

t7_sysrel

(TMU44qWDbVohT45bSJCJEV8fx5XoNAHFq1W)

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Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $r1_xboole_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. (k4_tarski X0 X1 \in k2_zfmisc_1 X2 X3) \Leftrightarrow ((X0 \in X2) \wedge (X1 \in X3)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (\neg(\neg r1_xboole_0 X0 X1) \wedge (\forall X2. \neg(X2 \in X0) \wedge (X2 \in X1))) \wedge (\neg(\exists X2. (X2 \in X0) \wedge (X2 \in X1)) \wedge (r1_xboole_0 X0 X1)) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (X2 = k2_xboole_0 X0 X1) \Leftrightarrow (\forall X3. (X3 \in X2) \Leftrightarrow ((X3 \in X0) \vee (X3 \in X1))) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (r1_tarski X0 X1) \Leftrightarrow (\forall X2. (X2 \in X0) \Rightarrow (X2 \in X1)) \quad (4)$$

Theorem 1

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. (v1_relat_1 \\ & X4) \Rightarrow (((r1_xboole_0 X0 X1) \wedge ((r1_tarski X4 (k2_xboole_0 (k2_zfmisc_1 \\ & X0 X1) (k2_zfmisc_1 X1 X0))) \wedge ((k4_tarski X2 X3 \in X4) \wedge (X2 \in X0)))) \Rightarrow \\ & ((\neg X2 \in X1) \wedge ((\neg X3 \in X0) \wedge (X3 \in X1))) \wedge (((r1_xboole_0 X0 X1) \wedge ((r1_tarski \\ & X4 (k2_xboole_0 (k2_zfmisc_1 X0 X1) (k2_zfmisc_1 X1 X0))) \wedge ((k4_tarski \\ & X2 X3 \in X4) \wedge (X3 \in X1)))) \Rightarrow ((\neg X3 \in X0) \wedge ((\neg X2 \in X1) \wedge (X2 \in X0)))) \wedge (((\\ & r1_xboole_0 X0 X1) \wedge ((r1_tarski X4 (k2_xboole_0 (k2_zfmisc_1 X0 \\ & X1) (k2_zfmisc_1 X1 X0))) \wedge ((k4_tarski X2 X3 \in X4) \wedge (X2 \in X1)))) \Rightarrow (\\ & (\neg X2 \in X0) \wedge ((\neg X3 \in X1) \wedge (X3 \in X0))) \wedge (((r1_xboole_0 X0 X1) \wedge ((r1_tarski \\ & X4 (k2_xboole_0 (k2_zfmisc_1 X0 X1) (k2_zfmisc_1 X1 X0))) \wedge ((k4_tarski \\ & X2 X3 \in X4) \wedge (X3 \in X0)))) \Rightarrow ((\neg X2 \in X0) \wedge ((\neg X3 \in X1) \wedge (X2 \in X1)))))) \end{aligned}$$