

t18_goboard1 (TMFSc- Cxa4NNqzNwjDWCJo8t815KJBgUvDh3)

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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 $k4_finseq_1 : \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $k3_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k1_xboole_0 : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ 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. 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.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow ((X0 \in k2_finseq_1 X1) \Leftrightarrow ((r1_xxreal_0 np_1 X0) \wedge (r1_xxreal_0 X0 X1)))) \quad (2)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\
& (m2_subset_1 X1 k1_numbers k5_numbers) \Rightarrow (\forall X2.(m2_subset_1 \\
& X2 k1_numbers k5_numbers) \Rightarrow (\forall X3.(m2_subset_1 X3 k1_numbers \\
& k5_numbers) \Rightarrow (\forall X4.((\neg v3_relat_1 X4) \wedge ((v1_matrix_1 X4) \wedge \\
& ((v2_goboard1 X4) \wedge ((v3_goboard1 X4) \wedge ((v4_goboard1 X4) \wedge ((v5_goboard1 \\
& X4) \wedge (m2_finseq_1 X4 (k3_finseq_2 (u1_struct_0 (k15_euclid np_2)))))))))) \Rightarrow \\
& (((X0 \in k2_finseq_1 (k1_matrix_1 X4) \wedge ((k1_matrix_1 X4 = k2_nat_1 \\
& X1 np_1) \wedge ((X2 \in k4_finseq_1 X4) \wedge ((r1_xxreal_0 X0 X3) \wedge (r1_xxreal_0 \\
& X3 X1)))))) \Rightarrow ((r1_xxreal_0 X1 k6_numbers) \vee ((k3_matrix_1 (u1_struct_0 \\
& (k15_euclid np_2)) (k3_goboard1 X4 X0) X2 X3 = k3_matrix_1 (u1_struct_0 \\
& (k15_euclid np_2)) X4 X2 (k2_nat_1 X3 np_1)) \wedge (k2_nat_1 X3 np_1 \in \\
& k2_finseq_1 (k1_matrix_1 X4)))))))))
\end{aligned} \tag{3}$$

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.

$$k6_numbers = k1_xboole_0 \tag{8}$$

Assume the following.

$$k5_numbers = k4_ordinal1 \tag{9}$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1) \wedge (v3_ordinal1 k4_ordinal1) \tag{10}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.(m1_finseq_1 X1 X0) \Rightarrow ((v1_relat_1 X1) \wedge (\\
& (v1_funct_1 X1) \wedge (v1_finseq_1 X1)))
\end{aligned} \tag{11}$$

Assume the following.

$$m1_subset_1 \ k5_numbers \ (k1_zfmisc_1 \ k1_numbers) \quad (12)$$

Assume the following.

$$\forall X0.((v1_relat_1 \ X0) \wedge ((v1_funct_1 \ X0) \wedge ((v1_finseq_1 \ X0) \wedge (v1_matrix_1 \ X0)))) \Rightarrow (m1_subset_1 \ (k1_matrix_1 \ X0) \ k5_numbers) \quad (13)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_xxreal_0 \ X0) \wedge (v1_xxreal_0 \ X1)) \Rightarrow ((r1_xxreal_0 \ X0 \ X1) \vee (r1_xxreal_0 \ X1 \ X0)) \quad (14)$$

Assume the following.

$$\forall X0. (m1_subset_1 \ X0 \ k4_ordinal1) \Rightarrow (v7_ordinal1 \ X0) \quad (15)$$

Assume the following.

$$\forall X0. (v7_ordinal1 \ X0) \Rightarrow (v1_xxreal_0 \ X0) \quad (16)$$

Assume the following.

$$\forall X0. (v1_xboole_0 \ X0) \Rightarrow (\forall X1. (m1_subset_1 \ X1 \ (k1_zfmisc_1 \ X0)) \Rightarrow (v1_xboole_0 \ X1)) \quad (17)$$

Theorem 1

$$\begin{aligned} & \forall X0. (m2_subset_1 \ X0 \ k1_numbers \ k5_numbers) \Rightarrow (\forall X1. \\ & (m2_subset_1 \ X1 \ k1_numbers \ k5_numbers) \Rightarrow (\forall X2. (m2_subset_1 \\ & X2 \ k1_numbers \ k5_numbers) \Rightarrow (\forall X3. ((\neg v3_relat_1 \ X3) \wedge ((v1_matrix_1 \\ & X3) \wedge ((v2_goboard1 \ X3) \wedge ((v3_goboard1 \ X3) \wedge ((v4_goboard1 \ X3) \wedge \\ & ((v5_goboard1 \ X3) \wedge (m2_finseq_1 \ X3 \ (k3_finseq_2 \ (u1_struct_0 \\ & (k15_euclid \ np_2)))))))))) \Rightarrow (((k1_matrix_1 \ X3 = k2_nat_1 \ X0 \ np_1) \wedge \\ & ((X1 \in k2_finseq_1 \ X0) \wedge (X2 \in k4_finseq_1 \ X3)) \Rightarrow ((r1_xxreal_0 \ X0 \\ & k6_numbers) \vee ((k3_matrix_1 \ (u1_struct_0 \ (k15_euclid \ np_2)) \\ & (k3_goboard1 \ X3 \ np_1) \ X2 \ X1 = k3_matrix_1 \ (u1_struct_0 \ (k15_euclid \\ & np_2)) \ X3 \ X2 \ (k2_nat_1 \ X1 \ np_1)) \wedge (np_1 \in k2_finseq_1 \ (k1_matrix_1 \\ & X3)))))))))) \end{aligned}$$