

t11_rewrite1

(TMXSaWBr9ywfAJ5fceB3TcWwDiuE36ub7Gq)

October 27, 2020

Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $r1_rewrite1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k4_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_rewrite1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.(m1_rewrite1 X1 X0) \Rightarrow (v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 X1))) \quad (1)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.\forall X2.(r1_rewrite1 X0 X1 X2) \Leftrightarrow (\exists X3.(m1_rewrite1 X3 X0) \wedge ((k1_funct_1 X3 np_1 = X1) \wedge (k1_funct_1 X3 (k3_finseq_1 X3) = X2)))) \quad (2)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 X1))) \Rightarrow ((m1_rewrite1 X1 X0) \Leftrightarrow ((\neg r1_xxreal_0 (k3_finseq_1 X1) k6_numbers) \wedge (\forall X2.(m1_subset_1 X2 k5_numbers) \Rightarrow (((X2 \in k4_finseq_1 X1) \wedge (k2_nat_1 X2 np_1 \in k4_finseq_1 X1)) \Rightarrow (k4_tarski (k1_funct_1 X1 X2) (k1_funct_1 X1 (k2_nat_1 X2 np_1)) \in X0)))))) \quad (3)$$

Theorem 1

$$\forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.\forall X2.(r1_rewrite1 X0 X1 X2) \Leftrightarrow (\exists X3.((v1_relat_1 X3) \wedge ((v1_funct_1 X3) \wedge (v1_finseq_1 X3))) \wedge ((\neg r1_xxreal_0 (k3_finseq_1 X3) k6_numbers) \wedge ((k1_funct_1 X3 np_1 = X1) \wedge ((k1_funct_1 X3 (k3_finseq_1 X3) = X2) \wedge (\forall X4.(m1_subset_1 X4 k5_numbers) \Rightarrow (((X4 \in k4_finseq_1 X3) \wedge (k2_nat_1 X4 np_1 \in k4_finseq_1 X3)) \Rightarrow (k4_tarski (k1_funct_1 X3 X4) (k1_funct_1 X3 (k2_nat_1 X4 np_1)) \in X0))))))))))$$