

t23_euclidlp
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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $m2_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_euclid : \iota \Rightarrow \iota$ be given. Let $k7_euclid : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_euclid : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $m1_finseq_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 k1_numbers) \Rightarrow (\forall X2.(v7_ordinal1 X2) \Rightarrow (\forall X3.(m2_finseq_2 \\ & X3 k1_numbers (k1_euclid X2)) \Rightarrow (k9_euclid X2 X3 (k7_real_1 X0 X1) = \\ & k7_euclid X2 (k9_euclid X2 X3 X0) (k9_euclid X2 X3 X1)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m2_finseq_2 \\ & X1 k1_numbers (k1_euclid X0)) \Rightarrow (\forall X2.(m2_finseq_2 X2 k1_numbers \\ & (k1_euclid X0)) \Rightarrow (\forall X3.(m2_finseq_2 X3 k1_numbers (k1_euclid \\ & X0)) \Rightarrow (\forall X4.(m2_finseq_2 X4 k1_numbers (k1_euclid X0)) \Rightarrow \\ & (k7_euclid X0 (k7_euclid X0 X1 X2) (k7_euclid X0 X3 X4) = k7_euclid \\ & X0 (k7_euclid X0 X1 X3) (k7_euclid X0 X2 X4)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_2 X1 X0) \Rightarrow (\forall X2.(m2_finseq_2 X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \quad (3)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (4)$$

Assume the following.

$$v6_membered k4_ordinal1 \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v7_ordinal1\ X0)\wedge((m1_subset_1\ X1\ (k1_euclid\ X0))\wedge(v1_xreal_0\ X2)))\Rightarrow(m2_finseq_2\ (k9_euclid\ X0\ X1\ X2)\ k1_numbers\ (k1_euclid\ X0)) \quad (6)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(m1_finseq_2\ (k1_euclid\ X0)\ k1_numbers) \quad (7)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k1_numbers)\Rightarrow(v1_xreal_0\ X0) \quad (8)$$

Assume the following.

$$\forall X0.(v6_membered\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ X0)\Rightarrow(v7_ordinal1\ X1)) \quad (9)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1\ X0\ k1_numbers)\Rightarrow(\forall X1.(m1_subset_1\ X1\ k1_numbers)\Rightarrow(\forall X2.(m1_subset_1\ X2\ k1_numbers)\Rightarrow(\forall X3. \\ & (m1_subset_1\ X3\ k1_numbers)\Rightarrow(\forall X4.(m1_subset_1\ X4\ k5_numbers)\Rightarrow \\ & (\forall X5.(m2_finseq_2\ X5\ k1_numbers\ (k1_euclid\ X4))\Rightarrow(\forall X6. \\ & (m2_finseq_2\ X6\ k1_numbers\ (k1_euclid\ X4))\Rightarrow(k7_euclid\ X4\ (k7_euclid\ X4\ (k9_euclid\ X4\ X5\ X0)\ (k9_euclid\ X4\ X6\ X1))\ (k7_euclid\ X4\ (k9_euclid\ X4\ X5\ X2)\ (k9_euclid\ X4\ X6\ X3)) = k7_euclid\ X4\ (k9_euclid\ X4\ X5\ (k7_real_1\ X0\ X2))\ (k9_euclid\ X4\ X6\ (k7_real_1\ X1\ X3)))))))))) \end{aligned}$$