

t30_prob_4
(TMK9bBGhDGSRjZbzJB9M1c8d9FjeGrm7NXR)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_prob_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_prob_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $m2_prob_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_prob_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_prob_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_prob_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

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

Assume the following.

$$\forall X0. \forall X1. (r1_tarski X0 X1) \Rightarrow (X1 = k2_xboole_0 X0 (k4_xboole_0 X1 X0)) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((\neg v1_xboole_0 X1) \wedge \\ & ((v1_prob_1 X1 X0) \wedge ((v4_prob_1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ & (k1_zfmisc_1 X0)))))) \Rightarrow (\forall X2. (m2_prob_1 X2 X0 X1) \Rightarrow (\forall X3. \\ & \forall X4. ((X3 \in X1) \wedge (X4 \in X1)) \Rightarrow (\forall X5. (m1_prob_4 X5 X0 X1 \\ & X2) \Rightarrow (\forall X6. (m1_prob_4 X6 X0 X1 X2) \Rightarrow ((k2_xboole_0 X3 X5 = k2_xboole_0 \\ & X4 X6) \Rightarrow (k1_funct_1 X2 X3 = k1_funct_1 X2 X4)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2. (m2_subset_1 \\ & X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (k7_subset_1 X0 X1 X2 = k4_xboole_0 X1 X2) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2. (m2_subset_1 \\ & X2 X0 X1) \Rightarrow (m1_subset_1 X2 X0)) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((\neg v1_xboole_0 X0) \wedge \\ & (((\neg v1_xboole_0 X1) \wedge ((v1_prob_1 X1 X0) \wedge ((v4_prob_1 X1 X0) \wedge (m1_subset_1 \\ & X1 (k1_zfmisc_1 (k1_zfmisc_1 X0)))))) \wedge ((m2_prob_1 X2 X0 X1) \wedge \\ & m1_subset_1 X3 (k4_prob_4 X0 X1 X2)))) \Rightarrow ((\neg v1_xboole_0 (k6_prob_4 \\ & X0 X1 X2 X3)) \wedge (m1_subset_1 (k6_prob_4 X0 X1 X2 X3) (k1_zfmisc_1 (\\ & k1_zfmisc_1 X0)))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((\neg v1_xboole_0 X0) \wedge (((\neg v1_xboole_0 \\ & X1) \wedge ((v1_prob_1 X1 X0) \wedge ((v4_prob_1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ & (k1_zfmisc_1 X0)))))) \wedge (m2_prob_1 X2 X0 X1))) \Rightarrow ((\neg v1_xboole_0 \\ & (k4_prob_4 X0 X1 X2)) \wedge (m1_subset_1 (k4_prob_4 X0 X1 X2) (k1_zfmisc_1 \\ & (k1_zfmisc_1 X0)))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((\neg v1_xboole_0 X1) \wedge \\ & ((v1_prob_1 X1 X0) \wedge ((v4_prob_1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ & (k1_zfmisc_1 X0)))))) \Rightarrow (\forall X2. (m2_prob_1 X2 X0 X1) \Rightarrow (\forall X3. \\ & (m2_subset_1 X3 (k1_zfmisc_1 X0) (k4_prob_4 X0 X1 X2)) \Rightarrow (\forall X4. \\ & ((\neg v1_xboole_0 X4) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k1_zfmisc_1 \\ & X0)))) \Rightarrow ((X4 = k6_prob_4 X0 X1 X2 X3) \Leftrightarrow (\forall X5. (X5 \in X4) \Leftrightarrow ((X5 \in \\ & X1) \wedge (r1_tarski X5 X3) \wedge (m1_prob_4 (k7_subset_1 X0 X3 X5) X0 X1 X2)))))))) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0. (v1_xboole_0 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (v1_xboole_0 X1)) \quad (10)$$

Theorem 1

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((\neg v1_xboole_0 X1) \wedge \\ & ((v1_prob_1 X1 X0) \wedge ((v4_prob_1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ & (k1_zfmisc_1 X0)))))) \Rightarrow (\forall X2. (m2_prob_1 X2 X0 X1) \Rightarrow (\forall X3. \\ & (m2_subset_1 X3 (k1_zfmisc_1 X0) (k4_prob_4 X0 X1 X2)) \Rightarrow (\forall X4. \\ & \forall X5. ((X4 \in k6_prob_4 X0 X1 X2 X3) \wedge (X5 \in k6_prob_4 X0 X1 X2 X3)) \Rightarrow \\ & (k1_funct_1 X2 X4 = k1_funct_1 X2 X5)))))) \end{aligned}$$