

t22_euclid_2 (TMLAQZhQwVhLrYdWxWLy- wGR7T4bT96DnKVF)

October 27, 2020

Let $v7_ordinal1 : \iota \Rightarrow o$ 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 $k23_rvsum_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_binop_2 : \iota \Rightarrow \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k1_rlvect_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_euclid : \iota \Rightarrow \iota$ be given. Let $k11_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k4_xcmplx_0 : \iota \Rightarrow \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ (u1_struct_0 \\ (k15_euclid\ X0))) \Rightarrow (\forall X2.(v1_xreal_0\ X2) \Rightarrow ((k4_algstr_0 \\ (k15_euclid\ X0)\ (k1_rlvect_1\ (k15_euclid\ X0)\ X1\ X2) = k1_rlvect_1 \\ (k15_euclid\ X0)\ X1\ (k7_binop_2\ X2)) \wedge (k4_algstr_0\ (k15_euclid \\ X0)\ (k1_rlvect_1\ (k15_euclid\ X0)\ X1\ X2) = k1_rlvect_1\ (k15_euclid \\ X0)\ (k4_algstr_0\ (k15_euclid\ X0)\ X1)\ X2)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ (u1_struct_0 \\ (k15_euclid\ X0))) \Rightarrow ((k1_rlvect_1\ (k15_euclid\ X0)\ X1\ np_1 = X1) \wedge \\ (k1_rlvect_1\ (k15_euclid\ X0)\ X1\ k6_numbers = k4_struct_0\ (k15_euclid \\ X0)))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0) \Rightarrow (u1_struct_0\ (k15_euclid\ X0) = k1_euclid\ X0) \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ (u1_struct_0 \\ (k15_euclid\ X0))) \Rightarrow (\forall X2.(m1_subset_1\ X2\ (u1_struct_0\ (\\ k15_euclid\ X0))) \Rightarrow (k23_rvsum_1\ (k4_algstr_0\ (k15_euclid\ X0)\ X1) \\ X2 = k7_binop_2\ (k23_rvsum_1\ X1\ X2)))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ (u1_struct_0 \\ (k15_euclid\ X0))) \Rightarrow (\forall X2.(m1_subset_1\ X2\ (u1_struct_0\ (\\ k15_euclid\ X0))) \Rightarrow (\forall X3.(v1_xreal_0\ X3) \Rightarrow (k23_rvsum_1\ X1 \\ (k1_rlvect_1\ (k15_euclid\ X0)\ X2\ X3) = k11_binop_2\ X3\ (k23_rvsum_1 \\ X1\ X2)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ (u1_struct_0 \\ (k15_euclid\ X0))) \Rightarrow (\forall X2.(m1_subset_1\ X2\ (u1_struct_0\ (\\ k15_euclid\ X0))) \Rightarrow (\forall X3.(v1_xreal_0\ X3) \Rightarrow (k23_rvsum_1\ (\\ k1_rlvect_1\ (k15_euclid\ X0)\ X1\ X3)\ X2 = k11_binop_2\ X3\ (k23_rvsum_1 \\ X1\ X2)))))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} ((v2_xxreal_0\ np_1) \wedge (m2_subset_1\ np_1\ k1_numbers\ k5_numbers)) \wedge \\ ((m1_subset_1\ np_1\ k5_numbers) \wedge (m1_subset_1\ np_1\ k1_numbers)) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.(v1_xreal_0\ X0) \Rightarrow (k7_binop_2\ X0 = k4_xcmplx_0\ X0) \quad (8)$$

Assume the following.

$$\forall X0.(v1_xreal_0\ X0) \Rightarrow ((v1_xcmplx_0\ (k4_xcmplx_0\ X0)) \wedge \\ (v1_xreal_0\ (k4_xcmplx_0\ X0))) \quad (9)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k1_numbers) \Rightarrow (v1_xreal_0\ X0) \quad (10)$$

Theorem 1

$$\begin{aligned} \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ (u1_struct_0 \\ (k15_euclid\ X0))) \Rightarrow (\forall X2.(m1_subset_1\ X2\ (u1_struct_0\ (\\ k15_euclid\ X0))) \Rightarrow (k23_rvsum_1\ X1\ (k4_algstr_0\ (k15_euclid\ X0) \\ X2) = k7_binop_2\ (k23_rvsum_1\ X1\ X2)))))) \end{aligned}$$