

t30_finseq_7 (TMN-
wGTWBv4Atk8mNbhbEVN4g7SVMAeLBUYx)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_1 : \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k7_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_finseq_7 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(m2_finseq_1 X1 X0) \Rightarrow \\ (\forall X2.(v7_ordinal1 X2) \Rightarrow (\forall X3.(v7_ordinal1 X3) \Rightarrow (\\ k3_finseq_1 (k2_finseq_7 X0 X1 X2 X3) = k3_finseq_1 X1)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.\forall X2.(m2_finseq_1 \\ X2 X1) \Rightarrow (((r1_xxreal_0 np_1 X0) \wedge (r1_xxreal_0 X0 (k3_finseq_1 \\ X2))) \Rightarrow (k7_partfun1 X1 X2 X0 = k1_funct_1 X2 X0))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(m2_finseq_1 X1 X0) \Rightarrow \\ (\forall X2.(v7_ordinal1 X2) \Rightarrow (\forall X3.(v7_ordinal1 X3) \Rightarrow (\\ \forall X4.(v7_ordinal1 X4) \Rightarrow (\neg (X2 \neq X3) \wedge ((X4 \neq X3) \wedge (k1_funct_1 \\ (k2_finseq_7 X0 X1 X2 X4) X3 \neq k1_funct_1 X1 X3))))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0) \wedge \\ ((m1_finseq_1 X1 X0) \wedge ((v7_ordinal1 X2) \wedge (v7_ordinal1 X3)))) \Rightarrow \\ (m2_finseq_1 (k2_finseq_7 X0 X1 X2 X3) X0) \end{aligned} \quad (5)$$

Theorem 1

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(m2_finseq_1 X1 X0) \Rightarrow \\ (\forall X2.(v7_ordinal1 X2) \Rightarrow (\forall X3.(v7_ordinal1 X3) \Rightarrow (\\ \forall X4.(v7_ordinal1 X4) \Rightarrow (((r1_xxreal_0 np_1 X3) \wedge (r1_xxreal_0 \\ X3 (k3_finseq_1 X1))) \Rightarrow ((X2 = X3) \vee ((X4 = X3) \vee (k7_partfun1 X0 (k2_finseq_7 \\ X0 X1 X2 X4) X3 = k7_partfun1 X0 X1 X3)))))))) \end{aligned}$$