

t39_ens_1

(TMR8TURy8cXmiCDVvtS8tVzp7xMGG35RheH)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_classes2 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k11_ens_1 : \iota \Rightarrow \iota$ be given. Let $k2_cat_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $m1_cat_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v8_cat_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_ens_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k15_ens_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \neg (X0 \in X1) \wedge (v1_xboole_0 X1) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((\neg v1_xboole_0 X2) \wedge (v1_classes2 X2)) \Rightarrow (((X0 \in X2) \wedge (X1 \in X2)) \Rightarrow ((k2_tarski X0 X1 \in X2) \wedge (k4_tarski X0 X1 \in X2))) \quad (2)$$

Assume the following.

$$\forall X0. ((\neg v1_xboole_0 X0) \wedge (v1_classes2 X0)) \Rightarrow (k1_xboole_0 \in X0) \quad (3)$$

Assume the following.

$$\forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 (k11_ens_1 X0))) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 (k11_ens_1 X0))) \Rightarrow (\forall X3. (m1_cat_1 X3 (k11_ens_1 X0) X1 X2) \Rightarrow ((v8_cat_1 X3 (k11_ens_1 X0) X1 X2) \Rightarrow ((k2_cat_1 (k11_ens_1 X0) X1 X2 = k1_xboole_0) \vee ((\forall X4. (m1_subset_1 X4 X0) \Rightarrow (\forall X5. \forall X6. \neg (X5 \in X4) \wedge ((X6 \in X4) \wedge (X5 \neq X6)))))) \vee (v1_ens_1 (k15_ens_1 X0 X3) X0)))))) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (X2 = k2_tarski X0 X1) \Leftrightarrow (\forall X3. (X3 \in X2) \Leftrightarrow ((X3 = X0) \vee (X3 = X1))) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (\neg X1 \in X0) \quad (7)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v1_xboole_0 X0) \wedge (v1_classes2 X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (u1_struct_0 (k11_ens_1 X0))) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 (u1_struct_0 (k11_ens_1 X0))) \Rightarrow ((k2_cat_1 (k11_ens_1 X0) X1 \\ & X2 \neq k1_xboole_0) \Rightarrow (\forall X3.(m1_cat_1 X3 (k11_ens_1 X0) X1 X2) \Rightarrow \\ & ((v8_cat_1 X3 (k11_ens_1 X0) X1 X2) \Rightarrow (v1_ens_1 (k15_ens_1 X0 X3) \\ & X0)))))) \end{aligned}$$