

t54_bhsp_1 (TMSjDPYEt- TuqL29Cy9RHnsn9GSV8DX2ZtKQ)

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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 $v2_bhsp.1 : \iota \Rightarrow o$ be given. Let $l1_bhsp.1 : \iota \Rightarrow o$ be given. Let $v1_funct.1 : \iota \Rightarrow o$ be given. Let $v1_funct.2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $u1_struct.0 : \iota \Rightarrow \iota$ be given. Let $m1_subset.1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc.1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc.1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_funct.2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_normsp.1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np.1 : \iota$ be given. Let $v2_xxreal.0 : \iota \Rightarrow o$ be given. Let $m2_subset.1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $v1_xboole.0 : \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $l2_struct.0 : \iota \Rightarrow o$ be given. Let $l1_struct.0 : \iota \Rightarrow o$ be given. Let $l2_algstr.0 : \iota \Rightarrow o$ be given. Let $l1_algstr.0 : \iota \Rightarrow o$ be given. Let $l1_rlvect.1 : \iota \Rightarrow o$ be given. Let $k1_normsp.1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_rlvect.1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & ((v2_xxreal.0 \ np.1) \wedge (m2_subset.1 \ np.1 \ k1_numbers \ k5_numbers)) \wedge \\ & ((m1_subset.1 \ np.1 \ k5_numbers) \wedge (m1_subset.1 \ np.1 \ k1_numbers)) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. (((v1_funct.1 \ X2) \wedge \\ & ((v1_funct.2 \ X2 \ X0 \ X1) \wedge (m1_subset.1 \ X2 \ (k1_zfmisc.1 \ (k2_zfmisc.1 \\ & X0 \ X1)))))) \wedge ((v1_funct.1 \ X3) \wedge ((v1_funct.2 \ X3 \ X0 \ X1) \wedge (m1_subset.1 \\ & X3 \ (k1_zfmisc.1 \ (k2_zfmisc.1 \ X0 \ X1)))))) \Rightarrow ((r2_funct.2 \ X0 \ X1 \ X2 \\ & X3) \Leftrightarrow (X2 = X3)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole.0 \ X0) \wedge ((\neg v1_xboole.0 \ X1) \wedge \\ & (m1_subset.1 \ X1 \ (k1_zfmisc.1 \ X0)))) \Rightarrow (\forall X2. (m2_subset.1 \\ & X2 \ X0 \ X1) \Leftrightarrow (m1_subset.1 \ X2 \ X1)) \end{aligned} \quad (3)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (4)$$

Assume the following.

$$(\neg v1_xboole_0 \ k4_ordinal1) \wedge (v3_ordinal1 \ k4_ordinal1) \quad (5)$$

Assume the following.

$$\forall X0. (l2_struct_0 \ X0) \Rightarrow (l1_struct_0 \ X0) \quad (6)$$

Assume the following.

$$\forall X0. (l2_algstr_0 \ X0) \Rightarrow ((l2_struct_0 \ X0) \wedge (l1_algstr_0 \ X0)) \quad (7)$$

Assume the following.

$$\forall X0. (l1_rlvect_1 \ X0) \Rightarrow (l2_algstr_0 \ X0) \quad (8)$$

Assume the following.

$$\forall X0. (l1_bhsp_1 \ X0) \Rightarrow (l1_rlvect_1 \ X0) \quad (9)$$

Assume the following.

$$m1_subset_1 \ k5_numbers \ (k1_zfmisc_1 \ k1_numbers) \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 \ X0) \wedge (l1_struct_0 \\ & \ X0)) \wedge (((v1_funct_1 \ X1) \wedge ((v1_funct_2 \ X1 \ k5_numbers \ (u1_struct_0 \\ & \ X0)) \wedge (m1_subset_1 \ X1 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k5_numbers \ (u1_struct_0 \\ & \ X0)))))) \wedge (m1_subset_1 \ X2 \ k5_numbers))) \Rightarrow (m1_subset_1 \ (k1_normsp_1 \\ & \ X0 \ X1 \ X2) \ (u1_struct_0 \ X0)) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 \ X0) \wedge (l1_rlvect_1 \ X0)) \Rightarrow ((v8_rlvect_1 \\ & \ X0) \Leftrightarrow (\forall X1. (m1_subset_1 \ X1 \ (u1_struct_0 \ X0)) \Rightarrow (k1_rlvect_1 \\ & \ X0 \ X1 \ np_1 = X1))) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 \ X0) \wedge (l1_rlvect_1 \ X0)) \Rightarrow (\forall X1. \\ & \ ((v1_funct_1 \ X1) \wedge ((v1_funct_2 \ X1 \ k5_numbers \ (u1_struct_0 \ X0)) \wedge \\ & \ (m1_subset_1 \ X1 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k5_numbers \ (u1_struct_0 \\ & \ X0)))))) \Rightarrow (\forall X2. (m1_subset_1 \ X2 \ k1_numbers) \Rightarrow (\forall X3. \\ & \ ((v1_funct_1 \ X3) \wedge ((v1_funct_2 \ X3 \ k5_numbers \ (u1_struct_0 \ X0)) \wedge \\ & \ (m1_subset_1 \ X3 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k5_numbers \ (u1_struct_0 \\ & \ X0)))))) \Rightarrow ((X3 = k5_normsp_1 \ X0 \ X1 \ X2) \Leftrightarrow (\forall X4. (m2_subset_1 \\ & \ X4 \ k1_numbers \ k5_numbers) \Rightarrow (k1_normsp_1 \ X0 \ X3 \ X4 = k1_rlvect_1 \ X0 \\ & \ (k1_normsp_1 \ X0 \ X1 \ X4) \ X2)))))) \end{aligned} \quad (13)$$

Assume the following.

$$\forall X0. (v1_xboole_0 \ X0) \Rightarrow (\forall X1. (m1_subset_1 \ X1 \ (k1_zfmisc_1 \ X0)) \Rightarrow (v1_xboole_0 \ X1)) \quad (14)$$

Theorem 1

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (v13_algstr_0 X0) \wedge (v2_rlvect_1 \\ & X0) \wedge (v3_rlvect_1 X0) \wedge (v4_rlvect_1 X0) \wedge (v5_rlvect_1 X0) \wedge \\ & ((v6_rlvect_1 X0) \wedge (v7_rlvect_1 X0) \wedge (v8_rlvect_1 X0) \wedge ((v2_bhsp_1 \\ & X0) \wedge (l1_bhsp_1 X0)))))) \Rightarrow (\forall X1. ((v1_funct_1 X1) \wedge \\ & ((v1_funct_2 X1 k5_numbers (u1_struct_0 X0)) \wedge (m1_subset_1 X1 \\ & (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 X0)))))) \Rightarrow \\ & (r2_funct_2 k5_numbers (u1_struct_0 X0) (k5_normsp_1 X0 X1 np_1) \\ & X1)) \end{aligned}$$