

t17_goboard1
(TMUT9Fv96hL6kBLDAMD27rZDzG2yTBydQEd)

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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 $v3_relat_1 : \iota \Rightarrow o$ be given. Let $v1_matrix_1 : \iota \Rightarrow o$ be given. Let $v2_goboard1 : \iota \Rightarrow o$ be given. Let $v3_goboard1 : \iota \Rightarrow o$ be given. Let $v4_goboard1 : \iota \Rightarrow o$ be given. Let $v5_goboard1 : \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_finseq_2 : \iota \Rightarrow \iota$ 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 $k1_matrix_1 : \iota \Rightarrow \iota$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k2_finseq_1 : \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $k9_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_goboard1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ 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 $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $v2_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (& \neg(\neg r1_xxreal_0 \\ & X0 np_1) \wedge (\forall X1.(m2_subset_1 X1 k1_numbers k5_numbers) \Rightarrow \\ & (\neg(X0 = k2_nat_1 X1 np_1) \wedge (\neg r1_xxreal_0 X1 k6_numbers)))) \wedge (\neg \\ & (\exists X1.(m2_subset_1 X1 k1_numbers k5_numbers) \wedge ((X0 = k2_nat_1 \\ & X1 np_1) \wedge (\neg r1_xxreal_0 X1 k6_numbers))) \wedge (r1_xxreal_0 X0 np_1))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow (& \\ & X0 \in k2_finseq_1 X1) \Leftrightarrow ((r1_xxreal_0 np_1 X0) \wedge (r1_xxreal_0 X0 X1)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\
& (m2_subset_1 X1 k1_numbers k5_numbers) \Rightarrow (\forall X2.(m2_subset_1 \\
& X2 k1_numbers k5_numbers) \Rightarrow (\forall X3.((\neg v3_relat_1 X3) \wedge ((v1_matrix_1 \\
& X3) \wedge ((v2_goboard1 X3) \wedge ((v3_goboard1 X3) \wedge ((v4_goboard1 X3) \wedge \\
& ((v5_goboard1 X3) \wedge (m2_finseq_1 X3 (k3_finseq_2 (u1_struct_0 \\
& (k15_euclid np_2)))))))))) \Rightarrow (((X0 \in k2_finseq_1 (k1_matrix_1 \\
& X3)) \wedge ((k1_matrix_1 X3 = k2_nat_1 X1 np_1) \wedge ((r1_xxreal_0 X0 X2) \wedge \\
& (r1_xxreal_0 X2 X1)))) \Rightarrow ((r1_xxreal_0 X1 k6_numbers) \vee ((k9_matrix_1 \\
& (u1_struct_0 (k15_euclid np_2)) (k3_goboard1 X3 X0) X2 = k9_matrix_1 \\
& (u1_struct_0 (k15_euclid np_2)) X3 (k2_nat_1 X2 np_1)) \wedge ((X2 \in \\
& k2_finseq_1 (k1_matrix_1 (k3_goboard1 X3 X0))) \wedge (k2_nat_1 X2 np_1 \in \\
& k2_finseq_1 (k1_matrix_1 X3)))))))))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& ((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge \\
& ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers))
\end{aligned} \tag{4}$$

Assume the following.

$$r1_xxreal_0 np_1 np_1 \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\
& (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2.(m2_subset_1 \\
& X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1))
\end{aligned} \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \tag{7}$$

Assume the following.

$$k5_numbers = k4_ordinal1 \tag{8}$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1) \wedge (v3_ordinal1 k4_ordinal1) \tag{9}$$

Assume the following.

$$v3_membered k1_numbers \tag{10}$$

Assume the following.

$$\neg v1_xboole_0 k1_numbers \tag{11}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\
& (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2.(m2_subset_1 \\
& X2 X0 X1) \Rightarrow (m1_subset_1 X2 X0))
\end{aligned} \tag{12}$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow((v1_relat_1 X1)\wedge(v1_funct_1 X1)\wedge(v1_finseq_1 X1)) \quad (13)$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \quad (14)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge((v1_finseq_1 X0)\wedge(v1_matrix_1 X0))))\Rightarrow(m1_subset_1 (k1_matrix_1 X0) k5_numbers) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0)\wedge(v1_xxreal_0 X1))\Rightarrow((r1_xxreal_0 X0 X1)\vee(r1_xxreal_0 X1 X0)) \quad (16)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1)\Rightarrow(v7_ordinal1 X0) \quad (17)$$

Assume the following.

$$\forall X0.(v3_membered X0)\Rightarrow(v2_membered X0) \quad (18)$$

Assume the following.

$$\forall X0.(v2_membered X0)\Rightarrow(\forall X1.(m1_subset_1 X1 X0)\Rightarrow(v1_xxreal_0 X1)) \quad (19)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers)\Rightarrow(\forall X1. \\ & (m2_subset_1 X1 k1_numbers k5_numbers)\Rightarrow(\forall X2.((\neg v3_relat_1 \\ & X2)\wedge((v1_matrix_1 X2)\wedge((v2_goboard1 X2)\wedge((v3_goboard1 X2)\wedge \\ & ((v4_goboard1 X2)\wedge((v5_goboard1 X2)\wedge(m2_finseq_1 X2 (k3_finseq_2 \\ & (u1_struct_0 (k15_euclid np_2))))))))))\Rightarrow(((k1_matrix_1 X2 = \\ & k2_nat_1 X0 np_1)\wedge(X1 \in k2_finseq_1 X0))\Rightarrow((r1_xxreal_0 X0 k6_numbers)\vee \\ & ((k9_matrix_1 (u1_struct_0 (k15_euclid np_2)) (k3_goboard1 \\ & X2 np_1) X1 = k9_matrix_1 (u1_struct_0 (k15_euclid np_2)) X2 (\\ & k2_nat_1 X1 np_1))\wedge((X1 \in k2_finseq_1 (k1_matrix_1 (k3_goboard1 \\ & X2 np_1)))\wedge(k2_nat_1 X1 np_1 \in k2_finseq_1 (k1_matrix_1 X2)))))))))) \end{aligned}$$