

t42_comseq_3 (TMShd-
wjMDk2smwpBmxJuZNd7nnhqifKhbdE)

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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 $k7_comseq_3 : \iota \Rightarrow \iota$ be given. Let $k8_comseq_3 : \iota \Rightarrow \iota$ 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 $k1_numbers : \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k2_numbers) \wedge \\ & ((v2_comseq_2 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 \\ & k5_numbers k2_numbers)))))) \Rightarrow ((v2_comseq_2 (k7_comseq_3 X0)) \wedge \\ & ((v2_comseq_2 (k8_comseq_3 X0)) \wedge ((k2_seq_2 (k7_comseq_3 X0) = \\ & k3_complex1 (k3_comseq_2 X0)) \wedge (k2_seq_2 (k8_comseq_3 X0) = k4_complex1 \\ & (k3_comseq_2 X0)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k1_numbers) \wedge \\ & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow \\ & (\forall X1. ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 k5_numbers k1_numbers) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow \\ & (\forall X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 k5_numbers k2_numbers) \wedge \\ & (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k2_numbers)))))) \Rightarrow \\ & ((\forall X3. (m2_subset_1 X3 k1_numbers k5_numbers) \Rightarrow ((k3_complex1 \\ & (k8_nat_1 k2_numbers X2 X3) = k8_nat_1 k1_numbers X0 X3) \wedge (k4_complex1 \\ & (k8_nat_1 k2_numbers X2 X3) = k8_nat_1 k1_numbers X1 X3))) \Rightarrow (((v2_comseq_2 \\ & X0) \wedge (v2_comseq_2 X1)) \Leftrightarrow (v2_comseq_2 X2)))))) \end{aligned} \tag{2}$$

Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k2_numbers) \wedge \\ & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k2_numbers)))))) \Rightarrow \\ & ((v1_funct_1 (k7_comseq_3 X0)) \wedge ((v1_funct_2 (k7_comseq_3 X0) \\ & k5_numbers k1_numbers) \wedge (m1_subset_1 (k7_comseq_3 X0) (k1_zfmisc_1 \\ & (k2_zfmisc_1 k5_numbers k1_numbers)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k2_numbers) \wedge \\ & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k2_numbers)))))) \Rightarrow \\ & (\forall X1.((v1_funct_1 X1) \wedge ((v1_funct_2 X1 k5_numbers k1_numbers) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow \\ & ((X1 = k8_comseq_3 X0) \Leftrightarrow (\forall X2.(m2_subset_1 X2 k1_numbers \\ & k5_numbers) \Rightarrow (k8_nat_1 k1_numbers X1 X2 = k4_complex1 (k8_nat_1 \\ & k2_numbers X0 X2)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k2_numbers) \wedge \\ & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k2_numbers)))))) \Rightarrow \\ & (\forall X1.((v1_funct_1 X1) \wedge ((v1_funct_2 X1 k5_numbers k1_numbers) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow \\ & ((X1 = k7_comseq_3 X0) \Leftrightarrow (\forall X2.(m2_subset_1 X2 k1_numbers \\ & k5_numbers) \Rightarrow (k8_nat_1 k1_numbers X1 X2 = k3_complex1 (k8_nat_1 \\ & k2_numbers X0 X2)))))) \end{aligned} \quad (6)$$

Theorem 1

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