

t130\_member\_1 (TMYt-  
GLFhQJweK9LeUPLJU6Rv6Q3PHJqZ8zh)

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Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $k15\_member\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $k6\_binop\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_member\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_binop\_2 : \iota \Rightarrow \iota$  be given. Let  $k13\_member\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_binop\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  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  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_xcmplx\_0 : \iota \Rightarrow \iota$  be given. Let  $v1\_membered : \iota \Rightarrow o$  be given. Let  $k2\_numbers : \iota$  be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.k1\_enumset1\ X0\ X1\ X2 = k2\_xboole\_0\ (k2\_tarski\ X0\ X1)\ (k1\_tarski\ X2) \quad (1)$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0\ X0) \Rightarrow (\forall X1.(v1\_xcmplx\_0\ X1) \Rightarrow (k7\_member\_1\ (k2\_tarski\ X0\ X1) = k2\_tarski\ (k2\_binop\_2\ X0)\ (k2\_binop\_2\ X1))) \quad (2)$$

Assume the following.

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

Assume the following.

$$\forall X0.k2\_tarski\ X0\ X0 = k1\_tarski\ X0 \quad (4)$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0\ X0) \Rightarrow (\forall X1.(v1\_xcmplx\_0\ X1) \Rightarrow (\forall X2.(v1\_xcmplx\_0\ X2) \Rightarrow (\forall X3.(v1\_xcmplx\_0\ X3) \Rightarrow (k13\_member\_1\ (k2\_tarski\ X0\ X1)\ (k2\_tarski\ X2\ X3) = k2\_enumset1\ (k5\_binop\_2\ X0\ X2)\ (k5\_binop\_2\ X0\ X3)\ (k5\_binop\_2\ X1\ X2)\ (k5\_binop\_2\ X1\ X3)))))) \quad (5)$$

Assume the following.

$$\forall X0 : \iota \Rightarrow \iota. \forall X1. \exists X2. ((v1\_relat\_1 X2) \wedge (v1\_funct\_1 X2)) \wedge ((k9\_xtuple\_0 X2 = X1) \wedge (\forall X3. (X3 \in X1) \Rightarrow (k1\_funct\_1 X2 X3 = X0 X3))) \quad (6)$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_xcmplx\_0 X0) \wedge (v1\_xcmplx\_0 X1)) \Rightarrow (k6\_binop\_2 X0 X1 = k7\_xcmplx\_0 X0 X1) \quad (7)$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_xcmplx\_0 X0) \wedge (v1\_xcmplx\_0 X1)) \Rightarrow (k5\_binop\_2 X0 X1 = k3\_xcmplx\_0 X0 X1) \quad (8)$$

Assume the following.

$$\forall X0. (v1\_xcmplx\_0 X0) \Rightarrow (k2\_binop\_2 X0 = k5\_xcmplx\_0 X0) \quad (9)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. k2\_enumset1 X0 X1 X2 X3 = k2\_xboole\_0 (k2\_tarSKI X0 X1) (k2\_tarSKI X2 X3) \quad (10)$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_xcmplx\_0 X0) \wedge (v1\_xcmplx\_0 X1)) \Rightarrow (v1\_membered (k2\_tarSKI X0 X1)) \quad (11)$$

Assume the following.

$$\forall X0. (v1\_xcmplx\_0 X0) \Rightarrow (v1\_xcmplx\_0 (k5\_xcmplx\_0 X0)) \quad (12)$$

Assume the following.

$$\forall X0. (v1\_xcmplx\_0 X0) \Rightarrow (\forall X1. (v1\_xcmplx\_0 X1) \Rightarrow (k7\_xcmplx\_0 X0 X1 = k3\_xcmplx\_0 X0 (k5\_xcmplx\_0 X1))) \quad (13)$$

Assume the following.

$$\forall X0. (v1\_xcmplx\_0 X0) \Leftrightarrow (X0 \in k2\_numbers) \quad (14)$$

Assume the following.

$$\forall X0. (v1\_membered X0) \Rightarrow (\forall X1. (v1\_membered X1) \Rightarrow (k15\_member\_1 X0 X1 = k13\_member\_1 X0 (k7\_member\_1 X1))) \quad (15)$$

Assume the following.

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

**Theorem 1**

$$\forall X0. (v1\_xcmplx\_0 X0) \Rightarrow (\forall X1. (v1\_xcmplx\_0 X1) \Rightarrow (\forall X2. (v1\_xcmplx\_0 X2) \Rightarrow (k15\_member\_1 (k2\_tarSKI X0 X1) (k1\_tarSKI X2) = k2\_tarSKI (k6\_binop\_2 X0 X2) (k6\_binop\_2 X1 X2))))$$