

t24_chain_1
(TMSb3E8eR8PfGsQvbn dUC5yWuiAr1iGARta)

October 27, 2020

Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $m2_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_euclid : \iota \Rightarrow \iota$ be given. Let $k2_finseq_1 : \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_chain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v1_xboole_0 X0) \wedge (m2_subset_1 X0 k1_numbers k5_numbers)) \Rightarrow \\
& \quad (\forall X1.(m2_finseq_2 X1 k1_numbers (k1_euclid X0)) \Rightarrow (\forall X2. \\
& \quad (m2_finseq_2 X2 k1_numbers (k1_euclid X0)) \Rightarrow (\forall X3.(m2_finseq_2 \\
& X3 k1_numbers (k1_euclid X0)) \Rightarrow ((X1 \in k3_chain_1 X0 X2 X3) \Leftrightarrow (\neg(\neg \forall X4. \\
& (m2_subset_1 X4 k5_numbers (k2_finseq_1 X0)) \Rightarrow ((r1_xxreal_0 (\\
& k1_seq_1 X2 X4) (k1_seq_1 X1 X4)) \wedge (r1_xxreal_0 (k1_seq_1 X1 X4) \\
& (k1_seq_1 X3 X4)))))) \wedge (\forall X4.(m2_subset_1 X4 k5_numbers (k2_finseq_1 \\
& X0)) \Rightarrow (\neg(\neg r1_xxreal_0 (k1_seq_1 X2 X4) (k1_seq_1 X3 X4)) \wedge ((r1_xxreal_0 \\
& (k1_seq_1 X1 X4) (k1_seq_1 X3 X4)) \vee (r1_xxreal_0 (k1_seq_1 X2 X4) \\
& (k1_seq_1 X1 X4))))))))))
\end{aligned} \tag{1}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v1_xboole_0 X0) \wedge (m2_subset_1 X0 k1_numbers k5_numbers)) \Rightarrow \\
& \quad (\forall X1.(m2_finseq_2 X1 k1_numbers (k1_euclid X0)) \Rightarrow (\forall X2. \\
& (m2_finseq_2 X2 k1_numbers (k1_euclid X0)) \Rightarrow (\forall X3.(m2_finseq_2 \\
& X3 k1_numbers (k1_euclid X0)) \Rightarrow ((\forall X4.(m2_subset_1 X4 k5_numbers \\
& (k2_finseq_1 X0)) \Rightarrow (r1_xxreal_0 (k1_seq_1 X1 X4) (k1_seq_1 X2 X4))) \Rightarrow \\
& ((X3 \in k3_chain_1 X0 X1 X2) \Leftrightarrow (\forall X4.(m2_subset_1 X4 k5_numbers \\
& (k2_finseq_1 X0)) \Rightarrow ((r1_xxreal_0 (k1_seq_1 X1 X4) (k1_seq_1 X3 \\
& X4)) \wedge (r1_xxreal_0 (k1_seq_1 X3 X4) (k1_seq_1 X2 X4))))))))))
\end{aligned}$$