

l11_o_ring_1

(TMLdug5dDenrNp1Yi1MrQcnA1zpzHCoZdvF)

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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 $v1_o_ring_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_o_ring_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k12_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k7_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_o_ring_1 : \iota \Rightarrow \iota \Rightarrow o$ 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. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l6_algstr_0 X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m2_finseq_1 X2 \\ & (u1_struct_0 X0)) \Rightarrow ((X2 = k12_finseq_1 (u1_struct_0 X0) X1) \Leftrightarrow ((\\ & k3_finseq_1 X2 = np_1) \wedge (k7_partfun1 (u1_struct_0 X0) X2 np_1 = \\ & X1)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l6_algstr_0 X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow ((v1_o_ring_1 X1 X0) \Rightarrow (v2_o_ring_1 \\ & (k12_finseq_1 (u1_struct_0 X0) X1) X0))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\neg v1_xboole_0 (u1_struct_0 X0)) \quad (3)$$

Assume the following.

$$\forall X0.(l6_algstr_0 X0) \Rightarrow ((l2_algstr_0 X0) \wedge (l5_algstr_0 X0)) \quad (4)$$

Assume the following.

$$\forall X0.(l2_struct_0 X0) \Rightarrow (l1_struct_0 X0) \quad (5)$$

Assume the following.

$$\forall X0.(l2_algstr_0 X0) \Rightarrow ((l2_struct_0 X0) \wedge (l1_algstr_0 X0)) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge (m1_subset_1 X1 X0)) \Rightarrow (m2_finseq_1 (k12_finseq_1 X0 X1) X0) \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge (l6_algstr_0 X0)) \Rightarrow (\forall X1. \\ (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow ((v3_o_ring_1 X1 X0) \Leftrightarrow (\exists X2. \\ (m2_finseq_1 X2 (u1_struct_0 X0)) \wedge ((v2_o_ring_1 X2 X0) \wedge (X1 = k7_partfun1 \\ (u1_struct_0 X0) X2 (k3_finseq_1 X2))))))) \quad (8) \end{aligned}$$

Theorem 1

$$\forall X0.((\neg v2_struct_0 X0) \wedge (l6_algstr_0 X0)) \Rightarrow (\forall X1. \\ (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow ((v1_o_ring_1 X1 X0) \Rightarrow (v3_o_ring_1 \\ X1 X0)))$$