

t22_yellow15
(TMJNyXeupKQ6rpLFuahsq3i2una5dR4vqnb)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v1_yellow15 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_eqrel_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_yellow15 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_xboole_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_setfam_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Assume the following.

$$\forall X0.\forall X1.((v1_finset_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2.\forall X3.((X2 \in k2_yellow15 X0 X1) \wedge (X3 \in k2_yellow15 X0 X1)) \Rightarrow ((X2 = X3) \vee (r1_xboole_0 X2 X3))) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.((v1_finset_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 X0)))) \Rightarrow (k5_setfam_1 X0 (k2_yellow15 X0 X1) = X0) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.((v1_finset_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 X0)))) \Rightarrow (m1_subset_1 (k2_yellow15 X0 X1) (k1_zfmisc_1 (k1_zfmisc_1 X0))) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 X0))) \Rightarrow ((m1_eqrel_1 X1 X0) \Leftrightarrow ((k5_setfam_1 X0 X1 = X0) \wedge (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 X0)) \Rightarrow ((X2 \in X1) \Rightarrow ((X2 \neq k1_xboole_0) \wedge (\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 X0)) \Rightarrow (\neg(X3 \in X1) \wedge ((X2 \neq X3) \wedge (\neg r1_xboole_0 X2 X3)))))))))) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((v1_finset_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 X0)))) \Rightarrow ((v1_yellow15 X1 X0) \Leftrightarrow (\neg k1_xboole_0 \in k2_yellow15 X0 X1)) \quad (5)$$

Theorem 1

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_finset_1 X1) \wedge \\ (m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 X0)))) \Rightarrow ((v1_yellow15 \\ X1 X0) \Rightarrow (m1_eqrel_1 (k2_yellow15 X0 X1) X0))) \end{aligned}$$