal1 (k2_card_2 X0 X2) (k2_card_2 X1 X2)))))))))) \quad (2)$$

Assume the following.

$$\forall X0.(v1_card_1 X0) \Rightarrow (\forall X1.(v1_card_1 X1) \Rightarrow ((X0 \in X1) \Leftrightarrow ((r1_ordinal1 X0 X1) \wedge (X0 \neq X1)))) \quad (3)$$

Assume the following.

$$\forall X0.(v1_card_1 X0) \Rightarrow ((\neg v1_finset_1 X0) \Rightarrow (k2_card_2 X0 X0 = X0)) \quad (4)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (5)$$

Assume the following.

$$\forall X0.v1_card_1 (k1_card_1 X0) \quad (6)$$

Assume the following.

$$\forall X0.(v1_card_1 X0) \Rightarrow (\forall X1.(v1_card_1 X1) \Rightarrow (k2_card_2 X0 X1 = k1_card_1 (k2_zfmisc_1 X0 X1))) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((v1_card.1 X0)\wedge(v1_card.1 X1))\Rightarrow(k2_card.2 X0 X1 = k2_card.2 X1 X0) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1)\Rightarrow(\neg X1 \in X0) \quad (9)$$

Theorem 1

$$\forall X0.(v1_card.1 X0)\Rightarrow(\forall X1.(v1_card.1 X1)\Rightarrow((k6_numbers \in X1)\Rightarrow((v1_finset.1 X0)\vee(((\neg v1_ordinal.1 X1 X0)\wedge(\neg X1 \in X0))\vee((k2_card.2 X0 X1 = X0)\wedge(k2_card.2 X1 X0 = X0))))))$$