

l34_altcat_4

(TMRP1uZ4mnvkwB3x4pnRZ3vqdnzSj8x9nDS)

October 27, 2020

Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_altcat_1 : \iota \Rightarrow o$ be given. Let $l2_altcat_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_altcat_1 : \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_altcat_1 : \iota \Rightarrow o$ be given. Let $k1_altcat_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. (k2_zfmisc_1 X0 X1 = k1_xboole_0) \Leftrightarrow ((X0 = k1_xboole_0) \vee (X1 = k1_xboole_0)) \quad (1)$$

Assume the following.

$$\forall X0. (l2_altcat_1 X0) \Rightarrow (l1_altcat_1 X0) \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. (l1_altcat_1 X0) \Rightarrow ((v2_altcat_1 X0) \Leftrightarrow (\forall X1. (\\ m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 \\ (u1_struct_0 X0)) \Rightarrow (\forall X3. (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow \\ (\neg(k1_altcat_1 X0 X1 X2 \neq k1_xboole_0) \wedge ((k1_altcat_1 X0 X2 X3 \neq k1_xboole_0) \wedge \\ (k1_altcat_1 X0 X1 X3 = k1_xboole_0))))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. (l1_altcat_1 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (k1_altcat_1 X0 X1 X2 = k1_binop_1 (u1_altcat_1 X0) X1 X2))) \quad (4)$$

Theorem 1

$$\begin{aligned} \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_altcat_1 X0) \wedge (l2_altcat_1 X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\ (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. (m1_subset_1 X3 \\ (u1_struct_0 X0)) \Rightarrow ((k1_binop_1 (u1_altcat_1 X0) X1 X3 = k1_xboole_0) \Rightarrow \\ (k2_zfmisc_1 (k1_binop_1 (u1_altcat_1 X0) X2 X3) (k1_binop_1 (\\ u1_altcat_1 X0) X1 X2) = k1_xboole_0)))))) \end{aligned}$$