

t11_card_fil
(TMbr9roPbGg3rE579LJm8U6NJmTqY3cVqsS)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m2_card_fil : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \quad (2)$$

Assume the following.

$$\forall X0. r1_tarski k1_xboole_0 X0 \quad (3)$$

Assume the following.

$$\forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. (m2_card_fil X1 X0) \Rightarrow ((\neg v1_xboole_0 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 X0)))))) \quad (4)$$

Assume the following.

$$k1_xboole_0 = the (\lambda X0 : \iota. v1_xboole_0 X0) \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((\neg v1_xboole_0 X1) \wedge \\ (m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 X0)))) \Rightarrow ((m2_card_fil \\ X1 X0) \Leftrightarrow ((\neg X0 \in X1) \wedge (\forall X2. (m1_subset_1 X2 (k1_zfmisc_1 X0)) \Rightarrow \\ (\forall X3. (m1_subset_1 X3 (k1_zfmisc_1 X0)) \Rightarrow (((X2 \in X1) \wedge (X3 \in \\ X1)) \Rightarrow (k4_subset_1 X0 X2 X3 \in X1)) \wedge (((X2 \in X1) \wedge (r1_tarski X3 X2)) \Rightarrow \\ (X3 \in X1)))))))) \quad (6) \end{aligned}$$

Assume the following.

$$\forall X0. (v1_xboole_0 X0) \Leftrightarrow (\forall X1. \neg X1 \in X0) \quad (7)$$

Theorem 1

$$\forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(m2_card_fil X1 X0) \Rightarrow (k1_xboole_0 \in X1))$$