

t10_sysrel (TMG- GqM7g8PZhH55EkC7ptmPejtPoPL7gjBQ)

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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 $k5_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.(k2_zfmisc_1 X0 X1 = k1_xboole_0) \Leftrightarrow ((X0 = k1_xboole_0) \vee (X1 = k1_xboole_0)) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(v1_relat_1 X1) \Rightarrow (k5_relat_1 X1 X0 = k3_xboole_0 X1 (k2_zfmisc_1 X0 (k10_xtuple_0 X1))) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(r1_tarski X0 X1) \Rightarrow (r1_tarski (k3_xboole_0 X0 X2) (k3_xboole_0 X1 X2)) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.k3_xboole_0 X0 (k2_xboole_0 X1 X2) = k2_xboole_0 (k3_xboole_0 X0 X1) (k3_xboole_0 X0 X2) \quad (4)$$

Assume the following.

$$\forall X0.k2_xboole_0 X0 k1_xboole_0 = X0 \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(r1_tarski X0 (k3_xboole_0 X1 X2)) \Rightarrow (r1_tarski X0 X1) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.k2_zfmisc_1 (k3_xboole_0 X0 X1) (k3_xboole_0 X2 X3) = k3_xboole_0 (k2_zfmisc_1 X0 X2) (k2_zfmisc_1 X1 X3) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(r1_xboole_0 X0 X1)\Leftrightarrow(k3_xboole_0 X0 X1 = k1_xboole_0) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.k3_xboole_0 X0 X1 = k3_xboole_0 X1 X0 \quad (9)$$

Theorem 1

$$\forall X0.\forall X1.\forall X2.(v1_relat_1 X2)\Rightarrow(((r1_xboole_0 X0 X1)\wedge(r1_tarski X2 (k2_xboole_0 (k2_zfmisc_1 X0 X1) (k2_zfmisc_1 X1 X0))))\Rightarrow(r1_tarski (k5_relat_1 X2 X0) (k2_zfmisc_1 X0 X1)))$$