

t7_card_4

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Let $v4_card_3 : \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_wellord2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $k2_card_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $r1_ordinal1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_card_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((r1_tarski X0 X1) \wedge (r1_tarski X2 X3)) \Rightarrow (r1_tarski (k2_zfmisc_1 X0 X2) (k2_zfmisc_1 X1 X3)) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(r2_wellord2 (k2_zfmisc_1 X0 X1) (k2_zfmisc_1 \\ & (k1_card_1 X0) X1)) \wedge ((r2_wellord2 (k2_zfmisc_1 X0 X1) (k2_zfmisc_1 \\ & X0 (k1_card_1 X1))) \wedge ((r2_wellord2 (k2_zfmisc_1 X0 X1) (k2_zfmisc_1 \\ & (k1_card_1 X0) (k1_card_1 X1))) \wedge ((k1_card_1 (k2_zfmisc_1 X0 X1) = \\ & k1_card_1 (k2_zfmisc_1 (k1_card_1 X0) X1)) \wedge ((k1_card_1 (k2_zfmisc_1 \\ & X0 X1) = k1_card_1 (k2_zfmisc_1 X0 (k1_card_1 X1))) \wedge (k1_card_1 \\ & (k2_zfmisc_1 X0 X1) = k1_card_1 (k2_zfmisc_1 (k1_card_1 X0) (k1_card_1 \\ & X1)))))) \end{aligned} \quad (2)$$

Assume the following.

$$k2_card_2 k4_ordinal1 k4_ordinal1 = k4_ordinal1 \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(r1_tarski X0 X1) \Rightarrow (r1_ordinal1 (k1_card_1 X0) (k1_card_1 X1)) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((v3_ordinal1 X0) \wedge (v3_ordinal1 X1)) \Rightarrow ((r1_ordinal1 X0 X1) \Leftrightarrow (r1_tarski X0 X1)) \quad (5)$$

Assume the following.

$$(\neg v1_xboole_0 \ k4_ordinal1) \wedge (v3_ordinal1 \ k4_ordinal1) \quad (6)$$

Assume the following.

$$v1_card_1 \ k4_ordinal1 \quad (7)$$

Assume the following.

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

Assume the following.

$$\forall X0. (v1_card_1 \ X0) \Rightarrow (\forall X1. (v1_card_1 \ X1) \Rightarrow (k2_card_2 \ X0 \ X1 = k1_card_1 \ (k2_zfmisc_1 \ X0 \ X1))) \quad (9)$$

Assume the following.

$$\forall X0. (v4_card_3 \ X0) \Leftrightarrow (r1_ordinal1 \ (k1_card_1 \ X0) \ k4_ordinal1) \quad (10)$$

Assume the following.

$$\forall X0. (v1_card_1 \ X0) \Rightarrow (v3_ordinal1 \ X0) \quad (11)$$

Theorem 1

$$\forall X0. \forall X1. ((v4_card_3 \ X0) \wedge (v4_card_3 \ X1)) \Rightarrow (v4_card_3 \ (k2_zfmisc_1 \ X0 \ X1))$$