

l7_sprect_4

(TMaWRJ1GVf6qSLKF71pi7fKAN1rGEkuEy6X)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v3_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_6 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k15_euclid : \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $v1_topreal1 : \iota \Rightarrow o$ be given. Let $v2_topreal1 : \iota \Rightarrow o$ be given. Let $v1_goboard5 : \iota \Rightarrow o$ be given. Let $v2_goboard5 : \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k20_pscomp_1 : \iota \Rightarrow \iota$ be given. Let $k3_topreal1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_goboard9 : \iota \Rightarrow \iota$ be given. Let $k3_goboard9 : \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k4_finseq_5 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $v1_sprect_2 : \iota \Rightarrow o$ be given. Let $k1_goboard9 : \iota \Rightarrow \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_finseq_5 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(m2_finseq_1 X1 X0) \Rightarrow \\ & ((\neg v1_xboole_0 X1) \Rightarrow ((k7_partfun1 X0 X1 np_1 = k7_partfun1 X0 (\\ & k4_finseq_5 X0 X1) (k3_finseq_1 X1)) \wedge (k7_partfun1 X0 X1 (k3_finseq_1 \\ & X1) = k7_partfun1 X0 (k4_finseq_5 X0 X1) np_1)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v3_funct_1 X0) \wedge ((\neg v1_xboole_0 X0) \wedge ((v1_finseq_6 \\ & X0 (u1_struct_0 (k15_euclid np_2))) \wedge ((v1_topreal1 X0) \wedge ((v2_topreal1 \\ & X0) \wedge ((v1_goboard5 X0) \wedge ((v2_goboard5 X0) \wedge (m2_finseq_1 X0 (u1_struct_0 \\ & (k15_euclid np_2)))))))))) \Rightarrow ((v1_sprect_2 X0) \vee (v1_sprect_2 \\ & (k1_goboard9 X0))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v1_xboole_0 X0) \wedge ((\neg v3_funct_1 X0) \wedge ((v1_finseq_6 \\ X0 (u1_struct_0 (k15_euclid np_2))) \wedge ((v1_topreal1 X0) \wedge ((v2_topreal1 \\ X0) \wedge ((v1_goboard5 X0) \wedge ((v2_goboard5 X0) \wedge (m2_finseq_1 X0 (u1_struct_0 \\ (k15_euclid np_2)))))))))) \Rightarrow (k3_goboard9 (k1_goboard9 X0) = \\ k2_goboard9 X0) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v1_xboole_0 X0) \wedge ((\neg v3_funct_1 X0) \wedge ((v1_finseq_6 \\ X0 (u1_struct_0 (k15_euclid np_2))) \wedge ((v1_topreal1 X0) \wedge ((v2_topreal1 \\ X0) \wedge ((v1_goboard5 X0) \wedge ((v2_goboard5 X0) \wedge (m2_finseq_1 X0 (u1_struct_0 \\ (k15_euclid np_2)))))))))) \Rightarrow (k3_goboard9 X0 = k2_goboard9 (k1_goboard9 \\ X0)) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.(m2_finseq_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ (k3_topreal1 np_2 X0 = k3_topreal1 np_2 (k4_finseq_5 (u1_struct_0 \\ (k15_euclid np_2)) X0)) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0) \Rightarrow (k4_finseq_5 X0 X1 = \\ k3_finseq_5 X1) \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v1_xboole_0 X0) \wedge ((v1_finseq_6 X0 (u1_struct_0 \\ (k15_euclid np_2))) \wedge ((v1_topreal1 X0) \wedge ((v2_topreal1 X0) \wedge \\ (v1_goboard5 X0) \wedge ((v2_goboard5 X0) \wedge (m1_finseq_1 X0 (u1_struct_0 \\ (k15_euclid np_2)))))))))) \Rightarrow (k1_goboard9 X0 = k3_finseq_5 X0) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v1_xboole_0 X0) \wedge ((\neg v3_funct_1 X0) \wedge ((v1_finseq_6 \\ X0 (u1_struct_0 (k15_euclid np_2))) \wedge ((v1_topreal1 X0) \wedge ((v2_topreal1 \\ X0) \wedge ((v1_goboard5 X0) \wedge ((v2_goboard5 X0) \wedge ((v1_sprect_2 X0) \wedge \\ (m2_finseq_1 X0 (u1_struct_0 (k15_euclid np_2)))))))))) \Rightarrow (\\ \neg(k7_partfun1 (u1_struct_0 (k15_euclid np_2)) X0 np_1 = k20_pscomp_1 \\ (k3_topreal1 np_2 X0)) \wedge (k2_goboard9 X0 = k3_goboard9 X0)) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.(v1_xboole_0 X0) \Rightarrow (v1_xboole_0 (k2_zfmisc_1 \\ X0 X1)) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.(v1_xboole_0 X1)\Rightarrow(v1_xboole_0 (k2_zfmisc_1 X0 X1)) \quad (12)$$

Assume the following.

$$v1_xboole_0 k1_xboole_0 \quad (13)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge((\neg v3_funct_1 X0)\wedge(v1_finseq_1 X0))))\Rightarrow((v1_relat_1 (k3_finseq_5 X0))\wedge((v1_funct_1 (k3_finseq_5 X0))\wedge((\neg v3_funct_1 (k3_finseq_5 X0))\wedge(v1_finseq_1 (k3_finseq_5 X0)))))) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0)\Rightarrow((v1_funct_1 X1)\wedge((v1_finseq_1 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers X0)))))) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge(v1_finseq_1 X1))) \quad (16)$$

Assume the following.

$$\forall X0.((\neg v1_xboole_0 X0)\wedge((v1_finseq_6 X0 (u1_struct_0 (k15_euclid np_2))))\wedge((v1_topreal1 X0)\wedge((v2_topreal1 X0)\wedge((v1_goboard5 X0)\wedge((v2_goboard5 X0)\wedge(m1_finseq_1 X0 (u1_struct_0 (k15_euclid np_2))))))))\Rightarrow((\neg v1_xboole_0 (k1_goboard9 X0))\wedge((v1_finseq_6 (k1_goboard9 X0) (u1_struct_0 (k15_euclid np_2)))\wedge((v1_topreal1 (k1_goboard9 X0))\wedge((v2_topreal1 (k1_goboard9 X0))\wedge((v1_goboard5 (k1_goboard9 X0))\wedge((v2_goboard5 (k1_goboard9 X0))\wedge(m2_finseq_1 (k1_goboard9 X0) (u1_struct_0 (k15_euclid np_2)))))))))) \quad (17)$$

Assume the following.

$$\forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.(m2_finseq_1 X1 X0)\Rightarrow((v1_finseq_6 X1 X0)\Leftrightarrow(k7_partfun1 X0 X1 np_1 = k7_partfun1 X0 X1 (k3_finseq_1 X1)))) \quad (18)$$

Assume the following.

$$\forall X0.\forall X1.(v1_xboole_0 X0)\Rightarrow(\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))\Rightarrow(v1_xboole_0 X2)) \quad (19)$$

Theorem 1

$$\begin{aligned} \forall X0. (& \neg v1_xboole_0 X0) \wedge ((\neg v3_funct_1 X0) \wedge ((v1_finseq_6 \\ & X0 (u1_struct_0 (k15_euclid np_2))) \wedge ((v1_topreal1 X0) \wedge ((v2_topreal1 \\ & X0) \wedge ((v1_goboard5 X0) \wedge ((v2_goboard5 X0) \wedge (m2_finseq_1 X0 (u1_struct_0 \\ & (k15_euclid np_2)))))))))) \Rightarrow (\neg (k7_partfun1 (u1_struct_0 (k15_euclid \\ & np_2)) X0 np_1 = k20_pscomp_1 (k3_topreal1 np_2 X0)) \wedge (k2_goboard9 \\ & X0 = k3_goboard9 X0)) \end{aligned}$$