

t28_finseq_7 (TMUAvZygeJkKnxtRWRmAMLn- MVf92oSc3DXu)

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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 $r1_xreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k2_finseq_7 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k17_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_nat_d : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $k2_rfinseq : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. 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 $k7_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k1_xreal_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $v2_xreal_0 : \iota \Rightarrow o$ 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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k16_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (1)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (k7_nat_d X0 np_2 = k7_nat_d (k7_nat_d X0 np_1) np_1) \quad (2)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow ((k7_finseq_1 X0 k1_xboole_0 = X0) \wedge (k7_finseq_1 k1_xboole_0 X0 = X0)) \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(m2_finseq_1 X1 X0) \Rightarrow \\ (\forall X2.(v7_ordinal1 X2) \Rightarrow (\forall X3.(v7_ordinal1 X3) \Rightarrow (\\ ((r1_xxreal_0 np_1 X2) \wedge (r1_xxreal_0 X3 (k3_finseq_1 X1))) \Rightarrow (\\ (r1_xxreal_0 X3 X2) \vee (k2_finseq_7 X0 X1 X2 X3 = k8_finseq_1 X0 (k8_finseq_1 \\ X0 (k8_finseq_1 X0 (k8_finseq_1 X0 (k17_finseq_1 X0 (k7_nat_d X2 \\ np_1) X1) (k12_finseq_1 X0 (k7_partfun1 X0 X1 X3))) (k17_finseq_1 \\ X0 (k7_nat_d (k7_nat_d X3 X2) np_1) (k2_rfinseq X0 X2 X1))) (k12_finseq_1 \\ X0 (k7_partfun1 X0 X1 X2))) (k2_rfinseq X0 X3 X1)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (k1_xreal_0 X0 X0 = k6_numbers) \quad (5)$$

Assume the following.

$$\begin{aligned} ((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge \\ ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \end{aligned} \quad (6)$$

Assume the following.

$$r1_xxreal_0 np_1 np_1 \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1_finseq_1 X1 X0) \wedge (m1_finseq_1 \\ X2 X0)) \Rightarrow (k8_finseq_1 X0 X1 X2 = k7_finseq_1 X1 X2) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1 X0) \wedge (v7_ordinal1 X1)) \Rightarrow (\\ k7_nat_d X0 X1 = k1_xreal_0 X0 X1) \quad (10)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (11)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v7_ordinal1 X1) \wedge (m1_finseq_1 \\ X2 X0)) \Rightarrow (k17_finseq_1 X0 X1 X2 = k16_finseq_1 X1 X2) \quad (13)$$

Assume the following.

$$\begin{aligned} \forall X0.\exists X1.(m1_finseq_1 X1 X0)\wedge((v1_relat_1 X1)\wedge \\ (v4_relat_1 X1 k5_numbers)\wedge((v5_relat_1 X1 X0)\wedge((v1_funct_1 \\ X1)\wedge((v1_xboole_0 X1)\wedge((v1_finset_1 X1)\wedge(v1_finseq_1 X1)))))) \end{aligned} \quad (14)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 X0)))\Rightarrow \\ ((v1_relat_1 (k16_finseq_1 k6_numbers X0))\wedge((v1_funct_1 (k16_finseq_1 \\ k6_numbers X0))\wedge((v1_xboole_0 (k16_finseq_1 k6_numbers X0))\wedge \\ (v1_finseq_1 (k16_finseq_1 k6_numbers X0)))))) \end{aligned} \quad (15)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(m2_finseq_1 X1 X0)\Rightarrow((v1_funct_1 X1)\wedge \\ (v1_finseq_1 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers \\ X0)))) \end{aligned} \quad (16)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow((v1_relat_1 X1)\wedge \\ (v1_funct_1 X1)\wedge(v1_finseq_1 X1)) \end{aligned} \quad (17)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((v1_relat_1 X1)\wedge((v5_relat_1 \\ X1 X0)\wedge(v1_funct_1 X1)))\Rightarrow(m1_subset_1 (k7_partfun1 X0 X1 X2) X0) \end{aligned} \quad (18)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((v7_ordinal1 X0)\wedge(v7_ordinal1 X1))\Rightarrow(\\ m1_subset_1 (k7_nat_d X0 X1) k5_numbers) \end{aligned} \quad (19)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge(m1_subset_1 X1 X0))\Rightarrow \\ (m2_finseq_1 (k12_finseq_1 X0 X1) X0) \end{aligned} \quad (20)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1)\Rightarrow(v7_ordinal1 X0) \quad (21)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow(v5_relat_1 X1 X0) \quad (22)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow(v1_xreal_0 X0) \quad (23)$$

Theorem 1

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(m2_finseq_1 X1 X0) \Rightarrow \\ & (\forall X2.(v7_ordinal1 X2) \Rightarrow ((r1_xxreal_0 X2 (k3_finseq_1 X1)) \Rightarrow \\ & ((r1_xxreal_0 X2 np_1) \vee (k2_finseq_7 X0 X1 np_1 X2 = k8_finseq_1 \\ & X0 (k8_finseq_1 X0 (k8_finseq_1 X0 (k12_finseq_1 X0 (k7_partfun1 \\ & X0 X1 X2)) (k17_finseq_1 X0 (k7_nat_d X2 np_2) (k2_rfinseq X0 np_1 \\ & X1))) (k12_finseq_1 X0 (k7_partfun1 X0 X1 np_1))) (k2_rfinseq \\ & X0 X2 X1)))))) \end{aligned}$$