

t4_menelaus

(TMTBGKCWfrq9oduPqN6tBk1iQHi9xaYhvg7)

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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 $k17_euclid : \iota \Rightarrow \iota$ 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 $k9_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k18_euclid : \iota \Rightarrow \iota$ be given. Let $k19_euclid : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ & (\forall X1.(m1_subset_1 X1 k1_numbers) \Rightarrow ((k17_euclid (k1_rlvect_1 \\ & (k15_euclid np_2) X0 X1) = k11_binop_2 X1 (k17_euclid X0)) \wedge (k18_euclid \\ & (k1_rlvect_1 (k15_euclid np_2) X0 X1) = k11_binop_2 X1 (k18_euclid \\ & X0)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 (u1_struct_0 (k15_euclid np_2))) \Rightarrow (k1_rlvect_1 (k15_euclid \\ & np_2) X1 X0 = k19_euclid (k8_real_1 X0 (k17_euclid X1)) (k8_real_1 \\ & X0 (k18_euclid X1)))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ & ((k17_euclid (k3_rlvect_1 (k15_euclid np_2) X0 X1) = k9_binop_2 \\ & (k17_euclid X0) (k17_euclid X1)) \wedge (k18_euclid (k3_rlvect_1 (k15_euclid \\ & np_2) X0 X1) = k9_binop_2 (k18_euclid X0) (k18_euclid X1)))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((m1_subset_1 X0 k1_numbers) \wedge (v1_xreal_0 \\ & X1)) \Rightarrow (k8_real_1 X0 X1 = k3_xcmplx_0 X0 X1) \end{aligned} \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 X0)\wedge(v1_xreal_0 X1))\Rightarrow(v1_xreal_0 (k3_xcmplx_0 X0 X1)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 X0)\wedge(v1_xreal_0 X1))\Rightarrow(m1_subset_1 (k19_euclid X0 X1) (u1_struct_0 (k15_euclid np_2))) \quad (6)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2)))\Rightarrow (m1_subset_1 (k18_euclid X0) k1_numbers) \quad (7)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2)))\Rightarrow (m1_subset_1 (k17_euclid X0) k1_numbers) \quad (8)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers)\Rightarrow(v1_xreal_0 X0) \quad (9)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2)))\Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2)))\Rightarrow \\ & (\forall X2.(m1_subset_1 X2 k1_numbers)\Rightarrow(\forall X3.(m1_subset_1 \\ & X3 k1_numbers)\Rightarrow((k17_euclid (k3_rlvect_1 (k15_euclid np_2) \\ & (k1_rlvect_1 (k15_euclid np_2) X0 X2) (k1_rlvect_1 (k15_euclid \\ & np_2) X1 X3)) = k9_binop_2 (k11_binop_2 X2 (k17_euclid X0)) (k11_binop_2 \\ & X3 (k17_euclid X1))))\wedge(k18_euclid (k3_rlvect_1 (k15_euclid np_2) \\ & (k1_rlvect_1 (k15_euclid np_2) X0 X2) (k1_rlvect_1 (k15_euclid \\ & np_2) X1 X3)) = k9_binop_2 (k11_binop_2 X2 (k18_euclid X0)) (k11_binop_2 \\ & X3 (k18_euclid X1)))))) \end{aligned}$$