

t8\_quaterni  
(TMag361EJwJEwPm9Wvz9K9D1ic9uxP7KgTf)

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Let  $r2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_quaterni : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  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  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow o$  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  $k1\_tarski : \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. (X0 \neq X2) \Rightarrow (k4\_funct\_4 \quad (1)$$

$$X0 \ X2 \ X1 \ X3 = k2\_tarski \ (k4\_tarski \ X0 \ X1) \ (k4\_tarski \ X2 \ X3))$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. (k9\_xtuple\_0 \ (k4\_funct\_4 \quad (2)$$

$$X0 \ X1 \ X2 \ X3) = k2\_tarski \ X0 \ X1) \wedge (r1\_tarski \ (k10\_xtuple\_0 \ (k4\_funct\_4$$

$$X0 \ X1 \ X2 \ X3)) \ (k2\_tarski \ X2 \ X3))$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. k2\_enumset1 \ X0 \ X1 \quad (3)$$

$$X2 \ X3 = k2\_xboole\_0 \ (k2\_tarski \ X0 \ X1) \ (k2\_tarski \ X2 \ X3)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \neg(\neg X0 \in X1) \wedge ((\neg X2 \in X1) \wedge (\neg r1\_xboole\_0 \quad (4)$$

$$(k2\_tarski \ X0 \ X2) \ X1))$$

Assume the following.

$$\forall X0. ((v1\_relat\_1 \ X0) \wedge (v1\_funct\_1 \ X0)) \Rightarrow (\forall X1. (( \quad (5)$$

$$v1\_relat\_1 \ X1) \wedge (v1\_funct\_1 \ X1)) \Rightarrow ((r1\_xboole\_0 \ (k9\_xtuple\_0$$

$$X0) \ (k9\_xtuple\_0 \ X1)) \Rightarrow (k2\_xboole\_0 \ X0 \ X1 = k1\_funct\_4 \ X0 \ X1)))$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. (v1\_relat\_1 \ (k4\_funct\_4 \quad (6)$$

$$X0 \ X1 \ X2 \ X3)) \wedge (v1\_funct\_1 \ (k4\_funct\_4 \ X0 \ X1 \ X2 \ X3))$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(r2\_zfmisc.1\ X0\ X1\ X2\ X3)\Leftrightarrow((X0\neq X1)\wedge((X0\neq X2)\wedge((X0\neq X3)\wedge((X1\neq X2)\wedge((X1\neq X3)\wedge(X2\neq X3)))))) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.k4\_tarski\ X0\ X1 = k2\_tarski\ (k2\_tarski\ X0\ X1)\ (k1\_tarski\ X0) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5.\forall X6.\forall X7.k2\_quaterni\ X0\ X1\ X2\ X3\ X4\ X5\ X6\ X7 = k1\_funct.4\ (k4\_funct.4\ X0\ X1\ X4\ X5)\ (k4\_funct.4\ X2\ X3\ X6\ X7) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k2\_tarski\ X0\ X1)\Leftrightarrow(\forall X3.(X3 \in X2)\Leftrightarrow((X3 = X0)\vee(X3 = X1))) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.k2\_tarski\ X0\ X1 = k2\_tarski\ X1\ X0 \quad (11)$$

**Theorem 1**

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5.\forall X6.\forall X7.(r2\_zfmisc.1\ X0\ X1\ X2\ X3)\Rightarrow(k2\_quaterni\ X0\ X1\ X2\ X3\ X4\ X5\ X6\ X7 = k2\_enumset1\ (k4\_tarski\ X0\ X4)\ (k4\_tarski\ X1\ X5)\ (k4\_tarski\ X2\ X6)\ (k4\_tarski\ X3\ X7))$$