

t45_euclidp (TMVzeyM- CtmKDa85g8SSdDmFCcrDboCWZpxg)

October 27, 2020

Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $m2_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k1_euclid : \iota \Rightarrow \iota$ be given. Let $r4_euclidlp : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r3_euclidlp : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_euclidlp : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k23_rvsum_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k5_euclid : \iota \Rightarrow \iota$ be given. Let $m1_finseq_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $r1_rvsum_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_valued_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m2_finseq_2 \\ & X1 k1_numbers (k1_euclid X0)) \Rightarrow (\forall X2.(m2_finseq_2 X2 k1_numbers \\ & (k1_euclid X0)) \Rightarrow (\forall X3.(m2_finseq_2 X3 k1_numbers (k1_euclid \\ & X0)) \Rightarrow (((r4_euclidlp X0 X1 X2) \wedge (r2_euclidlp X0 X2 X3)) \Rightarrow (r4_euclidlp \\ & X0 X1 X3)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(m2_finseq_2 X1 k1_numbers \\ & (k1_euclid X0)) \Rightarrow ((k23_rvsum_1 X1 X1 = k6_numbers) \Leftrightarrow (X1 = k5_euclid \\ & X0))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((m1_subset_1 X0 k5_numbers) \wedge \\ & ((m1_subset_1 X1 (k1_euclid X0)) \wedge (m1_subset_1 X2 (k1_euclid X0)))) \Rightarrow \\ & ((r4_euclidlp X0 X1 X2) \Rightarrow (r4_euclidlp X0 X2 X1)) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(m1_finseq_2 X1 X0) \Rightarrow (\forall X2.(m2_finseq_2 \\ & X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \end{aligned} \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0)\Leftrightarrow(m1_finseq_1 X1 X0) \quad (5)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 k5_numbers)\Rightarrow(\forall X1.(m2_finseq_2 \\ X1 k1_numbers (k1_euclid X0))\Rightarrow(\forall X2.(m2_finseq_2 X2 k1_numbers \\ (k1_euclid X0))\Rightarrow(\neg(\neg r3_euclidlp X0 X1 X2)\wedge((X1\neq k5_euclid X0)\wedge \\ ((X2\neq k5_euclid X0)\wedge(\neg r2_euclidlp X0 X1 X2)))))) \end{aligned} \quad (7)$$

Assume the following.

$$v6_membered k4_ordinal1 \quad (8)$$

Assume the following.

$$v3_membered k1_numbers \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_2 X1 X0)\Rightarrow(\forall X2.(m2_finseq_2 \\ X2 X0 X1)\Rightarrow(m2_finseq_1 X2 X0)) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0)\Rightarrow((v1_funct_1 X1)\wedge(\\ (v1_finseq_1 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers \\ X0)))))) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow((v1_relat_1 X1)\wedge(\\ (v1_funct_1 X1)\wedge(v1_finseq_1 X1))) \quad (12)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow(m1_finseq_2 (k1_euclid X0) k1_numbers) \quad (13)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 k5_numbers)\Rightarrow(\forall X1.(m2_finseq_2 \\ X1 k1_numbers (k1_euclid X0))\Rightarrow(\forall X2.(m2_finseq_2 X2 k1_numbers \\ (k1_euclid X0))\Rightarrow((r4_euclidlp X0 X1 X2)\Leftrightarrow((X1\neq k5_euclid X0)\wedge(\\ (X2\neq k5_euclid X0)\wedge(r1_rvsum_1 X1 X2)))))) \end{aligned} \quad (14)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge ((v3_valued_0 \\ X0) \wedge (v1_finseq_1 X0)))) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge ((v1_funct_1 \\ X1) \wedge ((v3_valued_0 X1) \wedge (v1_finseq_1 X1)))) \Rightarrow ((r1_rvsum_1 X0 X1) \Leftrightarrow \\ (k23_rvsum_1 X0 X1 = k6_numbers))) \end{aligned} \quad (15)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (v3_membered X1) \Rightarrow (\forall X2. (m1_subset_1 \\ X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (v3_valued_0 X2)) \end{aligned} \quad (16)$$

Assume the following.

$$\begin{aligned} \forall X0. (v6_membered X0) \Rightarrow (\forall X1. (m1_subset_1 X1 X0) \Rightarrow \\ (v7_ordinal1 X1)) \end{aligned} \quad (17)$$

Theorem 1

$$\begin{aligned} \forall X0. (m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1. (m2_finseq_2 \\ X1 k1_numbers (k1_euclid X0)) \Rightarrow (\forall X2. (m2_finseq_2 X2 k1_numbers \\ (k1_euclid X0)) \Rightarrow ((r4_euclidlp X0 X1 X2) \Rightarrow (r3_euclidlp X0 X1 X2)))) \end{aligned}$$