

t23_altcat_1
(TMXyq1jcJfAXN2fcDRq5NY1b356CXZnAqc)

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Let $v14_altcat_1 : \iota \Rightarrow o$ be given. Let $k7_altcat_1 : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $v13_struct_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_relat_1 : \iota \Rightarrow \iota$ be given. Let $v3_card_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l2_altcat_1 : \iota \Rightarrow o$ be given. Let $l1_altcat_1 : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v6_altcat_1 : \iota \Rightarrow o$ be given. Let $v10_altcat_1 : \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_zfmisc_1 : \iota \Rightarrow o$ be given. Let $k1_altcat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$np_1 = k1_tarski\ k1_xboole_0 \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1\ X0\ X1) \Rightarrow ((v1_xboole_0\ X1) \vee (X0 \in X1)) \tag{2}$$

Assume the following.

$$k1_funct_2\ k1_xboole_0\ k1_xboole_0 = k1_tarski\ (k4_relat_1\ k1_xboole_0) \tag{3}$$

Assume the following.

$$\neg v1_xboole_0\ np_1 \tag{4}$$

Assume the following.

$$\forall X0.v3_card_1\ (k1_tarski\ X0)\ np_1 \tag{5}$$

Assume the following.

$$\forall X0.(l2_altcat_1\ X0) \Rightarrow (l1_altcat_1\ X0) \tag{6}$$

Assume the following.

$$\forall X0.(l1_altcat_1\ X0) \Rightarrow (l1_struct_0\ X0) \tag{7}$$

Assume the following.

$$\forall X0.(\neg v1_xboole_0 X0) \Rightarrow ((\neg v2_struct_0 (k7_altcat_1 X0)) \wedge ((v6_altcat_1 (k7_altcat_1 X0)) \wedge ((v10_altcat_1 (k7_altcat_1 X0)) \wedge (l2_altcat_1 (k7_altcat_1 X0)))))) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.(X1 = k1_tarski X0) \Leftrightarrow (\forall X2.(X2 \in X1) \Leftrightarrow (X2 = X0)) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.(l1_struct_0 X1) \Rightarrow ((v13_struct_0 X1 X0) \Leftrightarrow (v3_card_1 (u1_struct_0 X1) X0)) \quad (10)$$

Assume the following.

$$\forall X0.(l2_altcat_1 X0) \Rightarrow ((v14_altcat_1 X0) \Leftrightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (v1_zfmisc_1 (k1_altcat_1 X0 X1 X1)))) \quad (11)$$

Assume the following.

$$\forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((v6_altcat_1 X1) \wedge ((v10_altcat_1 X1) \wedge (l2_altcat_1 X1)))) \Rightarrow ((X1 = k7_altcat_1 X0) \Leftrightarrow ((u1_struct_0 X1 = X0) \wedge (\forall X2.(m1_subset_1 X2 (u1_struct_0 X1)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 X1)) \Rightarrow (k1_altcat_1 X1 X2 X3 = k1_funct_2 X2 X3)))))) \quad (12)$$

Assume the following.

$$\forall X0.(v3_card_1 X0 np_1) \Rightarrow ((\neg v1_xboole_0 X0) \wedge (v1_zfmisc_1 X0)) \quad (13)$$

Theorem 1

$$(v14_altcat_1 (k7_altcat_1 np_1)) \wedge (v13_struct_0 (k7_altcat_1 np_1) np_1)$$