

t32_borsuk_7

(TMJ615xR2vT62fJdJVRF6sGUeFp3Lp7GCHV)

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Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_card_3 : \iota \Rightarrow \iota$ be given. Let $k1_borsuk_7 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_funct_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k16_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k1_funct_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.k4_funct_4 X0 X0 X1 X2 = k16_funcop_1 X0 X2 \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5. \\ & (v1_xcmplx_0 X5) \Rightarrow ((r1_zfmisc_1 X0 X1 X5) \Rightarrow ((k1_funct_1 (k1_borsuk_7 \\ & X0 X1 X5 X2 X3 X4) X0 = X2) \wedge ((k1_funct_1 (k1_borsuk_7 X0 X1 X5 X2 X3 X4) \\ & X1 = X3) \wedge (k1_funct_1 (k1_borsuk_7 X0 X1 X5 X2 X3 X4) X5 = X4)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1.((\\ & v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow (((k9_xtuple_0 X0 = k9_xtuple_0 \\ & X1) \wedge (\forall X2.(X2 \in k9_xtuple_0 X0) \Rightarrow (r1_tarski (k1_funct_1 \\ & X0 X2) (k1_funct_1 X1 X2)))) \Rightarrow (r1_tarski (k4_card_3 X0) (k4_card_3 \\ & X1)))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.k1_borsuk_7 X0 X1 X1 X2 X3 X4 = k4_funct_4 X0 X1 X2 X4 \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.(X0 \neq X1) \Rightarrow (k1_borsuk_7 X0 X1 X0 X2 X3 X4 = k4_funct_4 X0 X1 X4 X3) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5. \\ & ((r1_tarski\ X0\ X1)\wedge(r1_tarski\ X2\ X3))\Rightarrow(r1_tarski\ (k4_card_3\ (\\ & k4_funct_4\ X4\ X5\ X0\ X2))\ (k4_card_3\ (k4_funct_4\ X4\ X5\ X1\ X3))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5. \\ & k9_xtuple_0\ (k1_funct_4\ (k1_funct_4\ (k16_funcop_1\ X0\ X3)\ (k16_funcop_1 \\ & X1\ X4))\ (k16_funcop_1\ X2\ X5)) = k1_enumset1\ X0\ X1\ X2 \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5. \\ & (v1_relat_1\ (k1_borsuk_7\ X0\ X1\ X2\ X3\ X4\ X5))\wedge(v1_funct_1\ (k1_borsuk_7 \\ & X0\ X1\ X2\ X3\ X4\ X5)) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(r1_zfmisc_1\ X0\ X1\ X2)\Leftrightarrow((X0\neq \\ & X1)\wedge((X0\neq X2)\wedge(X1\neq X2))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.k4_funct_4\ X0\ X1\ X2 \\ & X3 = k1_funct_4\ (k16_funcop_1\ X0\ X2)\ (k16_funcop_1\ X1\ X3) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.(X3 = k1_enumset1 \\ & X0\ X1\ X2)\Leftrightarrow(\forall X4.(X4 \in X3)\Leftrightarrow(\neg(X4\neq X0)\wedge((X4\neq X1)\wedge(X4\neq X2)))) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5. \\ & k1_borsuk_7\ X0\ X1\ X2\ X3\ X4\ X5 = k1_funct_4\ (k4_funct_4\ X0\ X1\ X3\ X4)\ (\\ & k16_funcop_1\ X2\ X5) \end{aligned} \quad (12)$$

Theorem 1

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(v1_xcmplx_0\ X2)\Rightarrow(\forall X3. \\ & \forall X4.\forall X5.\forall X6.\forall X7.\forall X8.((r1_tarski \\ & X3\ X4)\wedge((r1_tarski\ X5\ X6)\wedge(r1_tarski\ X7\ X8)))\Rightarrow(r1_tarski\ (k4_card_3 \\ & (k1_borsuk_7\ X0\ X1\ X2\ X3\ X5\ X7))\ (k4_card_3\ (k1_borsuk_7\ X0\ X1\ X2\ X4 \\ & X6\ X8)))) \end{aligned}$$