

## t37\_comseq\_2

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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  $v2\_comseq\_2 : \iota \Rightarrow o$  be given. Let  $v2\_relat\_1 : \iota \Rightarrow o$  be given. Let  $k3\_comseq\_2 : \iota \Rightarrow \iota$  be given. Let  $k5\_complex1 : \iota$  be given. Let  $k2\_comseq\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k36\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k12\_complex1 : \iota \Rightarrow \iota$  be given. Let  $k15\_complex1 : \iota \Rightarrow \iota$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $k5\_xcmplx\_0 : \iota \Rightarrow \iota$  be given. Let  $v1\_membered : \iota \Rightarrow o$  be given. Let  $k35\_valued\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (k15\_complex1 (k5\_xcmplx\_0 X0) = k12\_complex1 (k15\_complex1 X0)) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_funct\_1 X0) \wedge ((v1\_funct\_2 X0 k5\_numbers k2\_numbers) \wedge \\ & (m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k2\_numbers)))))) \Rightarrow \\ & (((v2\_comseq\_2 X0) \wedge (v2\_relat\_1 X0)) \Rightarrow ((k3\_comseq\_2 X0 = k5\_complex1) \vee \\ & (k3\_comseq\_2 (k36\_valued\_1 k5\_numbers k2\_numbers X0) = k12\_complex1 \\ & (k3\_comseq\_2 X0)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_funct\_1 X0) \wedge ((v1\_funct\_2 X0 k5\_numbers k2\_numbers) \wedge \\ & ((v2\_comseq\_2 X0) \wedge (m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & k5\_numbers k2\_numbers)))))) \Rightarrow ((v2\_relat\_1 X0) \Rightarrow ((k3\_comseq\_2 \\ & X0 = k5\_complex1) \vee (v2\_comseq\_2 (k36\_valued\_1 k5\_numbers k2\_numbers \\ & X0)))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_funct\_1 X0) \wedge ((v1\_funct\_2 X0 k5\_numbers k2\_numbers) \wedge \\ & (m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k2\_numbers)))))) \Rightarrow \\ & ((v2\_comseq\_2 X0) \Rightarrow (k3\_comseq\_2 (k2\_comseq\_2 k5\_numbers X0) = \\ & k15\_complex1 (k3\_comseq\_2 X0))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v1\_membered X1) \wedge ((v1\_funct\_1 \\ & X2) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))))) \Rightarrow (k36\_valued\_1 \\ & X0 X1 X2 = k35\_valued\_1 X2) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. (m1\_subset\_1 X0 k2\_numbers) \Rightarrow (k12\_complex1 X0 = k5\_xcmplx\_0 \\ & X0) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v1\_xboole\_0 X1) \wedge (v1\_membered \\ & X1)) \wedge ((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 X0 X1) \wedge (m1\_subset\_1 X2 \\ & (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))))) \Rightarrow ((v1\_funct\_1 (k35\_valued\_1 \\ & X2)) \wedge (v1\_partfun1 (k35\_valued\_1 X2) X0)) \end{aligned} \quad (7)$$

Assume the following.

$$\neg v1\_xboole\_0 k2\_numbers \quad (8)$$

Assume the following.

$$v1\_membered k2\_numbers \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1\_funct\_1 X0) \wedge ((v1\_funct\_2 X0 k5\_numbers k2\_numbers) \wedge \\ & (m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k2\_numbers)))))) \Rightarrow \\ & (m1\_subset\_1 (k3\_comseq\_2 X0) k2\_numbers) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v1\_membered X1) \wedge ((v1\_funct\_1 \\ & X2) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))))) \Rightarrow ((v1\_funct\_1 \\ & (k36\_valued\_1 X0 X1 X2)) \wedge (m1\_subset\_1 (k36\_valued\_1 X0 X1 X2) ( \\ & k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 k2\_numbers)))) \end{aligned} \quad (11)$$

Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 X0 X1))) \Rightarrow ((v1\_partfun1 X2 X0) \Rightarrow (v1\_funct\_2 X2 X0 X1)) \end{aligned} \tag{13}$$

**Theorem 1**

$$\begin{aligned} & \forall X0. ((v1\_funct\_1 X0) \wedge ((v1\_funct\_2 X0 k5\_numbers k2\_numbers) \wedge \\ & (m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k2\_numbers)))))) \Rightarrow \\ & (((v2\_comseq\_2 X0) \wedge (v2\_relat\_1 X0)) \Rightarrow ((k3\_comseq\_2 X0 = k5\_complex1) \vee \\ & (k3\_comseq\_2 (k2\_comseq\_2 k5\_numbers (k36\_valued\_1 k5\_numbers \\ & k2\_numbers X0)) = k12\_complex1 (k15\_complex1 (k3\_comseq\_2 X0)))))) \end{aligned}$$