

t2_tdgrouo

(TMdmu1Hhhi5fN4Ec5NejbA2o57LAkrCVU3Z)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_vectsp_1 : \iota$ be given. Let $k3_rlvect_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $np_2 : \iota$ be given. 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 $np_0 : \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k9_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_rlvect_1 : \iota \Rightarrow o$ be given. Let $l1_algstr_0 : \iota \Rightarrow o$ be given. Let $k1_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $g2_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v8_algstr_0 : \iota \Rightarrow o$ be given. Let $v13_algstr_0 : \iota \Rightarrow o$ be given. Let $v3_rlvect_1 : \iota \Rightarrow o$ be given. Let $v4_rlvect_1 : \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $l2_struct_0 : \iota \Rightarrow o$ be given. Let $k33_binop_2 : \iota$ be given. Let $u2_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_membered : \iota \Rightarrow o$ be given. Let $u1_algstr_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (1)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k3_xcmplx_0 np_1 X0 = X0) \quad (2)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k3_xcmplx_0 X0 k6_numbers = k6_numbers) \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((v1_xcmplx_0 X0) \wedge ((v1_xcmplx_0 \\ X1) \wedge (v1_xcmplx_0 X2))) \Rightarrow (k3_xcmplx_0 (k2_xcmplx_0 X0 X1) X2 = k2_xcmplx_0 \\ (k3_xcmplx_0 X0 X2) (k3_xcmplx_0 X1 X2)) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1_xcmplx_0 X0)\wedge((v1_xcmplx_0 X1)\wedge(v1_xcmplx_0 X2)))\Rightarrow(k3_xcmplx_0 X0 (k7_xcmplx_0 X1 X2) = k7_xcmplx_0 (k3_xcmplx_0 X0 X1) X2) \quad (5)$$

Assume the following.

$$((v2_xreal_0 np_2)\wedge(m2_subset_1 np_2 k1_numbers k5_numbers))\wedge((m1_subset_1 np_2 k5_numbers)\wedge(m1_subset_1 np_2 k1_numbers)) \quad (6)$$

Assume the following.

$$((v2_xreal_0 np_1)\wedge(m2_subset_1 np_1 k1_numbers k5_numbers))\wedge((m1_subset_1 np_1 k5_numbers)\wedge(m1_subset_1 np_1 k1_numbers)) \quad (7)$$

Assume the following.

$$(m2_subset_1 np_0 k1_numbers k5_numbers)\wedge((m1_subset_1 np_0 k5_numbers)\wedge(m1_subset_1 np_0 k1_numbers)) \quad (8)$$

Assume the following.

$$v1_xboole_0 np_0 \quad (9)$$

Assume the following.

$$k3_xcmplx_0 np_2 (k7_xcmplx_0 np_1 np_2) = np_1 \quad (10)$$

Assume the following.

$$k3_xcmplx_0 np_2 np_1 = np_2 \quad (11)$$

Assume the following.

$$k2_xcmplx_0 np_1 np_1 = np_2 \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 X0)\wedge(v1_xreal_0 X1))\Rightarrow(k9_binop_2 X0 X1 = k2_xcmplx_0 X0 X1) \quad (13)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((v2_rlvect_1 X0)\wedge(l1_algstr_0 X0))\wedge((m1_subset_1 X1 (u1_struct_0 X0))\wedge(m1_subset_1 X2 (u1_struct_0 X0))))\Rightarrow(k3_rlvect_1 X0 X1 X2 = k1_algstr_0 X0 X1 X2) \quad (15)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((m1_subset_1 X0 \\ & (u1_struct_0 k1_vectsp_1))\wedge((m1_subset_1 X1 (u1_struct_0 k1_vectsp_1))\wedge \\ & ((v1_xreal_0 X2)\wedge(v1_xreal_0 X3))))\Rightarrow(((X0 = X2)\wedge(X1 = X3))\Rightarrow(k1_algstr_0 \\ & k1_vectsp_1 X0 X1 = k9_binop_2 X2 X3)) \end{aligned} \quad (16)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((v1_funct_1 X1)\wedge((v1_funct_2 \\ & X1 (k2_zfmisc_1 X0 X0) X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ & (k2_zfmisc_1 X0 X0) X0))))\wedge(m1_subset_1 X2 X0))\Rightarrow(\forall X3. \\ & \forall X4.\forall X5.(g2_algstr_0 X0 X1 X2 = g2_algstr_0 X3 X4 X5)\Rightarrow \\ & ((X0 = X3)\wedge((X1 = X4)\wedge(X2 = X5)))) \end{aligned} \quad (17)$$

Assume the following.

$$(v8_algstr_0 k1_vectsp_1)\wedge((v13_algstr_0 k1_vectsp_1)\wedge((v2_rlvect_1 k1_vectsp_1)\wedge((v3_rlvect_1 k1_vectsp_1)\wedge(v4_rlvect_1 k1_vectsp_1)))) \quad (18)$$

Assume the following.

$$v3_membered (u1_struct_0 k1_vectsp_1) \quad (19)$$

Assume the following.

$$\forall X0.(l2_algstr_0 X0)\Rightarrow((l2_struct_0 X0)\wedge(l1_algstr_0 X0)) \quad (20)$$

Assume the following.

$$\begin{aligned} & (v1_funct_1 k33_binop_2)\wedge((v1_funct_2 k33_binop_2 (k2_zfmisc_1 \\ & k1_numbers k1_numbers) k1_numbers)\wedge(m1_subset_1 k33_binop_2 \\ & (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers) \\ & k1_numbers)))) \end{aligned} \quad (21)$$

Assume the following.

$$(v8_algstr_0 k1_vectsp_1)\wedge(l2_algstr_0 k1_vectsp_1) \quad (22)$$

Assume the following.

$$\forall X0.(l2_struct_0 X0)\Rightarrow(k4_struct_0 X0 = u2_struct_0 X0) \quad (23)$$

Assume the following.

$$k1_vectsp_1 = g2_algstr_0 k1_numbers k33_binop_2 k6_numbers \quad (24)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0)\wedge(v1_xcmplx_0 X1))\Rightarrow(k3_xcmplx_0 X0 X1 = k3_xcmplx_0 X1 X0) \quad (25)$$

Assume the following.

$$\forall X0.(v3_membered\ X0)\Rightarrow(v1_membered\ X0) \quad (26)$$

Assume the following.

$$\forall X0.(v3_membered\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ X0)\Rightarrow(v1_xreal_0\ X1)) \quad (27)$$

Assume the following.

$$\forall X0.(v1_membered\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ X0)\Rightarrow(v1_xcmplx_0\ X1)) \quad (28)$$

Assume the following.

$$\forall X0.(l2_algstr_0\ X0)\Rightarrow((v8_algstr_0\ X0)\Rightarrow(X0 = g2_algstr_0\ (u1_struct_0\ X0)\ (u1_algstr_0\ X0)\ (u2_struct_0\ X0))) \quad (29)$$

Theorem 1

$$\forall X0.(m1_subset_1\ X0\ (u1_struct_0\ k1_vectsp_1))\Rightarrow((k3_rlvect_1\ k1_vectsp_1\ X0\ X0 = k4_struct_0\ k1_vectsp_1)\Rightarrow(X0 = k4_struct_0\ k1_vectsp_1))$$