

t23_complfld (TMWCch- fEN6auyMQFtvHfJkUBpCgV98FezWH)

October 27, 2020

Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_complfld : \iota$ be given. Let $k3_vectsp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $k6_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k7_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k5_numbers : \iota$ be given. Let $np_0 : \iota$ be given. Let $k5_complex1 : \iota$ be given. Let $k6_complex1 : \iota$ be given. Let $k2_numbers : \iota$ be given. Let $v36_algstr_0 : \iota \Rightarrow o$ be given. Let $l6_algstr_0 : \iota \Rightarrow o$ be given. Let $u1_algstr_0 : \iota \Rightarrow \iota$ be given. Let $k27_binop_2 : \iota$ be given. Let $u2_algstr_0 : \iota \Rightarrow \iota$ be given. Let $k29_binop_2 : \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (u1_struct_0 k1_complfld)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (u1_struct_0 k1_complfld)) \Rightarrow (\forall X2.(v1_xcmplx_0 \\ & X2) \Rightarrow (\forall X3.(v1_xcmplx_0 X3) \Rightarrow (((X0 = X2) \wedge (X1 = X3)) \Rightarrow ((X1 = \\ & k4_struct_0 k1_complfld) \vee (k3_vectsp_1 k1_complfld X0 X1 = k6_binop_2 \\ & X2 X3)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \tag{2}$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k7_xcmplx_0 X0 np_1 = X0) \tag{3}$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \end{aligned} \tag{4}$$

Assume the following.

$$v1_xboole_0 np_0 \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0)\wedge(v1_xcmplx_0 X1))\Rightarrow(k6_binop_2 X0 X1 = k7_xcmplx_0 X0 X1) \quad (6)$$

Assume the following.

$$k5_complex1 = k1_xboole_0 \quad (7)$$

Assume the following.

$$m1_subset_1 k6_complex1 k2_numbers \quad (8)$$

Assume the following.

$$(v36_algstr_0 k1_complfld)\wedge(l6_algstr_0 k1_complfld) \quad (9)$$

Assume the following.

$$k6_complex1 = np_1 \quad (10)$$

Assume the following.

$$\begin{aligned} \forall X0.((v36_algstr_0 X0)\wedge(l6_algstr_0 X0))\Rightarrow((X0 = k1_complfld)\Leftrightarrow \\ ((u1_struct_0 X0 = k2_numbers)\wedge((u1_algstr_0 X0 = k27_binop_2)\wedge \\ ((u2_algstr_0 X0 = k29_binop_2)\wedge((k5_struct_0 X0 = k6_complex1)\wedge \\ (k4_struct_0 X0 = k5_complex1)))))) \quad (11) \end{aligned}$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k2_numbers)\Rightarrow(v1_xcmplx_0 X0) \quad (12)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers)\Rightarrow(v1_xcmplx_0 X0) \quad (13)$$

Theorem 1

$$\forall X0.(m1_subset_1 X0 (u1_struct_0 k1_complfld))\Rightarrow(k3_vectsp_1 k1_complfld X0 (k5_struct_0 k1_complfld) = X0)$$