

t4_rewrite1
(TMLNVrsgsipXADSWE6ZCe6wh8uDJe77njue)

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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 $k1_xboole_0 : \iota$ be given. Let $k1_rewrite1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k7_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_finseq_1 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow ((k7_finseq_1 X0 k1_xboole_0 = X0) \wedge (k7_finseq_1 k1_xboole_0 X0 = X0)) \quad (1)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 X1))) \Rightarrow (\forall X2.(X0 \neq k1_xboole_0) \Rightarrow (k1_rewrite1 (k7_finseq_1 X1 (k9_finseq_1 X2)) X0 = k7_finseq_1 X1 X0))) \quad (2)$$

Assume the following.

$$\forall X0.k9_finseq_1 X0 = k5_finseq_1 X0 \quad (3)$$

Assume the following.

$$\forall X0.v1_finseq_1 (k5_finseq_1 X0) \quad (4)$$

Assume the following.

$$v1_xboole_0 k1_xboole_0 \quad (5)$$

Assume the following.

$$\forall X0.(v1_relat_1 (k9_finseq_1 X0)) \wedge (v1_funct_1 (k9_finseq_1 X0)) \quad (6)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (v1_relat_1 X0) \quad (7)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (v1_funct_1 X0) \quad (8)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge (v1_xboole_0 X0)) \Rightarrow ((v1_relat_1 X0) \wedge (v1_finseq_1 X0)) \quad (9)$$

Theorem 1

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow (\forall X1.(X0 \neq k1_xboole_0) \Rightarrow (k1_rewrite1 (k9_finseq_1 X1) X0 = X0))$$