

t3_seqm_3

(TMbywL6at3ZTKf7XUBQ5x76EWLEvkSDtsjs)

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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 $k1_numbers : \iota$ 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 $v6_valued_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Assume the following.

$$\begin{aligned}
& \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k1_numbers) \wedge \\
& (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow \\
& (((\forall X1.(m2_subset_1 X1 k1_numbers k5_numbers) \Rightarrow (\neg r1_xxreal_0 \\
& (k8_nat_1 k1_numbers X0 X1) (k8_nat_1 k1_numbers X0 (k2_nat_1 X1 \\
& np_1)))))) \Rightarrow (\forall X1.(m2_subset_1 X1 k1_numbers k5_numbers) \Rightarrow \\
& (\forall X2.(m2_subset_1 X2 k1_numbers k5_numbers) \Rightarrow (\neg r1_xxreal_0 \\
& (k8_nat_1 k1_numbers X0 X1) (k8_nat_1 k1_numbers X0 (k2_nat_1 (\\
& k2_nat_1 X1 np_1) X2)))))) \wedge (((\forall X1.(m2_subset_1 X1 k1_numbers \\
& k5_numbers) \Rightarrow (\forall X2.(m2_subset_1 X2 k1_numbers k5_numbers) \Rightarrow \\
& (\neg r1_xxreal_0 (k8_nat_1 k1_numbers X0 X1) (k8_nat_1 k1_numbers \\
& X0 (k2_nat_1 (k2_nat_1 X1 np_1) X2)))))) \Rightarrow (\forall X1.(m2_subset_1 \\
& X1 k1_numbers k5_numbers) \Rightarrow (\forall X2.(m2_subset_1 X2 k1_numbers \\
& k5_numbers) \Rightarrow (\neg (\neg r1_xxreal_0 X2 X1) \wedge (r1_xxreal_0 (k8_nat_1 k1_numbers \\
& X0 X1) (k8_nat_1 k1_numbers X0 X2)))))) \wedge ((\forall X1.(m2_subset_1 \\
& X1 k1_numbers k5_numbers) \Rightarrow (\forall X2.(m2_subset_1 X2 k1_numbers \\
& k5_numbers) \Rightarrow (\neg (\neg r1_xxreal_0 X2 X1) \wedge (r1_xxreal_0 (k8_nat_1 k1_numbers \\
& X0 X1) (k8_nat_1 k1_numbers X0 X2)))))) \Rightarrow (\forall X1.(m2_subset_1 \\
& X1 k1_numbers k5_numbers) \Rightarrow (\neg r1_xxreal_0 (k8_nat_1 k1_numbers \\
& X0 X1) (k8_nat_1 k1_numbers X0 (k2_nat_1 X1 np_1))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k1_numbers) \wedge \\
& (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow \\
& ((v6_valued_0 X0) \Leftrightarrow (\forall X1.(m2_subset_1 X1 k1_numbers k5_numbers) \Rightarrow \\
& (\neg r1_xreal_0 (k8_nat_1 k1_numbers X0 X1) (k8_nat_1 k1_numbers \\
& X0 (k2_nat_1 X1 np_1))))))
\end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k1_numbers) \wedge \\
& (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow \\
& ((v6_valued_0 X0) \Leftrightarrow (\forall X1.(m2_subset_1 X1 k1_numbers k5_numbers) \Rightarrow \\
& (\forall X2.(m2_subset_1 X2 k1_numbers k5_numbers) \Rightarrow (\neg r1_xreal_0 \\
& (k8_nat_1 k1_numbers X0 X1) (k8_nat_1 k1_numbers X0 (k2_nat_1 (\\
& k2_nat_1 X1 np_1) X2))))))
\end{aligned}$$