

t38_bvfunc14 (TMRcX-
tYuX4RBMMyvzERT9NSCZghNJAoBBgBh)

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Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k1_funct_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k16_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k4_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k2_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k7_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.k3_enumset1 \\ & X0 X1 X2 X3 X4 = k2_xboole_0 (k1_tarski X0) (k2_enumset1 X1 X2 X3 X4) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5. \\ & ((v1_relat_1 X5) \wedge (v1_funct_1 X5)) \Rightarrow (\forall X6.\forall X7.\forall X8. \\ & \forall X9.\forall X10.(X5 = k1_funct_4 (k1_funct_4 (k1_funct_4 \\ & (k1_funct_4 (k16_funcop_1 X1 X7) (k16_funcop_1 X2 X8)) (k16_funcop_1 \\ & X3 X9)) (k16_funcop_1 X4 X10)) (k16_funcop_1 X0 X6)) \Rightarrow (k9_xtuple_0 \\ & X5 = k3_enumset1 X0 X1 X2 X3 X4)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(k9_xtuple_0 (k2_funcop_1 X0 X1) = X0) \wedge (\\ & r1_tarski (k10_xtuple_0 (k2_funcop_1 X0 X1)) (k1_tarski X1)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5. \\ & k4_enumset1 X0 X1 X2 X3 X4 X5 = k2_xboole_0 (k1_tarski X0) (k3_enumset1 \\ & X1 X2 X3 X4 X5) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.k3_enumset1 \\ X0\ X1\ X2\ X3\ X4 = k2_xboole_0 (k2_enumset1\ X0\ X1\ X2\ X3) (k1_tarSKI\ X4) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.k7_funcop_1\ X0\ X1 = k2_funcop_1\ X0\ X1 \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(v1_relat_1 (k16_funcop_1\ X0\ X1)) \wedge (v1_funct_1 \\ (k16_funcop_1\ X0\ X1)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(v1_funct_1 (k7_funcop_1\ X0\ X1)) \wedge ((v1_funct_2 \\ (k7_funcop_1\ X0\ X1)\ X0 (k1_tarSKI\ X1)) \wedge (m1_subset_1 (k7_funcop_1 \\ X0\ X1) (k1_zfmisc_1 (k2_zfmisc_1\ X0 (k1_tarSKI\ X1)))))) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.(((v1_relat_1\ X0) \wedge (v1_funct_1\ X0)) \wedge ((\\ v1_relat_1\ X1) \wedge (v1_funct_1\ X1))) \Rightarrow ((v1_relat_1 (k1_funct_4\ X0 \\ X1)) \wedge (v1_funct_1 (k1_funct_4\ X0\ X1))) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.k16_funcop_1\ X0\ X1 = k7_funcop_1 (k1_tarSKI \\ X0)\ X1 \quad (10)$$

Assume the following.

$$\forall X0.(((v1_relat_1\ X0) \wedge (v1_funct_1\ X0)) \Rightarrow (\forall X1.(((\\ v1_relat_1\ X1) \wedge (v1_funct_1\ X1)) \Rightarrow (\forall X2.(((v1_relat_1\ X2) \wedge \\ (v1_funct_1\ X2)) \Rightarrow ((X2 = k1_funct_4\ X0\ X1) \Leftrightarrow ((k9_xtuple_0\ X2 = k2_xboole_0 \\ (k9_xtuple_0\ X0) (k9_xtuple_0\ X1)) \wedge (\forall X3.(X3 \in k2_xboole_0 \\ (k9_xtuple_0\ X0) (k9_xtuple_0\ X1)) \Rightarrow (((X3 \in k9_xtuple_0\ X1) \Rightarrow (k1_funct_1 \\ X2\ X3 = k1_funct_1\ X1\ X3)) \wedge ((\neg X3 \in k9_xtuple_0\ X1) \Rightarrow (k1_funct_1\ X2 \\ X3 = k1_funct_1\ X0\ X3)))))))))) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.k2_xboole_0\ X0\ X1 = k2_xboole_0\ X1\ X0 \quad (12)$$

Theorem 1

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5. \\ \forall X6.(((v1_relat_1\ X6) \wedge (v1_funct_1\ X6)) \Rightarrow (\forall X7.\forall X8. \\ \forall X9.\forall X10.\forall X11.\forall X12.(X6 = k1_funct_4 \\ (k1_funct_4 (k1_funct_4 (k1_funct_4 (k1_funct_4 (k16_funcop_1 \\ X1\ X8) (k16_funcop_1\ X2\ X9)) (k16_funcop_1\ X3\ X10)) (k16_funcop_1 \\ X4\ X11)) (k16_funcop_1\ X5\ X12)) (k16_funcop_1\ X0\ X7)) \Rightarrow (k9_xtuple_0 \\ X6 = k4_enumset1\ X0\ X1\ X2\ X3\ X4\ X5))) \quad (13)$$