

t79_card_2

(TMVdMsVtS7wiDMQSaQ8vshrWTmYvjb2MHDA)

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Let $v1_finset.1 : \iota \Rightarrow o$ be given. Let $k1_card.1 : \iota \Rightarrow \iota$ be given. Let $r1_ordinal1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_wellord2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_xboole.0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_card.1 : \iota \Rightarrow o$ be given. Let $k1_card.2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset.1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc.1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. r1_tarski X0 (k2_xboole.0 X0 X1) \tag{1}$$

Assume the following.

$$\forall X0. (v1_card.1 X0) \Rightarrow (\forall X1. (v1_card.1 X1) \Rightarrow (\neg(\neg v1_finset.1 X0) \wedge ((r1_ordinal1 X1 X0) \vee (X1 \in X0)) \wedge (\neg(k1_card.2 X0 X1 = X0) \wedge (k1_card.2 X1 X0 = X0)))) \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. (r2_wellord2 X0 X1) \Leftrightarrow (k1_card.1 X0 = k1_card.1 X1) \tag{3}$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset.1 X0 (k1_zfmisc.1 X1)) \Leftrightarrow (r1_tarski X0 X1) \tag{4}$$

Assume the following.

$$\forall X0. \forall X1. r1_ordinal1 (k1_card.1 (k2_xboole.0 X0 X1)) (k1_card.2 (k1_card.1 X0) (k1_card.1 X1)) \tag{5}$$

Assume the following.

$$\forall X0. \forall X1. (r1_tarski X0 X1) \Rightarrow (r1_ordinal1 (k1_card.1 X0) (k1_card.1 X1)) \tag{6}$$

Assume the following.

$$\forall X0. (\neg v1_finset.1 X0) \Rightarrow ((\neg v1_finset.1 (k1_card.1 X0)) \wedge (v1_card.1 (k1_card.1 X0))) \tag{7}$$

Assume the following.

$$\forall X0.v1_card_1 (k1_card_1 X0) \quad (8)$$

Assume the following.

$$\forall X0.(v1_finset_1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (v1_finset_1 X1)) \quad (9)$$

Theorem 1

$$\forall X0.\forall X1.\neg(\neg v1_finset_1 X0) \wedge (((k1_card_1 X1 \in k1_card_1 X0) \vee (r1_ordinal1 (k1_card_1 X1) (k1_card_1 X0))) \wedge (\neg(r2_wellord2 (k2_xboole_0 X0 X1) X0) \wedge (k1_card_1 (k2_xboole_0 X0 X1) = k1_card_1 X0)))$$