

t1_rewrite1 (TMGMKTk- STg2NTt4ESza8EdKMiozZahnUnCN)

October 27, 2020

Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k1_rewrite1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k1_finseq_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k7_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k5_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_finseq_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow (k1_finseq_3 X0 (k10_xtuple_0 X0) = k1_xboole_0) \quad (1)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow ((k7_finseq_1 X0 k1_xboole_0 = X0) \wedge (k7_finseq_1 k1_xboole_0 X0 = X0)) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow ((v1_relat_1 (k1_finseq_3 X0 X1)) \wedge ((v1_funct_1 (k1_finseq_3 X0 X1)) \wedge (v1_finseq_1 (k1_finseq_3 X0 X1)))) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow \\ & (\forall X1. ((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 X1))) \Rightarrow (\forall X2. ((v1_relat_1 X2) \wedge ((v1_funct_1 X2) \wedge (v1_finseq_1 X2)))) \Rightarrow (((X0 = k1_xboole_0) \vee (X1 = k1_xboole_0)) \Rightarrow ((X2 = k1_rewrite1 X0 X1) \Leftrightarrow (X2 = k7_finseq_1 X0 X1))) \wedge (\neg (X0 \neq k1_xboole_0) \wedge ((X1 \neq k1_xboole_0) \wedge (\neg (X2 = k1_rewrite1 X0 X1) \Leftrightarrow (\exists X3. (m1_subset_1 X3 k5_numbers) \wedge (\exists X4. ((v1_relat_1 X4) \wedge ((v1_funct_1 X4) \wedge (v1_finseq_1 X4))) \wedge ((k3_finseq_1 X0 = k2_nat_1 X3 np_1) \wedge ((X4 = k5_relat_1 X0 (k2_finseq_1 X3)) \wedge (X2 = k7_finseq_1 X4 X1)))))))))) \quad (4) \end{aligned}$$

Theorem 1

$$\forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 X0)))\Rightarrow$$
$$((k1_rewrite1 k1_xboole_0 X0 = X0)\wedge(k1_rewrite1 X0 k1_xboole_0 =$$
$$X0))$$