t4_borsuk_4 (TMXmVNkH9pCn3MYPWcGSgQFvJC6tehWYfxy)

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Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v2\_funct\_1 : \iota \Rightarrow o$ be given. Let $k3\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k1\_tarski : \iota \Rightarrow \iota$ be given. Let $k10\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_funct\_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $r1\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\neg(X0 \in X1) \wedge (v1\_xboole\_0\ X1) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.r1\_xboole\_0\ (k4\_xboole\_0\ X0\ X1)\ X1 \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((X0 \in X1) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X2))) \Rightarrow (m1\_subset\_1\ X0\ X2) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.(\neg(\neg r1\_xboole\_0\ X0\ X1) \wedge (\forall X2.\neg(X2 \in X0) \wedge (X2 \in X1))) \wedge (\neg(\exists X2.(X2 \in X0) \wedge (X2 \in X1)) \wedge (r1\_xboole\_0\ X0\ X1)) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1) \wedge (v1\_funct\_1\ X1)) \Rightarrow ((X0 \in k9\_xtuple\_0\ X1) \Rightarrow (k1\_funct\_1\ X1\ X0 \in k10\_xtuple\_0\ X1)) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.(r1\_tarski\ (k1\_tarski\ X0)\ X1) \Leftrightarrow (X0 \in X1) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X0\ X1)\Rightarrow((v1\_xboole\_0\ X1)\vee (X0 \in X1)) \tag{7}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge(v1\_funct\_1\ X0))\Rightarrow(\forall X1.((v1\_relat\_1\ X1)\wedge(v1\_funct\_1\ X1))\Rightarrow(((v2\_funct\_1\ X0)\wedge((v2\_funct\_1\ X1)\wedge(\forall X2.\forall X3.\neg(X2 \in k9\_xtuple\_0\ X1)\wedge((X3 \in k6\_subset\_1\ (k9\_xtuple\_0\ X0)\ (k9\_xtuple\_0\ X1))\wedge(k1\_funct\_1\ X1\ X2 = k1\_funct\_1\ X0\ X3)))))\Rightarrow(v2\_funct\_1\ (k1\_funct\_4\ X0\ X1)))) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.r1\_tarski\ (k3\_xboole\_0\ X0\ X1)\ X0 \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.r1\_tarski\ X0\ X0 \tag{10}$$

Assume the following.

$$\forall X0.\forall X1.k6\_subset\_1\ X0\ X1 = k4\_xboole\_0\ X0\ X1 \tag{11}$$

Assume the following.

$$\forall X0.\forall X1.m1\_subset\_1\ (k6\_subset\_1\ X0\ X1)\ (k1\_zfmisc\_1\ X0) \tag{12}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k3\_xboole\_0\ X0\ X1)\Leftrightarrow(\forall X3.\ (X3 \in X2)\Leftrightarrow((X3 \in X0)\wedge(X3 \in X1))) \tag{13}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge(v1\_funct\_1\ X0))\Rightarrow((v2\_funct\_1\ X0)\Leftrightarrow(\forall X1.\forall X2.((X1 \in k9\_xtuple\_0\ X0)\wedge((X2 \in k9\_xtuple\_0\ X0)\wedge(k1\_funct\_1\ X0\ X1 = k1\_funct\_1\ X0\ X2)))\Rightarrow(X1 = X2))) \tag{14}$$

Assume the following.

$$\forall X0.\forall X1.(X1 = k1\_tarski\ X0)\Leftrightarrow(\forall X2.(X2 \in X1)\Leftrightarrow(X2 = X0)) \tag{15}$$

Theorem 1

$$\forall X0.((v1\_relat\_1\ X0)\wedge(v1\_funct\_1\ X0))\Rightarrow(\forall X1.((v1\_relat\_1\ X1)\wedge(v1\_funct\_1\ X1))\Rightarrow(\forall X2.((v2\_funct\_1\ X0)\wedge((v2\_funct\_1\ X1)\wedge((k3\_xboole\_0\ (k9\_xtuple\_0\ X0)\ (k9\_xtuple\_0\ X1) = k1\_tarski\ X2)\wedge(k3\_xboole\_0\ (k10\_xtuple\_0\ X0)\ (k10\_xtuple\_0\ X1) = k1\_tarski\ (k1\_funct\_1\ X0\ X2)))))\Rightarrow(v2\_funct\_1\ (k1\_funct\_4\ X0\ X1))))$$