

t7_euclid_3

(TMPY6uvoDM9eae1enAX88cMPEbzPVwgTEQn)

October 27, 2020

Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k1_euclid_3 : \iota \Rightarrow \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_rlvect_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k15_euclid : \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $k19_euclid : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_complex1 : \iota \Rightarrow \iota$ be given. Let $k4_complex1 : \iota \Rightarrow \iota$ be given. Let $k7_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k9_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.(v1_xcmplx_0 X0) \Rightarrow (\forall X1.(v1_xcmplx_0 X1) \Rightarrow (k19_euclid \\ (k3_complex1 (k2_xcmplx_0 X0 X1)) (k4_complex1 (k2_xcmplx_0 X0 \\ X1)) = k19_euclid (k7_real_1 (k3_complex1 X0) (k3_complex1 X1)) \\ (k7_real_1 (k4_complex1 X0) (k4_complex1 X1)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2. \\ (v1_xreal_0 X2) \Rightarrow (\forall X3.(v1_xreal_0 X3) \Rightarrow (k3_rlvect_1 (k15_euclid \\ np_2) (k19_euclid X0 X1) (k19_euclid X2 X3) = k19_euclid (k9_binop_2 \\ X0 X2) (k9_binop_2 X1 X3)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 X0) \wedge (v1_xreal_0 X1)) \Rightarrow (k9_binop_2 \\ X0 X1 = k2_xcmplx_0 X0 X1) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k1_numbers) \wedge (v1_xreal_0 \\ X1)) \Rightarrow (k7_real_1 X0 X1 = k2_xcmplx_0 X0 X1) \quad (4)$$

Assume the following.

$$v3_membered k1_numbers \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0) \wedge (v1_xcmplx_0 X1)) \Rightarrow (\\ v1_xcmplx_0 (k2_xcmplx_0 X0 X1)) \quad (6)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (m1_subset_1 (k4_complex1 X0) k1_numbers) \quad (7)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (m1_subset_1 (k3_complex1 X0) k1_numbers) \quad (8)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k1_euclid_3 X0 = k19_euclid (k3_complex1 X0) (k4_complex1 X0)) \quad (9)$$

Assume the following.

$$\forall X0.(v3_membered X0) \Rightarrow (\forall X1.(m1_subset_1 X1 X0) \Rightarrow (v1_xreal_0 X1)) \quad (10)$$

Theorem 1

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (\forall X1.(v1_xcmplx_0 X1) \Rightarrow (k1_euclid_3 (k2_xcmplx_0 X0 X1) = k3_rlvect_1 (k15_euclid np_2) (k1_euclid_3 X0) (k1_euclid_3 X1)))$$