

t10_relat_1 (TMKxuSHZe- QLTXGxvrGo22yhM2x6mgr9zwNA)

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Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.(v1_relat_1 X2) \Rightarrow ((X2 = k1_tarski (k4_tarski X0 X1)) \Rightarrow ((k9_xtuple_0 X2 = k1_tarski X0) \wedge (k10_xtuple_0 X2 = k1_tarski X1))) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.k10_xtuple_0 (k2_xboole_0 X0 X1) = k2_xboole_0 (k10_xtuple_0 X0) (k10_xtuple_0 X1) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.k9_xtuple_0 (k2_xboole_0 X0 X1) = k2_xboole_0 (k9_xtuple_0 X0) (k9_xtuple_0 X1) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.k2_tarski X0 X1 = k2_xboole_0 (k1_tarski X0) (k1_tarski X1) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.v1_relat_1 (k1_tarski (k4_tarski X0 X1)) \quad (5)$$

Theorem 1

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.(v1_relat_1 X4) \Rightarrow ((X4 = k2_tarski (k4_tarski X0 X1) (k4_tarski X2 X3)) \Rightarrow ((k9_xtuple_0 X4 = k2_tarski X0 X2) \wedge (k10_xtuple_0 X4 = k2_tarski X1 X3)))$$