

# t46\_complex2 (TM- RESHdd5ND2aq5rtJrJAVMMpyHGo9brNca)

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Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_numbers : \iota$  be given. Let  $k1\_complex2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k11\_complex1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_cplx\_0 : \iota \Rightarrow o$  be given. Let  $k3\_cplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_cplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_cplx\_0 : \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $k6\_cplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_cplx\_0 : \iota$  be given. Let  $k15\_complex1 : \iota \Rightarrow \iota$  be given. Let  $k14\_complex1 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((v1\_cplx\_0 X0) \wedge ((v1\_cplx\_0 X1) \wedge (v1\_cplx\_0 X2))) \Rightarrow (k3\_cplx\_0 (k3\_cplx\_0 X0 X1) X2 = k3\_cplx\_0 X0 (k3\_cplx\_0 X1 X2)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((v1\_cplx\_0 X0) \wedge ((v1\_cplx\_0 X1) \wedge (v1\_cplx\_0 X2))) \Rightarrow (k3\_cplx\_0 (k2\_cplx\_0 X0 X1) X2 = k2\_cplx\_0 (k3\_cplx\_0 X0 X2) (k3\_cplx\_0 X1 X2)) \quad (2)$$

Assume the following.

$$\forall X0. (v1\_cplx\_0 X0) \Rightarrow (k3\_cplx\_0 X0 (k4\_cplx\_0 np\_1) = k4\_cplx\_0 X0) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_cplx\_0 X0) \wedge (v1\_cplx\_0 X1)) \Rightarrow (k2\_cplx\_0 X0 (k4\_cplx\_0 X1) = k6\_cplx\_0 X0 X1) \quad (4)$$

Assume the following.

$$k3\_cplx\_0 k1\_cplx\_0 k1\_cplx\_0 = k4\_cplx\_0 np\_1 \quad (5)$$

Assume the following.

$$\forall X0. (v1\_cplx\_0 X0) \Rightarrow (k15\_complex1 X0 = k14\_complex1 X0) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1 X0 k2\_numbers)\wedge(m1\_subset\_1 X1 k2\_numbers))\Rightarrow(k11\_complex1 X0 X1 = k6\_xcmplx\_0 X0 X1) \quad (7)$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0)\Rightarrow(k15\_complex1 (k15\_complex1 X0) = X0) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xcmplx\_0 X0)\wedge(v1\_xcmplx\_0 X1))\Rightarrow(v1\_xcmplx\_0 (k3\_xcmplx\_0 X0 X1)) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xcmplx\_0 X0)\wedge(v1\_xcmplx\_0 X1))\Rightarrow(v1\_xcmplx\_0 (k2\_xcmplx\_0 X0 X1)) \quad (10)$$

Assume the following.

$$v1\_xcmplx\_0 k1\_xcmplx\_0 \quad (11)$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0)\Rightarrow(m1\_subset\_1 (k15\_complex1 X0) k2\_numbers) \quad (12)$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0)\Rightarrow(v1\_xcmplx\_0 (k14\_complex1 X0)) \quad (13)$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0)\Rightarrow(\forall X1.(v1\_xcmplx\_0 X1)\Rightarrow(k1\_complex2 X0 X1 = k3\_xcmplx\_0 X0 (k15\_complex1 X1))) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xcmplx\_0 X0)\wedge(v1\_xcmplx\_0 X1))\Rightarrow(k3\_xcmplx\_0 X0 X1 = k3\_xcmplx\_0 X1 X0) \quad (15)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k2\_numbers)\Rightarrow(v1\_xcmplx\_0 X0) \quad (16)$$

**Theorem 1**

$$\forall X0.(m1\_subset\_1 X0 k2\_numbers)\Rightarrow(\forall X1.(m1\_subset\_1 X1 k2\_numbers)\Rightarrow(\forall X2.(m1\_subset\_1 X2 k2\_numbers)\Rightarrow(k1\_complex2 (k11\_complex1 X0 X1) X2 = k11\_complex1 (k1\_complex2 X0 X2) (k1\_complex2 X1 X2))))$$