

# t22\_borsuk\_7 (TMQcmCX- cjtM7NB31cen2YvyVDDtE5Wkymtv)

October 27, 2020

Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_borsuk\_7 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $k2\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k4\_funct\_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $k1\_funct\_4 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k16\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. (X0 \neq k1\_xboole\_0) \Rightarrow (k10\_xtuple\_0 (k2\_funcop\_1 X0 X1) = k1\_tarski X1) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. (k9\_xtuple\_0 (k4\_funct\_4 X0 X1 X2 X3) = k2\_tarski X0 X1) \wedge (r1\_tarski (k10\_xtuple\_0 (k4\_funct\_4 X0 X1 X2 X3)) (k2\_tarski X2 X3)) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. k1\_enumset1 X0 X1 X2 = k2\_xboole\_0 (k2\_tarski X0 X1) (k1\_tarski X2) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((r1\_tarski X0 X1) \wedge (r1\_tarski X1 X2)) \Rightarrow (r1\_tarski X0 X2) \quad (4)$$

Assume the following.

$$\forall X0. ((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow (\forall X1. ((v1\_relat\_1 X1) \wedge (v1\_funct\_1 X1)) \Rightarrow (r1\_tarski (k10\_xtuple\_0 (k1\_funct\_4 X0 X1)) (k2\_xboole\_0 (k10\_xtuple\_0 X0) (k10\_xtuple\_0 X1)))) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((r1\_tarski\ X0\ X1)\wedge (r1\_tarski\ X2\ X3))\Rightarrow(r1\_tarski\ (k2\_xboole\_0\ X0\ X2)\ (k2\_xboole\_0\ X1\ X3)) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.r1\_tarski\ X0\ X0 \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.k7\_funcop\_1\ X0\ X1 = k2\_funcop\_1\ X0\ X1 \quad (8)$$

Assume the following.

$$\forall X0.\neg v1\_xboole\_0\ (k1\_tarski\ X0) \quad (9)$$

Assume the following.

$$v1\_xboole\_0\ k1\_xboole\_0 \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(v1\_relat\_1\ (k4\_funct\_4\ X0\ X1\ X2\ X3))\wedge(v1\_funct\_1\ (k4\_funct\_4\ X0\ X1\ X2\ X3)) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.(v1\_relat\_1\ (k16\_funcop\_1\ X0\ X1))\wedge(v1\_funct\_1\ (k16\_funcop\_1\ X0\ X1)) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.k16\_funcop\_1\ X0\ X1 = k7\_funcop\_1\ (k1\_tarski\ X0)\ X1 \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.k4\_funct\_4\ X0\ X1\ X2\ X3 = k1\_funct\_4\ (k16\_funcop\_1\ X0\ X2)\ (k16\_funcop\_1\ X1\ X3) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5. k1\_borsuk\_7\ X0\ X1\ X2\ X3\ X4\ X5 = k1\_funct\_4\ (k4\_funct\_4\ X0\ X1\ X3\ X4)\ (k16\_funcop\_1\ X2\ X5) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.k2\_xboole\_0\ X0\ X1 = k2\_xboole\_0\ X1\ X0 \quad (16)$$

**Theorem 1**

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5. (v1\_xcmplx\_0\ X5)\Rightarrow(r1\_tarski\ (k10\_xtuple\_0\ (k1\_borsuk\_7\ X0\ X1\ X5\ X2\ X3\ X4))\ (k1\_enumset1\ X2\ X3\ X4))$$