

t62_comseq_3

(TMUqx9y7vvXF8sUT2bDksw7E5RKnMcPqBj4)

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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 $v1_comseq_3 : \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k17_complex1 : \iota \Rightarrow \iota$ be given. Let $k11_complex1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_comseq_3 : \iota \Rightarrow \iota$ be given. Let $v2_comseq_2 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k2_numbers) \wedge \\
 & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k2_numbers)))))) \Rightarrow \\
 & ((v2_comseq_2 X0) \Leftrightarrow (\forall X1.(m1_subset_1 X1 k1_numbers) \Rightarrow (\\
 & \neg(\neg r1_xxreal_0 X1 k6_numbers) \wedge (\forall X2.(m2_subset_1 X2 k1_numbers \\
 & k5_numbers) \Rightarrow (\exists X3.(m2_subset_1 X3 k1_numbers k5_numbers) \wedge \\
 & (r1_xxreal_0 X2 X3) \wedge (r1_xxreal_0 X1 (k17_complex1 (k11_complex1 \\
 & (k8_nat_1 k2_numbers X0 X3) (k8_nat_1 k2_numbers X0 X2))))))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k2_numbers) \wedge \\
 & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k2_numbers)))))) \Rightarrow \\
 & ((v1_funct_1 (k10_comseq_3 X0)) \wedge ((v1_funct_2 (k10_comseq_3 \\
 & X0) k5_numbers k2_numbers) \wedge (m1_subset_1 (k10_comseq_3 X0) (k1_zfmisc_1 \\
 & (k2_zfmisc_1 k5_numbers k2_numbers))))))
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k2_numbers) \wedge \\
 & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k2_numbers)))))) \Rightarrow \\
 & ((v1_comseq_3 X0) \Leftrightarrow (v2_comseq_2 (k10_comseq_3 X0)))
 \end{aligned} \tag{3}$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k2_numbers) \wedge \\ & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k2_numbers)))))) \Rightarrow \\ & ((v1_comseq_3 X0) \Leftrightarrow (\forall X1.(m1_subset_1 X1 k1_numbers) \Rightarrow (\\ & \neg(\neg r1_xxreal_0 X1 k6_numbers) \wedge (\forall X2.(m2_subset_1 X2 k1_numbers \\ & k5_numbers) \Rightarrow (\exists X3.(m2_subset_1 X3 k1_numbers k5_numbers) \wedge \\ & (r1_xxreal_0 X2 X3) \wedge (r1_xxreal_0 X1 (k17_complex1 (k11_complex1 \\ & (k8_nat_1 k2_numbers (k10_comseq_3 X0) X3) (k8_nat_1 k2_numbers \\ & (k10_comseq_3 X0) X2)))))))))) \end{aligned}$$