

t14_menelaus (TMEjuD- BXCE5Q3Dmgxk77D2b46U5RVeUzsRD)

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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 $k15_euclid : \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $k1_numbers : \iota$ be given. Let $r1_euclid_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_rlvect_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_rlvect_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $r1_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_euclid_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k32_sin_cos : \iota$ be given. Let $k4_euclid_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k5_numbers : \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k9_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k3_euclid_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\
 & (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\
 & (\forall X2.(m1_subset_1 X2 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\
 & ((\neg r1_euclid_6 X0 X1 X2) \Leftrightarrow ((r1_zfmisc_1 X0 X1 X2) \wedge ((k4_euclid_3 \\
 & X0 X1 X2 \neq k32_sin_cos) \wedge ((k4_euclid_3 X1 X2 X0 \neq k32_sin_cos) \wedge (k4_euclid_3 \\
 & X2 X0 X1 \neq k32_sin_cos))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\
 & (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\
 & (\forall X2.(m1_subset_1 X2 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\
 & ((X0 \neq X1) \Rightarrow ((r1_euclid_6 X2 X0 X1) \Leftrightarrow (X2 \in k4_euclid_4 np_2 X0 X1))))))
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
 & ((v2_xxreal_0 np_2) \wedge (m2_subset_1 np_2 k1_numbers k5_numbers)) \wedge \\
 & ((m1_subset_1 np_2 k5_numbers) \wedge (m1_subset_1 np_2 k1_numbers))
 \end{aligned} \tag{3}$$

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.

$$\forall X0.\forall X1.((m1_subset_1 X0 k1_numbers)\wedge(v1_xreal_0 X1))\Rightarrow(k9_real_1 X0 X1 = k6_xcmplx_0 X0 X1) \quad (5)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v7_ordinal1 X0)\wedge((m1_subset_1 X1 (u1_struct_0 (k15_euclid X0)))\wedge(m1_subset_1 X2 (u1_struct_0 (k15_euclid X0))))))\Rightarrow(k4_euclid_4 X0 X1 X2 = k3_euclid_4 X0 X1 X2) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 X0)\wedge(v1_xreal_0 X1))\Rightarrow(k10_binop_2 X0 X1 = k6_xcmplx_0 X0 X1) \quad (8)$$

Assume the following.

$$v6_membered k4_ordinal1 \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(r1_zfmisc_1 X0 X1 X2)\Leftrightarrow((X0\neq X1)\wedge((X0\neq X2)\wedge(X1\neq X2))) \quad (10)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid X0)))\Rightarrow(\forall X2.(m1_subset_1 X2 (u1_struct_0 (k15_euclid X0)))\Rightarrow(k3_euclid_4 X0 X1 X2 = ReplSep (toset (\lambda X3 : \iota.m1_subset_1 X3 k1_numbers)) (\lambda X3 : \iota.True) (\lambda X3 : \iota.k3_rlvect_1 (k15_euclid X0) (k1_rlvect_1 (k15_euclid X0) X1 (k9_real_1 np_1 X3)) (k1_rlvect_1 (k15_euclid X0) X2 X3)))))) \quad (11)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers)\Rightarrow(v1_xreal_0 X0) \quad (12)$$

Assume the following.

$$\forall X0.(v6_membered X0)\Rightarrow(\forall X1.(m1_subset_1 X1 X0)\Rightarrow(v7_ordinal1 X1)) \quad (13)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2)))\Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2)))\Rightarrow \\ & (\forall X2.(m1_subset_1 X2 (u1_struct_0 (k15_euclid np_2)))\Rightarrow \\ & (\forall X3.(m1_subset_1 X3 (u1_struct_0 (k15_euclid np_2)))\Rightarrow \\ & (\forall X4.(m1_subset_1 X4 k1_numbers)\Rightarrow(\neg(\neg r1_euclid_6 X0 X1 \\ & X2)\wedge((X3 = k3_rlvect_1 (k15_euclid np_2) (k1_rlvect_1 (k15_euclid \\ & np_2) X1 (k10_binop_2 np_1 X4)) (k1_rlvect_1 (k15_euclid np_2) \\ & X2 X4))\wedge(X0 = X3))))))))) \end{aligned}$$