

l52_lopban_3 (TMFf- pKJ8d4vUVHuYunNG5tJVRDU8XhUanWj)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v13_algstr_0 : \iota \Rightarrow o$ be given. Let $v2_rlvect_1 : \iota \Rightarrow o$ be given. Let $v3_rlvect_1 : \iota \Rightarrow o$ be given. Let $v4_rlvect_1 : \iota \Rightarrow o$ be given. Let $v5_rlvect_1 : \iota \Rightarrow o$ be given. Let $v6_rlvect_1 : \iota \Rightarrow o$ be given. Let $v7_rlvect_1 : \iota \Rightarrow o$ be given. Let $v8_rlvect_1 : \iota \Rightarrow o$ be given. Let $v3_normsp_0 : \iota \Rightarrow o$ be given. Let $v4_normsp_0 : \iota \Rightarrow o$ be given. Let $v2_normsp_1 : \iota \Rightarrow o$ be given. Let $l1_normsp_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $k1_normsp_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $v3_xxreal_0 : \iota \Rightarrow o$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $l2_normsp_0 : \iota \Rightarrow o$ be given. Let $l1_normsp_0 : \iota \Rightarrow o$ be given. Let $l2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_rlvect_1 : \iota \Rightarrow o$ be given. Let $v2_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. \neg(v1_xboole_0 X0) \wedge ((X0 \neq X1) \wedge (v1_xboole_0 X1)) \quad (1)$$

Assume the following.

$$\forall X0. (v1_xreal_0 X0) \Rightarrow (\forall X1. (v1_xreal_0 X1) \Rightarrow ((r1_xxreal_0 X0 X1) \Rightarrow ((v1_xboole_0 X0) \vee ((v2_xxreal_0 X1) \vee (v3_xxreal_0 X0)))))) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_xxreal_0 X0) \wedge (v1_xxreal_0 X1)) \Rightarrow (r1_xxreal_0 X0 X0) \quad (3)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (4)$$

Assume the following.

$$\exists X0. (v1_xboole_0 X0) \wedge ((v1_xcmplx_0 X0) \wedge ((v1_xxreal_0 X0) \wedge (v1_xreal_0 X0))) \quad (5)$$

Assume the following.

$$v3_membered\ k1_numbers \quad (6)$$

Assume the following.

$$v1_xboole_0\ k1_xboole_0 \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((\neg v2_struct_0\ X0)\wedge((v13_algstr_0\ X0)\wedge \\ & ((v2_rlvect_1\ X0)\wedge((v3_rlvect_1\ X0)\wedge((v4_rlvect_1\ X0)\wedge((v5_rlvect_1 \\ & X0)\wedge((v6_rlvect_1\ X0)\wedge((v7_rlvect_1\ X0)\wedge((v8_rlvect_1\ X0)\wedge \\ & ((v3_normsp_0\ X0)\wedge((v4_normsp_0\ X0)\wedge((v2_normsp_1\ X0)\wedge(l1_normsp_1 \\ & X0))))))))))\wedge(m1_subset_1\ X1\ (u1_struct_0\ X0)))\Rightarrow(\neg v3_xreal_0 \\ & (k1_normsp_0\ X0\ X1)) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.(l2_normsp_0\ X0)\Rightarrow((l1_normsp_0\ X0)\wedge(l2_struct_0\ X0)) \quad (9)$$

Assume the following.

$$\forall X0.(l1_normsp_1\ X0)\Rightarrow((l1_rlvect_1\ X0)\wedge(l2_normsp_0\ X0)) \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((\neg v2_struct_0\ X0)\wedge(l1_normsp_0\ X0))\wedge \\ & (m1_subset_1\ X1\ (u1_struct_0\ X0)))\Rightarrow(m1_subset_1\ (k1_normsp_0 \\ & X0\ X1)\ k1_numbers) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0\ X0)\wedge(l2_normsp_0\ X0))\Rightarrow((v3_normsp_0 \\ & X0)\Leftrightarrow(\forall X1.(m1_subset_1\ X1\ (u1_struct_0\ X0))\Rightarrow((k1_normsp_0 \\ & X0\ X1 = k6_numbers)\Rightarrow(X1 = k4_struct_0\ X0)))) \end{aligned} \quad (12)$$

Assume the following.

$$\forall X0.(v3_membered\ X0)\Rightarrow(v2_membered\ X0) \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_xreal_0\ X0)\wedge(v2_xreal_0\ X0))\Rightarrow((\neg v1_xboole_0 \\ & X0)\wedge((v1_xreal_0\ X0)\wedge(\neg v3_xreal_0\ X0))) \end{aligned} \quad (14)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k1_numbers)\Rightarrow(v1_xreal_0\ X0) \quad (15)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v2_membered\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ X0)\Rightarrow \\ & (v1_xreal_0\ X1)) \end{aligned} \quad (16)$$

Theorem 1

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (v13_algstr_0 X0) \wedge (v2_rlvect_1 \\ & X0) \wedge (v3_rlvect_1 X0) \wedge (v4_rlvect_1 X0) \wedge (v5_rlvect_1 X0) \wedge \\ & ((v6_rlvect_1 X0) \wedge (v7_rlvect_1 X0) \wedge (v8_rlvect_1 X0) \wedge (v3_normsp_0 \\ & X0) \wedge (v4_normsp_0 X0) \wedge (v2_normsp_1 X0) \wedge (l1_normsp_1 X0)))))) \Rightarrow \\ & (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. (\\ & m1_subset_1 X2 k1_numbers) \Rightarrow (\neg(\neg r1_xxreal_0 X2 k6_numbers) \wedge (\\ & r1_xxreal_0 X2 (k1_normsp_0 X0 X1)))) \Rightarrow (X1 = k4_struct_0 X0))) \end{aligned}$$