

t57_comseq_3 (TMSkT-
gLu7Ggi5Q6RvAB5tZwtEGZe2MgKyyS)

October 27, 2020

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 $v1_series_1 : \iota \Rightarrow o$ be given. Let $k7_comseq_3 : \iota \Rightarrow \iota$ be given. Let $k8_comseq_3 : \iota \Rightarrow \iota$ be given. Let $v1_comseq_3 : \iota \Rightarrow o$ be given. Let $k11_comseq_3 : \iota \Rightarrow \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_series_1 : \iota \Rightarrow \iota$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_complex1 : \iota$ be given. Let $v2_comseq_2 : \iota \Rightarrow o$ be given. Let $k3_complex1 : \iota \Rightarrow \iota$ be given. Let $k3_comseq_2 : \iota \Rightarrow \iota$ be given. Let $k2_seq_2 : \iota \Rightarrow \iota$ be given. Let $k4_complex1 : \iota \Rightarrow \iota$ be given. Let $r2_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k3_series_1 : \iota \Rightarrow \iota$ be given. Let $k10_comseq_3 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k2_numbers) \wedge \\ & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k2_numbers)))))) \Rightarrow \\ & ((v1_comseq_3 X0) \Rightarrow ((v1_series_1 (k7_comseq_3 X0)) \wedge ((v1_series_1 \\ & (k8_comseq_3 X0)) \wedge (k11_comseq_3 X0 = k2_xcmplx_0 (k4_series_1 \\ & (k7_comseq_3 X0)) (k3_xcmplx_0 (k4_series_1 (k8_comseq_3 X0)) \\ & k7_complex1)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k2_numbers) \wedge \\ & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k2_numbers)))))) \Rightarrow \\ & (((v2_comseq_2 (k7_comseq_3 X0)) \wedge (v2_comseq_2 (k8_comseq_3 \\ & X0))) \Rightarrow ((v2_comseq_2 X0) \wedge ((k3_complex1 (k3_comseq_2 X0) = k2_seq_2 \\ & (k7_comseq_3 X0)) \wedge (k4_complex1 (k3_comseq_2 X0) = k2_seq_2 (k8_comseq_3 \\ & X0)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k2_numbers) \wedge \\ & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k2_numbers)))))) \Rightarrow \\ & ((r2_funct_2 k5_numbers k1_numbers (k3_series_1 (k7_comseq_3 \\ & X0)) (k7_comseq_3 (k10_comseq_3 X0))) \wedge (r2_funct_2 k5_numbers \\ & k1_numbers (k3_series_1 (k8_comseq_3 X0)) (k8_comseq_3 (k10_comseq_3 \\ & X0)))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. (((v1_funct_1 X2) \wedge \\ & ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X1)))))) \wedge ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 X0 X1) \wedge (m1_subset_1 \\ & X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \Rightarrow ((r2_funct_2 X0 X1 X2 \\ & X3) \Leftrightarrow (X2 = X3)) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k2_numbers) \wedge \\ & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k2_numbers)))))) \Rightarrow \\ & ((v1_funct_1 (k8_comseq_3 X0)) \wedge ((v1_funct_2 (k8_comseq_3 X0) \\ & k5_numbers k1_numbers) \wedge (m1_subset_1 (k8_comseq_3 X0) (k1_zfmisc_1 \\ & (k2_zfmisc_1 k5_numbers k1_numbers)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k2_numbers) \wedge \\ & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k2_numbers)))))) \Rightarrow \\ & ((v1_funct_1 (k7_comseq_3 X0)) \wedge ((v1_funct_2 (k7_comseq_3 X0) \\ & k5_numbers k1_numbers) \wedge (m1_subset_1 (k7_comseq_3 X0) (k1_zfmisc_1 \\ & (k2_zfmisc_1 k5_numbers k1_numbers)))))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k1_numbers) \wedge \\ & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow \\ & ((v1_funct_1 (k3_series_1 X0)) \wedge ((v1_funct_2 (k3_series_1 X0) \\ & k5_numbers k1_numbers) \wedge (m1_subset_1 (k3_series_1 X0) (k1_zfmisc_1 \\ & (k2_zfmisc_1 k5_numbers k1_numbers)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k2_numbers) \wedge \\ & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k2_numbers)))))) \Rightarrow \\ & ((v1_funct_1 (k10_comseq_3 X0)) \wedge ((v1_funct_2 (k10_comseq_3 \\ & X0) k5_numbers k2_numbers) \wedge (m1_subset_1 (k10_comseq_3 X0) (k1_zfmisc_1 \\ & (k2_zfmisc_1 k5_numbers k2_numbers)))))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k2_numbers) \wedge \\ & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k2_numbers)))))) \Rightarrow \\ & ((v1_comseq_3 X0) \Leftrightarrow (v2_comseq_2 (k10_comseq_3 X0))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k1_numbers) \wedge \\ & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow \\ & ((v1_series_1 X0) \Leftrightarrow (v2_comseq_2 (k3_series_1 X0))) \end{aligned} \quad (10)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k2_numbers) \wedge \\ & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k2_numbers)))))) \Rightarrow \\ & (((v1_series_1 (k7_comseq_3 X0)) \wedge (v1_series_1 (k8_comseq_3 \\ & X0))) \Rightarrow ((v1_comseq_3 X0) \wedge (k11_comseq_3 X0 = k2_xcmplx_0 (k4_series_1 \\ & (k7_comseq_3 X0)) (k3_xcmplx_0 (k4_series_1 (k8_comseq_3 X0)) \\ & k7_complex1)))) \end{aligned}$$