

t37_gobrd14 (TM-
cuiRe69xoPADj8nXVsD6pK3yD9ZwASm3L)

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Let $v3_funct_1 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ 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 $v1_sprect_2 : \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_jordan2c : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_topreal1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_goboard9 : \iota \Rightarrow \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_xboole_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_jordan2c : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_goboard9 : \iota \Rightarrow \iota$ 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 $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k4_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((k2_xboole_0 X0 X1 = k2_xboole_0 X2 X1) \wedge ((r1_xboole_0 X0 X1) \wedge (r1_xboole_0 X2 X1))) \Rightarrow (X0 = X2) \quad (1)$$

Assume the following.

$$\forall X0. ((\neg v3_funct_1 X0) \wedge ((\neg v1_xboole_0 X0) \wedge ((v1_finseq_6 X0 (u1_struct_0 (k15_euclid np_2)))) \wedge ((v1_topreal1 X0) \wedge ((v2_topreal1 X0) \wedge ((v1_goboard5 X0) \wedge ((v2_goboard5 X0) \wedge ((v1_sprect_2 X0) \wedge (m2_finseq_1 X0 (u1_struct_0 (k15_euclid np_2)))))))))) \Rightarrow (k2_jordan2c np_2 (k3_topreal1 np_2 X0) = k2_goboard9 X0) \quad (2)$$

Assume the following.

$$\forall X0. (m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 (k15_euclid X0)))) \Rightarrow (k4_subset_1 (u1_struct_0 (k15_euclid X0)) (k1_jordan2c X0 X1) (k2_jordan2c X0 X1) = k3_subset_1 (u1_struct_0 (k15_euclid X0)) X1)) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 (k15_euclid X0)))) \Rightarrow \\ & (r1_xboole_0 (k1_jordan2c X0 X1) (k2_jordan2c X0 X1))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v3_funct_1 X0) \wedge ((\neg v1_xboole_0 X0) \wedge ((v1_finseq_6 \\ & X0 (u1_struct_0 (k15_euclid np_2))) \wedge ((v1_topreal1 X0) \wedge ((v2_topreal1 \\ & X0) \wedge ((v1_goboard5 X0) \wedge ((v2_goboard5 X0) \wedge (m2_finseq_1 X0 (u1_struct_0 \\ & (k15_euclid np_2)))))))))) \Rightarrow (r1_subset_1 (k2_goboard9 X0) (\\ & k3_goboard9 X0)) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1_xboole_0 X0) \wedge ((\neg v3_funct_1 X0) \wedge ((v1_finseq_6 \\ & X0 (u1_struct_0 (k15_euclid np_2))) \wedge ((v1_topreal1 X0) \wedge ((v2_topreal1 \\ & X0) \wedge ((v1_goboard5 X0) \wedge ((v2_goboard5 X0) \wedge (m2_finseq_1 X0 (u1_struct_0 \\ & (k15_euclid np_2)))))))))) \Rightarrow (k3_subset_1 (u1_struct_0 (k15_euclid \\ & np_2)) (k3_topreal1 np_2 X0) = k4_subset_1 (u1_struct_0 (k15_euclid \\ & np_2)) (k2_goboard9 X0) (k3_goboard9 X0)) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0. \forall X1. (r1_xboole_0 X0 X1) \Rightarrow (r1_xboole_0 X1 X0) \quad (7)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 np_2) \wedge (m2_subset_1 np_2 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_2 k5_numbers) \wedge (m1_subset_1 np_2 k1_numbers)) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge (\neg v1_xboole_0 X1)) \Rightarrow \\ & ((r1_subset_1 X0 X1) \Leftrightarrow (r1_xboole_0 X0 X1)) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (10)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((m1_subset_1 X1 (k1_zfmisc_1 \\ & X0)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 X0))) \Rightarrow (k4_subset_1 X0 X1 X2 = \\ & k2_xboole_0 X1 X2) \end{aligned} \quad (12)$$

Assume the following.

$$v6_membered\ k4_ordinal1 \quad (13)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v1_xboole_0\ X0) \wedge (\neg v3_funct_1\ X0) \wedge ((v1_finseq_6 \\ X0\ (u1_struct_0\ (k15_euclid\ np_2))) \wedge ((v1_topreal1\ X0) \wedge ((v2_topreal1 \\ X0) \wedge ((v1_goboard5\ X0) \wedge ((v2_goboard5\ X0) \wedge (m1_finseq_1\ X0\ (u1_struct_0 \\ (k15_euclid\ np_2)))))))))) \Rightarrow (\neg v1_xboole_0\ (k3_goboard9\ X0)) \end{aligned} \quad (14)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v1_xboole_0\ X0) \wedge (\neg v3_funct_1\ X0) \wedge ((v1_finseq_6 \\ X0\ (u1_struct_0\ (k15_euclid\ np_2))) \wedge ((v1_topreal1\ X0) \wedge ((v2_topreal1 \\ X0) \wedge ((v1_goboard5\ X0) \wedge ((v2_goboard5\ X0) \wedge (m1_finseq_1\ X0\ (u1_struct_0 \\ (k15_euclid\ np_2)))))))))) \Rightarrow (\neg v1_xboole_0\ (k2_goboard9\ X0)) \end{aligned} \quad (15)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((v7_ordinal1\ X0) \wedge (m1_finseq_1\ X1\ (u1_struct_0 \\ (k15_euclid\ X0)))) \Rightarrow (m1_subset_1\ (k3_topreal1\ X0\ X1)\ (k1_zfmisc_1 \\ (u1_struct_0\ (k15_euclid\ X0)))) \end{aligned} \quad (16)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v1_xboole_0\ X0) \wedge (\neg v3_funct_1\ X0) \wedge ((v1_finseq_6 \\ X0\ (u1_struct_0\ (k15_euclid\ np_2))) \wedge ((v1_topreal1\ X0) \wedge ((v2_topreal1 \\ X0) \wedge ((v1_goboard5\ X0) \wedge ((v2_goboard5\ X0) \wedge (m1_finseq_1\ X0\ (u1_struct_0 \\ (k15_euclid\ np_2)))))))))) \Rightarrow (m1_subset_1\ (k3_goboard9\ X0)\ (\\ k1_zfmisc_1\ (u1_struct_0\ (k15_euclid\ np_2)))) \end{aligned} \quad (17)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((v7_ordinal1\ X0) \wedge (m1_subset_1\ X1\ (k1_zfmisc_1 \\ (u1_struct_0\ (k15_euclid\ X0)))))) \Rightarrow (m1_subset_1\ (k2_jordan2c \\ X0\ X1)\ (k1_zfmisc_1\ (u1_struct_0\ (k15_euclid\ X0)))) \end{aligned} \quad (18)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((v7_ordinal1\ X0) \wedge (m1_subset_1\ X1\ (k1_zfmisc_1 \\ (u1_struct_0\ (k15_euclid\ X0)))))) \Rightarrow (m1_subset_1\ (k1_jordan2c \\ X0\ X1)\ (k1_zfmisc_1\ (u1_struct_0\ (k15_euclid\ X0)))) \end{aligned} \quad (19)$$

Assume the following.

$$\forall X0.\forall X1.k2_xboole_0\ X0\ X1 = k2_xboole_0\ X1\ X0 \quad (20)$$

Assume the following.

$$\forall X0.(v6_membered\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ X0) \Rightarrow (v7_ordinal1\ X1)) \quad (21)$$

Theorem 1

$$\begin{aligned} & \forall X0. ((\neg v3_funct_1 X0) \wedge ((\neg v1_xboole_0 X0) \wedge ((v1_finseq_6 \\ & X0 (u1_struct_0 (k15_euclid np_2))) \wedge ((v1_topreal1 X0) \wedge ((v2_topreal1 \\ & X0) \wedge ((v1_goboard5 X0) \wedge ((v2_goboard5 X0) \wedge ((v1_sprect_2 X0) \wedge \\ & (m2_finseq_1 X0 (u1_struct_0 (k15_euclid np_2)))))))))) \Rightarrow (\\ & k1_jordan2c np_2 (k3_topreal1 np_2 X0) = k3_goboard9 X0) \end{aligned}$$