

t37_membered

(TMbxdjxmns2TJWQ2nuinf5Zre93pmrsWoWg)

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Let $v3_membered : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \quad (2)$$

Assume the following.

$$\forall X0.(v3_membered X0) \Rightarrow (r1_tarski X0 k1_numbers) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 (k1_zfmisc_1 k1_numbers)) \Rightarrow (\forall X1. \\ (m1_subset_1 X1 (k1_zfmisc_1 k1_numbers)) \Rightarrow (\neg(\forall X2.(v1_xreal_0 \\ X2) \Rightarrow (\forall X3.(v1_xreal_0 X3) \Rightarrow (((X2 \in X0) \wedge (X3 \in X1)) \Rightarrow (r1_xxreal_0 \\ X2 X3)))))) \wedge (\forall X2.(v1_xreal_0 X2) \Rightarrow (\exists X3.(v1_xreal_0 \\ X3) \wedge (\exists X4.(v1_xreal_0 X4) \wedge ((X3 \in X0) \wedge ((X4 \in X1) \wedge (\neg(r1_xxreal_0 \\ X3 X2) \wedge (r1_xxreal_0 X2 X4)))))))))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.\exists X1.m1_subset_1 X1 X0 \quad (6)$$

Assume the following.

$$\forall X0.(v3_membered X0) \Rightarrow (\forall X1.(m1_subset_1 X1 X0) \Rightarrow (v1_xreal_0 X1)) \quad (7)$$

Theorem 1

$$\begin{aligned} & \forall X0.(v3_membered\ X0) \Rightarrow (\forall X1.(v3_membered\ X1) \Rightarrow (\neg \\ & (X0 \neq k1_xboole_0) \wedge ((X1 \neq k1_xboole_0) \wedge ((\forall X2.(v1_xreal_0 \\ X2) \Rightarrow (\forall X3.(v1_xreal_0\ X3) \Rightarrow (((X2 \in X0) \wedge (X3 \in X1)) \Rightarrow (r1_xxreal_0 \\ X2\ X3)))))) \wedge (\forall X2.(v1_xreal_0\ X2) \Rightarrow (\neg(\forall X3.(v1_xreal_0 \\ X3) \Rightarrow ((X3 \in X0) \Rightarrow (r1_xxreal_0\ X3\ X2)))) \wedge (\forall X3.(v1_xreal_0 \\ X3) \Rightarrow ((X3 \in X1) \Rightarrow (r1_xxreal_0\ X2\ X3)))))))))) \end{aligned}$$