

t21_euclidlp
(TMSQ4MsLN9YLjbeKa4TBjUzE7JsMCbi7u5F)

October 27, 2020

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 $k9_euclid : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_euclid : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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.

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

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 k1_numbers) \Rightarrow (\forall X2.(v7_ordinal1 X2) \Rightarrow (\forall X3.(m2_finseq_2 \\ & X3 k1_numbers (k1_euclid X2)) \Rightarrow (k9_euclid X2 X3 (k8_real_1 X0 X1) = \\ & k9_euclid X2 (k9_euclid X2 X3 X1) X0)))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_2 X1 X0) \Rightarrow (\forall X2.(m2_finseq_2 X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \tag{3}$$

Assume the following.

$$k5_numbers = k4_ordinal1 \tag{4}$$

Assume the following.

$$v6_membered k4_ordinal1 \tag{5}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v7_ordinal1 X0) \wedge ((m1_subset_1 \\ & X1 (k1_euclid X0)) \wedge (v1_xreal_0 X2))) \Rightarrow (m2_finseq_2 (k9_euclid \\ & X0 X1 X2) k1_numbers (k1_euclid X0)) \end{aligned} \tag{6}$$

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

$$\begin{aligned} &\forall X0.(m1_subset_1\ X0\ k1_numbers)\Rightarrow(\forall X1.(m1_subset_1 \\ &\quad X1\ k1_numbers)\Rightarrow(\forall X2.(m1_subset_1\ X2\ k1_numbers)\Rightarrow(\forall X3. \\ &\quad (m1_subset_1\ X3\ k5_numbers)\Rightarrow(\forall X4.(m2_finseq_2\ X4\ k1_numbers \\ &\quad (k1_euclid\ X3))\Rightarrow(\forall X5.(m2_finseq_2\ X5\ k1_numbers\ (k1_euclid \\ &\quad X3))\Rightarrow(k9_euclid\ X3\ (k7_euclid\ X3\ (k9_euclid\ X3\ X4\ X1)\ (k9_euclid \\ &\quad X3\ X5\ X2))\ X0 = k7_euclid\ X3\ (k9_euclid\ X3\ X4\ (k8_real_1\ X0\ X1))\ (k9_euclid \\ &\quad X3\ X5\ (k8_real_1\ X0\ X2))))))))) \end{aligned}$$