

t6_euclid_5

(TMUg3iu7JFbEuUhZoR8ow6Nt7oFJk2UCNA4)

October 27, 2020

Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k3_rlvect_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k15_euclid : \iota \Rightarrow \iota$ be given. Let $np_3 : \iota$ be given. Let $k4_euclid_5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_euclid_5 : \iota \Rightarrow \iota$ be given. Let $k2_euclid_5 : \iota \Rightarrow \iota$ be given. Let $k3_euclid_5 : \iota \Rightarrow \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_3))) \Rightarrow \\
 & (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid np_3))) \Rightarrow \\
 & (k3_rlvect_1 (k15_euclid np_3) X0 X1 = k4_euclid_5 (k7_real_1 \\
 & (k1_euclid_5 X0) (k1_euclid_5 X1)) (k7_real_1 (k2_euclid_5 X0) \\
 & (k2_euclid_5 X1)) (k7_real_1 (k3_euclid_5 X0) (k3_euclid_5 X1))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\
 & X1 k1_numbers) \Rightarrow (\forall X2.(m1_subset_1 X2 k1_numbers) \Rightarrow ((k1_euclid_5 \\
 & (k4_euclid_5 X0 X1 X2) = X0) \wedge ((k2_euclid_5 (k4_euclid_5 X0 X1 X2) = \\
 & X1) \wedge (k3_euclid_5 (k4_euclid_5 X0 X1 X2) = X2))))
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.\forall X1.\forall X2.((v1_xreal_0 X0) \wedge ((v1_xreal_0 \\
 & X1) \wedge (v1_xreal_0 X2))) \Rightarrow (m1_subset_1 (k4_euclid_5 X0 X1 X2) (u1_struct_0 \\
 & (k15_euclid np_3)))
 \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \tag{4}$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 k1_numbers) \Rightarrow (\forall X2.(m1_subset_1 X2 k1_numbers) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 k1_numbers) \Rightarrow (\forall X4.(m1_subset_1 X4 k1_numbers) \Rightarrow \\ & (\forall X5.(m1_subset_1 X5 k1_numbers) \Rightarrow (k3_rlvect_1 (k15_euclid \\ & np_3) (k4_euclid_5 X0 X1 X2) (k4_euclid_5 X3 X4 X5) = k4_euclid_5 \\ & (k7_real_1 X0 X3) (k7_real_1 X1 X4) (k7_real_1 X2 X5))))))) \end{aligned}$$