

l28_o_ring_1 (TMawQjvhKQq- NAQddd3dHJDASHX4cYq8PWvL)

October 27, 2020

Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l6_algstr_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v5_o_ring_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v8_o_ring_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k12_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_1 : \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k7_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v6_o_ring_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $l5_algstr_0 : \iota \Rightarrow o$ be given. Let $l2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_algstr_0 : \iota \Rightarrow o$ be given. Let $k6_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (\neg(r1_xxreal_0 X0 np_1) \wedge ((X0 \neq k6_numbers) \wedge (X0 \neq np_1))) \quad (1)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge (l6_algstr_0 X0)) \Rightarrow (\forall X1. \\ (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m2_finseq_1 X2 \\ (u1_struct_0 X0)) \Rightarrow ((X2 = k12_finseq_1 (u1_struct_0 X0) X1) \Leftrightarrow ((\\ k3_finseq_1 X2 = np_1) \wedge (k7_partfun1 (u1_struct_0 X0) X2 np_1 = \\ X1)))))) \quad (3) \end{aligned}$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge (l6_algstr_0 X0)) \Rightarrow (\forall X1. \\ (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow ((v5_o_ring_1 X1 X0) \Rightarrow (v6_o_ring_1 \\ (k12_finseq_1 (u1_struct_0 X0) X1) X0))) \quad (4) \end{aligned}$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\neg v1_xboole_0 (u1_struct_0 X0)) \quad (5)$$

Assume the following.

$$\forall X0.(l6_algstr_0 X0) \Rightarrow ((l2_algstr_0 X0) \wedge (l5_algstr_0 X0)) \quad (6)$$

Assume the following.

$$\forall X0.(l2_struct_0 X0) \Rightarrow (l1_struct_0 X0) \quad (7)$$

Assume the following.

$$\forall X0.(l2_algstr_0 X0) \Rightarrow ((l2_struct_0 X0) \wedge (l1_algstr_0 X0)) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge (m1_subset_1 X1 X0)) \Rightarrow (m2_finseq_1 (k12_finseq_1 X0 X1) X0) \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l6_algstr_0 X0)) \Rightarrow (\forall X1. \\ & (m2_finseq_1 X1 (u1_struct_0 X0)) \Rightarrow ((v8_oring_1 X1 X0) \Leftrightarrow ((k3_finseq_1 \\ & X1 \neq k6_numbers) \wedge (\forall X2.(v7_ordinal1 X2) \Rightarrow (\neg(X2 \neq k6_numbers) \wedge \\ & ((r1_xxreal_0 X2 (k3_finseq_1 X1)) \wedge ((\neg v5_oring_1 (k7_partfun1 \\ & (u1_struct_0 X0) X1 X2) X0) \wedge (\forall X3.(v7_ordinal1 X3) \Rightarrow (\forall X4. \\ & (v7_ordinal1 X4) \Rightarrow (\neg(k7_partfun1 (u1_struct_0 X0) X1 X2 = k6_algstr_0 \\ & X0 (k7_partfun1 (u1_struct_0 X0) X1 X3) (k7_partfun1 (u1_struct_0 \\ & X0) X1 X4)) \wedge ((X3 \neq k6_numbers) \wedge ((\neg r1_xxreal_0 X2 X3) \wedge ((X4 \neq k6_numbers) \wedge \\ & (\neg r1_xxreal_0 X2 X4)))))))))))))) \quad (10) \end{aligned}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l6_algstr_0 X0)) \Rightarrow (\forall X1. \\ & (m2_finseq_1 X1 (u1_struct_0 X0)) \Rightarrow ((v6_oring_1 X1 X0) \Leftrightarrow ((k3_finseq_1 \\ & X1 \neq k6_numbers) \wedge ((v5_oring_1 (k7_partfun1 (u1_struct_0 X0) \\ & X1 np_1) X0) \wedge (\forall X2.(v7_ordinal1 X2) \Rightarrow (\neg(X2 \neq k6_numbers) \wedge \\ & ((\neg r1_xxreal_0 (k3_finseq_1 X1) X2) \wedge (\forall X3.(m1_subset_1 \\ & X3 (u1_struct_0 X0)) \Rightarrow (\neg(v5_oring_1 X3 X0) \wedge (k7_partfun1 (u1_struct_0 \\ & X0) X1 (k1_nat_1 X2 np_1) = k1_algstr_0 X0 (k7_partfun1 (u1_struct_0 \\ & X0) X1 X2) X3)))))))))) \quad (11) \end{aligned}$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l6_algstr_0 X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow ((v5_oring_1 X1 X0) \Rightarrow (v8_oring_1 \\ & (k12_finseq_1 (u1_struct_0 X0) X1) X0))) \end{aligned}$$