

t20_gobrd14 (TMQg-
maf6KAZ7AxFRB9K8z1cGMHP1vcPue9f)

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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 $m2_finseq.1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_topreal1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_subset.1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_goboard9 : \iota \Rightarrow \iota$ be given. Let $k3_goboard9 : \iota \Rightarrow \iota$ be given. Let $k1_goboard9 : \iota \Rightarrow \iota$ be given. Let $k4_finseq.5 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_finseq.1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_finseq.5 : \iota \Rightarrow \iota$ be given. Let $v1_relat.1 : \iota \Rightarrow o$ 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 $k2_zfmisc.1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v1_xboole.0 X0) \wedge ((\neg v3_funct.1 X0) \wedge ((v1_finseq.6 \\ &X0 (u1_struct.0 (k15_euclid np_2))) \wedge ((v1_topreal1 X0) \wedge ((v2_topreal1 \\ &X0) \wedge ((v1_goboard5 X0) \wedge ((v2_goboard5 X0) \wedge (m2_finseq.1 X0 (u1_struct.0 \\ &(k15_euclid np_2)))))))))) \Rightarrow (k3_goboard9 (k1_goboard9 X0) = \\ &k2_goboard9 X0) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0. (m2_finseq.1 X0 (u1_struct.0 (k15_euclid np_2))) \Rightarrow \\ (k3_topreal1 np_2 X0 = k3_topreal1 np_2 (k4_finseq.5 (u1_struct.0 \\ (k15_euclid np_2)) X0)) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v3_funct.1 X0) \wedge ((\neg v1_xboole.0 X0) \wedge ((v1_finseq.6 \\ &X0 (u1_struct.0 (k15_euclid np_2))) \wedge ((v1_topreal1 X0) \wedge ((v2_topreal1 \\ &X0) \wedge ((v1_goboard5 X0) \wedge ((v2_goboard5 X0) \wedge (m2_finseq.1 X0 (u1_struct.0 \\ &(k15_euclid np_2)))))))))) \Rightarrow (k3_topreal1 np_2 X0 = k7_subset.1 \\ &(u1_struct.0 (k15_euclid np_2)) (k2_pre_topc (k15_euclid np_2) \\ &(k3_goboard9 X0)) (k3_goboard9 X0)) \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0)\Leftrightarrow(m1_finseq_1 X1 X0) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow(k4_finseq_5 X0 X1 = k3_finseq_5 X1) \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v1_xboole_0 X0)\wedge((v1_finseq_6 X0 (u1_struct_0 \\ (k15_euclid np_2)))\wedge((v1_topreal1 X0)\wedge((v2_topreal1 X0)\wedge(\\ (v1_goboard5 X0)\wedge((v2_goboard5 X0)\wedge(m1_finseq_1 X0 (u1_struct_0 \\ (k15_euclid np_2))))))))))\Rightarrow(k1_goboard9 X0 = k3_finseq_5 X0) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge((\neg v3_funct_1 \\ X0)\wedge(v1_finseq_1 X0))))\Rightarrow((v1_relat_1 (k3_finseq_5 X0))\wedge((v1_funct_1 \\ (k3_finseq_5 X0))\wedge((\neg v3_funct_1 (k3_finseq_5 X0))\wedge(v1_finseq_1 \\ (k3_finseq_5 X0)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0)\Rightarrow((v1_funct_1 X1)\wedge(\\ (v1_finseq_1 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers \\ X0)))))) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow((v1_relat_1 X1)\wedge(\\ (v1_funct_1 X1)\wedge(v1_finseq_1 X1))) \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v1_xboole_0 X0)\wedge((v1_finseq_6 X0 (u1_struct_0 \\ (k15_euclid np_2)))\wedge((v1_topreal1 X0)\wedge((v2_topreal1 X0)\wedge(\\ (v1_goboard5 X0)\wedge((v2_goboard5 X0)\wedge(m1_finseq_1 X0 (u1_struct_0 \\ (k15_euclid np_2))))))))))\Rightarrow((\neg v1_xboole_0 (k1_goboard9 X0))\wedge \\ ((v1_finseq_6 (k1_goboard9 X0) (u1_struct_0 (k15_euclid np_2)))\wedge \\ ((v1_topreal1 (k1_goboard9 X0))\wedge((v2_topreal1 (k1_goboard9 \\ X0))\wedge((v1_goboard5 (k1_goboard9 X0))\wedge((v2_goboard5 (k1_goboard9 \\ X0))\wedge(m2_finseq_1 (k1_goboard9 X0) (u1_struct_0 (k15_euclid \\ np_2)))))))))) \end{aligned} \quad (10)$$

Theorem 1

$$\begin{aligned} \forall X0. (&(\neg v3_funct_1 X0) \wedge (\neg v1_xboole_0 X0) \wedge ((v1_finseq_6 \\ &X0 (u1_struct_0 (k15_euclid np_2))) \wedge ((v1_topreal1 X0) \wedge ((v2_topreal1 \\ &X0) \wedge ((v1_goboard5 X0) \wedge ((v2_goboard5 X0) \wedge (m2_finseq_1 X0 (u1_struct_0 \\ &(k15_euclid np_2)))))))))) \Rightarrow (k3_topreal1 np_2 X0 = k7_subset_1 \\ &(u1_struct_0 (k15_euclid np_2)) (k2_pre_topc (k15_euclid np_2) \\ &(k2_goboard9 X0)) (k2_goboard9 X0)) \end{aligned}$$