

## t39\_comseq\_1

(TMSn5yHY7BcvVdn8Hme521ofzFoj8fXk2Xj)

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Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $k2\_numbers : \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v2\_relat\_1 : \iota \Rightarrow o$  be given. Let  $k31\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $k5\_complex1 : \iota$  be given. Let  $k25\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_0 : \iota$  be given. Let  $k4\_xcmplx\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_xcmplx\_0 : \iota$  be given. Let  $k3\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $np\_2 : \iota$  be given. Let  $v1\_membered : \iota \Rightarrow o$  be given. Let  $k30\_valued\_1 : \iota \Rightarrow \iota$  be given. Let  $k24\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k10\_complex1 : \iota \Rightarrow \iota$  be given. Let  $k6\_complex1 : \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_valued\_0 : \iota \Rightarrow o$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(v1\_xboole\_0 X0) \Rightarrow (X0 = k1\_xboole\_0) \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k2\_numbers) \Rightarrow (\forall X1.((v1\_funct\_1 \\ & X1) \wedge ((v1\_funct\_2 X1 k5\_numbers k2\_numbers) \wedge (m1\_subset\_1 X1 ( \\ & k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k2\_numbers)))))) \Rightarrow ((v2\_relat\_1 \\ & X1) \Rightarrow ((X0 = k5\_complex1) \vee (v2\_relat\_1 (k25\_valued\_1 k5\_numbers \\ & k2\_numbers X1 X0)))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v1\_xcmplx\_0 X0) \wedge ((v1\_xcmplx\_0 \\ & X1) \wedge (v1\_xcmplx\_0 X2))) \Rightarrow (k2\_xcmplx\_0 (k2\_xcmplx\_0 X0 X1) X2 = k2\_xcmplx\_0 \\ & X0 (k2\_xcmplx\_0 X1 X2)) \end{aligned} \tag{3}$$

Assume the following.

$$v1\_xboole\_0 np\_0 \tag{4}$$

Assume the following.

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

Assume the following.

$$k3\_xcmplx\_0 \ k1\_xcmplx\_0 \ k1\_xcmplx\_0 = k4\_xcmplx\_0 \ np\_1 \quad (6)$$

Assume the following.

$$k2\_xcmplx\_0 \ np\_2 \ (k4\_xcmplx\_0 \ np\_1) = np\_1 \quad (7)$$

Assume the following.

$$k2\_xcmplx\_0 \ np\_1 \ np\_1 = np\_2 \quad (8)$$

Assume the following.

$$k2\_xcmplx\_0 \ np\_1 \ np\_0 = np\_1 \quad (9)$$

Assume the following.

$$k2\_xcmplx\_0 \ (k3\_xcmplx\_0 \ (k4\_xcmplx\_0 \ np\_1) \ k1\_xcmplx\_0) \ k1\_xcmplx\_0 = np\_0 \quad (10)$$

Assume the following.

$$k5\_complex1 = k1\_xboole\_0 \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1\_membered \ X1)\wedge((v1\_funct\_1 \ X2)\wedge(m1\_subset\_1 \ X2 \ (k1\_zfmisc\_1 \ (k2\_zfmisc\_1 \ X0 \ X1)))))\Rightarrow(k31\_valued\_1 \ X0 \ X1 \ X2 = k30\_valued\_1 \ X2) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v1\_membered \ X1)\wedge(((v1\_funct\_1 \ X2)\wedge(m1\_subset\_1 \ X2 \ (k1\_zfmisc\_1 \ (k2\_zfmisc\_1 \ X0 \ X1)))))\wedge(v1\_xcmplx\_0 \ X3))\Rightarrow(k25\_valued\_1 \ X0 \ X1 \ X2 \ X3 = k24\_valued\_1 \ X2 \ X3) \quad (13)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 \ X0 \ k2\_numbers)\Rightarrow(k10\_complex1 \ X0 = k4\_xcmplx\_0 \ X0) \quad (14)$$

Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.((v1\_xcmplx\_0 X0)\wedge(v1\_xcmplx\_0 X1))\Rightarrow(v1\_xcmplx\_0 (k2\_xcmplx\_0 X0 X1)) \quad (16)$$

Assume the following.

$$v1\_xcmplx\_0 k1\_xcmplx\_0 \quad (17)$$

Assume the following.

$$v1\_membered k2\_numbers \quad (18)$$

Assume the following.

$$m1\_subset\_1 k6\_complex1 k2\_numbers \quad (19)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k2\_numbers)\Rightarrow(m1\_subset\_1 (k10\_complex1 X0) k2\_numbers) \quad (20)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0)\wedge((v1\_funct\_1 X0)\wedge(v1\_valued\_0 X0)))\Rightarrow(k30\_valued\_1 X0 = k24\_valued\_1 X0 (k4\_xcmplx\_0 np\_1)) \quad (21)$$

Assume the following.

$$k6\_complex1 = np\_1 \quad (22)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow((v4\_relat\_1 X2 X0)\wedge(v5\_relat\_1 X2 X1)) \quad (23)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0)\wedge(v5\_relat\_1 X0 k2\_numbers))\Rightarrow((v1\_relat\_1 X0)\wedge(v1\_valued\_0 X0)) \quad (24)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow(v1\_relat\_1 X2) \quad (25)$$

Assume the following.

$$\forall X0.(v1\_membered X0)\Rightarrow(\forall X1.(m1\_subset\_1 X1 X0)\Rightarrow(v1\_xcmplx\_0 X1)) \quad (26)$$

**Theorem 1**

$$\forall X0.((v1\_funct\_1 X0)\wedge((v1\_funct\_2 X0 k5\_numbers k2\_numbers)\wedge(m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k2\_numbers))))\Rightarrow((v2\_relat\_1 X0)\Rightarrow(v2\_relat\_1 (k31\_valued\_1 k5\_numbers k2\_numbers X0))))$$