

157_anproj_2 (TMbth-
bahb9LPx9dj9mqwUPTWg8MkDuq9uoC)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $np_1 : \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k2_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ 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.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (2)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \end{aligned} \quad (3)$$

Assume the following.

$$\neg v1_xboole_0 np_1 \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. ((\neg v1_xboole_0 \\ & X0) \wedge ((m1_subset_1 X1 X0) \wedge ((m1_subset_1 X2 X0) \wedge ((m1_subset_1 \\ & X3 X0) \wedge (m1_subset_1 X4 X0)))))) \Rightarrow (k9_domain_1 X0 X1 X2 X3 X4 = k2_enumset1 \\ & X1 X2 X3 X4) \end{aligned} \quad (5)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (6)$$

Assume the following.

$$\exists X0. v1_xboole_0 X0 \quad (7)$$

Assume the following.

$$(\neg v1_xboole_0\ k4_ordinal1) \wedge (v3_ordinal1\ k4_ordinal1) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\neg v1_xboole_0\ (k2_enumset1\ X0\ X1\ X2\ X3) \quad (9)$$

Assume the following.

$$\forall X0.\neg v1_xboole_0\ (k1_zfmisc_1\ X0) \quad (10)$$

Assume the following.

$$m1_subset_1\ k5_numbers\ (k1_zfmisc_1\ k1_numbers) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.(X4 = k2_enumset1\ X0\ X1\ X2\ X3) \Leftrightarrow (\forall X5.(X5 \in X4) \Leftrightarrow (\neg(X5 \neq X0) \wedge ((X5 \neq X1) \wedge ((X5 \neq X2) \wedge (X5 \neq X3)))))) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (\neg X1 \in X0) \quad (13)$$

Theorem 1

$$\begin{aligned} & \exists X0.(\neg v1_xboole_0\ X0) \wedge (\exists X1.(m1_subset_1\ X1\ X0) \wedge \\ & (\exists X2.(m1_subset_1\ X2\ X0) \wedge (\exists X3.(m1_subset_1\ X3\ X0) \wedge \\ & (\exists X4.(m1_subset_1\ X4\ X0) \wedge ((X0 = k9_domain_1\ X0\ X1\ X2\ X3\ X4) \wedge \\ & ((X1 \neq X2) \wedge ((X1 \neq X3) \wedge ((X1 \neq X4) \wedge ((X2 \neq X3) \wedge ((X2 \neq X4) \wedge (X3 \neq X4)))))))))) \end{aligned}$$