

t7_altcat_1 (TMdwhmTNpAT- mVEzi8LRsZZMaZSzSt9JjBnF)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r8_pboole : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_tarSKI : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (\neg v1_xboole_0 X1) \Rightarrow (\forall X2. (\neg v1_xboole_0 X2) \Rightarrow (\neg (X0 \in k2_zfmisc_1 X1 X2) \wedge (\forall X3. (m1_subset_1 X3 X1) \Rightarrow (\forall X4. (m1_subset_1 X4 X2) \Rightarrow (X0 \neq k4_tarSKI X3 X4)))))) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge (\neg v1_xboole_0 X1)) \Rightarrow (\neg v1_xboole_0 (k2_zfmisc_1 X0 X1)) \quad (3)$$

Assume the following.

$$\forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((v1_relat_1 X1) \wedge (v4_relat_1 X1 X0) \wedge ((v1_funct_1 X1) \wedge (v1_partfun1 X1 X0)))) \Rightarrow (\forall X2. ((v1_relat_1 X2) \wedge ((v4_relat_1 X2 X0) \wedge ((v1_funct_1 X2) \wedge (v1_partfun1 X2 X0)))) \Rightarrow ((r8_pboole X0 X1 X2) \Leftrightarrow (\forall X3. (m1_subset_1 X3 X0) \Rightarrow (k1_funct_1 X1 X3 = k1_funct_1 X2 X3)))))) \quad (4)$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1. \forall X2. k1_binop_1 X0 X1 X2 = k1_funct_1 X0 (k4_tarSKI X1 X2)) \quad (5)$$

Theorem 1

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(\neg v1_xboole_0 X1) \Rightarrow \\ & (\forall X2.((v1_relat_1 X2) \wedge ((v4_relat_1 X2 (k2_zfmisc_1 X0 \\ & X1)) \wedge ((v1_funct_1 X2) \wedge (v1_partfun1 X2 (k2_zfmisc_1 X0 X1)))))) \Rightarrow \\ & (\forall X3.((v1_relat_1 X3) \wedge ((v4_relat_1 X3 (k2_zfmisc_1 X0 \\ & X1)) \wedge ((v1_funct_1 X3) \wedge (v1_partfun1 X3 (k2_zfmisc_1 X0 X1)))))) \Rightarrow \\ & ((\forall X4.(m1_subset_1 X4 X0) \Rightarrow (\forall X5.(m1_subset_1 X5 \\ & X1) \Rightarrow (k1_binop_1 X2 X4 X5 = k1_binop_1 X3 X4 X5))) \Rightarrow (r8_pboole (k2_zfmisc_1 \\ & X0 X1) X3 X2)))) \end{aligned}$$