

t25_sprect_3
(TMc3DyKpY59QEvR7hszDuNwuZs4nih5hQ4o)

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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 $r1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_goboard9 : \iota \Rightarrow \iota$ be given. Let $k3_topreal1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $r1_xboole_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_goboard9 : \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ 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 $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Let $v1_zfmisc_1 : \iota \Rightarrow o$ 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 $v7_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. r1_tarski X0 (k2_xboole_0 X0 X1) \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (k1_zfmisc_1 X0)) \Rightarrow ((r1_xboole_0 X1 X2) \Leftrightarrow (r1_tarski \\ & X1 (k3_subset_1 X0 X2)))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v1_xboole_0 X0) \wedge (\neg v3_funct_1 X0) \wedge ((v1_finseq_6 \\ & X0 (u1_struct_0 (k15_euclid np_2))) \wedge ((v1_topreal1 X0) \wedge ((v2_topreal1 \\ & X0) \wedge ((v1_goboard5 X0) \wedge ((v2_goboard5 X0) \wedge (m2_finseq_1 X0 (u1_struct_0 \\ & (k15_euclid np_2)))))))))) \Rightarrow (k3_subset_1 (u1_struct_0 (k15_euclid \\ & np_2)) (k3_topreal1 np_2 X0) = k4_subset_1 (u1_struct_0 (k15_euclid \\ & np_2)) (k2_goboard9 X0) (k3_goboard9 X0)) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & ((v2_xreal_0 \ np_2) \wedge (m2_subset_1 \ np_2 \ k1_numbers \ k5_numbers)) \wedge \\ & ((m1_subset_1 \ np_2 \ k5_numbers) \wedge (m1_subset_1 \ np_2 \ k1_numbers)) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 \ X0) \wedge (\neg v1_xboole_0 \ X1)) \Rightarrow \\ & ((r1_subset_1 \ X0 \ X1) \Leftrightarrow (r1_xboole_0 \ X0 \ X1)) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 \ X1 \ X0) \Leftrightarrow (m1_finseq_1 \ X1 \ X0) \quad (6)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((m1_subset_1 \ X1 \ (k1_zfmisc_1 \\ & X0)) \wedge (m1_subset_1 \ X2 \ (k1_zfmisc_1 \ X0))) \Rightarrow (k4_subset_1 \ X0 \ X1 \ X2 = \\ & k2_xboole_0 \ X1 \ X2) \end{aligned} \quad (8)$$

Assume the following.

$$v6_membered \ k4_ordinal1 \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((m1_subset_1 \ X0 \ k5_numbers) \wedge ((\neg v1_zfmisc_1 \\ & X1) \wedge (m1_finseq_1 \ X1 \ (u1_struct_0 \ (k15_euclid \ X0)))))) \Rightarrow (\neg v1_xboole_0 \\ & (k3_topreal1 \ X0 \ X1)) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v1_xboole_0 \ X0) \wedge ((\neg v3_funct_1 \ X0) \wedge ((v1_finseq_6 \\ & X0 \ (u1_struct_0 \ (k15_euclid \ np_2))) \wedge ((v1_topreal1 \ X0) \wedge ((v2_topreal1 \\ & X0) \wedge ((v1_goboard5 \ X0) \wedge ((v2_goboard5 \ X0) \wedge (m1_finseq_1 \ X0 \ (u1_struct_0 \\ & (k15_euclid \ np_2)))))))))) \Rightarrow (\neg v1_xboole_0 \ (k3_goboard9 \ X0)) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1_finseq_1 \ X1 \ X0) \Rightarrow ((v1_relat_1 \ X1) \wedge \\ & (v1_funct_1 \ X1) \wedge (v1_finseq_1 \ X1)) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v7_ordinal1 \ X0) \wedge (m1_finseq_1 \ X1 \ (u1_struct_0 \\ & (k15_euclid \ X0)))) \Rightarrow (m1_subset_1 \ (k3_topreal1 \ X0 \ X1) \ (k1_zfmisc_1 \\ & (u1_struct_0 \ (k15_euclid \ X0)))) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v1_xboole_0 X0) \wedge ((\neg v3_funct_1 X0) \wedge ((v1_finseq_6 \\ X0 (u1_struct_0 (k15_euclid np_2))) \wedge ((v1_topreal1 X0) \wedge ((v2_topreal1 \\ X0) \wedge ((v1_goboard5 X0) \wedge ((v2_goboard5 X0) \wedge (m1_finseq_1 X0 (u1_struct_0 \\ (k15_euclid np_2)))))))))) \Rightarrow (m1_subset_1 (k3_goboard9 X0) (\\ k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))) \end{aligned} \quad (14)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v1_xboole_0 X0) \wedge ((\neg v3_funct_1 X0) \wedge ((v1_finseq_6 \\ X0 (u1_struct_0 (k15_euclid np_2))) \wedge ((v1_topreal1 X0) \wedge ((v2_topreal1 \\ X0) \wedge ((v1_goboard5 X0) \wedge ((v2_goboard5 X0) \wedge (m1_finseq_1 X0 (u1_struct_0 \\ (k15_euclid np_2)))))))))) \Rightarrow (m1_subset_1 (k2_goboard9 X0) (\\ k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))) \end{aligned} \quad (15)$$

Assume the following.

$$\forall X0. \forall X1. k2_xboole_0 X0 X1 = k2_xboole_0 X1 X0 \quad (16)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_zfmisc_1 X0) \wedge ((v1_relat_1 X0) \wedge (v1_funct_1 X0))) \Rightarrow \\ ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v3_funct_1 X0))) \end{aligned} \quad (17)$$

Assume the following.

$$\begin{aligned} \forall X0.(v6_membered X0) \Rightarrow (\forall X1.(m1_subset_1 X1 X0) \Rightarrow \\ (v7_ordinal1 X1)) \end{aligned} \quad (18)$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v1_xboole_0 X0) \wedge ((\neg v3_funct_1 X0) \wedge ((v1_finseq_6 \\ X0 (u1_struct_0 (k15_euclid np_2))) \wedge ((v1_topreal1 X0) \wedge ((v2_topreal1 \\ X0) \wedge ((v1_goboard5 X0) \wedge ((v2_goboard5 X0) \wedge (m2_finseq_1 X0 (u1_struct_0 \\ (k15_euclid np_2)))))))))) \Rightarrow (r1_subset_1 (k3_goboard9 X0) (\\ k3_topreal1 np_2 X0)) \end{aligned}$$