

t41_topreal9
(TMV1Qgnku1PAwmvX4gLTjiMzjDM8VsFj5Hd)

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Let $v1_xreal_0 : \iota \Rightarrow o$ be given. 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 $k17_euclid : \iota \Rightarrow \iota$ 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 $k7_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k19_euclid : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k18_euclid : \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ (k15_euclid np_2))) \Rightarrow (k1_rlvect_1 (k15_euclid np_2) X1 X0 = k19_euclid \\ (k4_real_1 X0 (k17_euclid X1)) (k4_real_1 X0 (k18_euclid X1)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ (\forall X1.(v1_xreal_0 X1) \Rightarrow ((k17_euclid (k1_rlvect_1 (k15_euclid \\ np_2) X0 X1) = k4_real_1 X1 (k17_euclid X0)) \wedge (k18_euclid (k1_rlvect_1 \\ (k15_euclid np_2) X0 X1) = k4_real_1 X1 (k18_euclid X0)))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 X0) \wedge (m1_subset_1 X1 k1_numbers)) \Rightarrow \\ (k4_real_1 X0 X1 = k3_xcmplx_0 X0 X1) \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ ((k17_euclid (k3_rlvect_1 (k15_euclid np_2) X0 X1) = k7_real_1 \\ (k17_euclid X0) (k17_euclid X1)) \wedge (k18_euclid (k3_rlvect_1 (k15_euclid \\ np_2) X0 X1) = k7_real_1 (k18_euclid X0) (k18_euclid X1)))) \end{aligned} \quad (4)$$

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

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0)\Rightarrow(\forall X1.(v1_xreal_0 X1)\Rightarrow(\forall X2. \\ & (m1_subset_1 X2 (u1_struct_0 (k15_euclid np_2)))\Rightarrow(\forall X3. \\ & (m1_subset_1 X3 (u1_struct_0 (k15_euclid np_2)))\Rightarrow(k17_euclid \\ & (k3_rlvect_1 (k15_euclid np_2) (k1_rlvect_1 (k15_euclid np_2) \\ & X2 X0) (k1_rlvect_1 (k15_euclid np_2) X3 X1)) = k7_real_1 (k4_real_1 \\ & X0 (k17_euclid X2)) (k4_real_1 X1 (k17_euclid X3)))))) \end{aligned}$$