

t93_euclidlp (TMbRyoY-
zoMe4uuG8fNKFp6k6PVz3K1WZWge)

October 27, 2020

Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k1_euclid : \iota \Rightarrow \iota$ be given. Let $k5_euclidlp : \iota \Rightarrow \iota$ be given. Let $v1_euclidlp : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $r3_euclidlp : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8_euclid : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_euclidlp : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m2_finseq_2 \\ & X1 k1_numbers (k1_euclid X0)) \Rightarrow (\forall X2.(m2_finseq_2 X2 k1_numbers \\ & (k1_euclid X0)) \Rightarrow (\forall X3.(m2_finseq_2 X3 k1_numbers (k1_euclid \\ & X0)) \Rightarrow (\forall X4.(m2_subset_1 X4 (k1_zfmisc_1 (k1_euclid X0)) \\ & (k5_euclidlp X0)) \Rightarrow (((X1 \in X4) \wedge ((X2 \in X4) \wedge ((X3 \in X4) \wedge (r3_euclidlp \\ & X0 (k8_euclid X0 X2 X1) (k8_euclid X0 X3 X1)))))) \Rightarrow (X4 = k4_euclidlp \\ & X0 X1 X2 X3)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m2_finseq_2 \\ & X1 k1_numbers (k1_euclid X0)) \Rightarrow (\forall X2.(m2_finseq_2 X2 k1_numbers \\ & (k1_euclid X0)) \Rightarrow (\forall X3.(m2_finseq_2 X3 k1_numbers (k1_euclid \\ & X0)) \Rightarrow ((X1 \in k4_euclidlp X0 X1 X2 X3) \wedge ((X2 \in k4_euclidlp X0 X1 X2 X3) \wedge \\ & (X3 \in k4_euclidlp X0 X1 X2 X3)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\neg v1_xboole_0 (k5_euclidlp X0)) \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2.(m2_subset_1 \\ & X2 X0 X1) \Rightarrow (m1_subset_1 X2 X0)) \end{aligned} \tag{4}$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (m1_subset_1 (k5_euclidlp X0) (k1_zfmisc_1 (k1_zfmisc_1 (k1_euclid X0)))) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(r1_tarski X0 X1) \Leftrightarrow (\forall X2.(X2 \in X0) \Rightarrow (X2 \in X1)) \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\ X1 (k1_zfmisc_1 (k1_euclid X0))) \Rightarrow ((v1_euclidlp X1 X0) \Leftrightarrow (\exists X2. \\ (m2_finseq_2 X2 k1_numbers (k1_euclid X0)) \wedge (\exists X3.(m2_finseq_2 \\ X3 k1_numbers (k1_euclid X0)) \wedge (\exists X4.(m2_finseq_2 X4 k1_numbers \\ (k1_euclid X0)) \wedge (r3_euclidlp X0 (k8_euclid X0 X3 X2) (k8_euclid \\ X0 X4 X2)) \wedge (X1 = k4_euclidlp X0 X2 X3 X4)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (v1_xboole_0 X1)) \quad (8)$$

Theorem 1

$$\begin{aligned} \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m2_subset_1 \\ X1 (k1_zfmisc_1 (k1_euclid X0)) (k5_euclidlp X0)) \Rightarrow (\forall X2. \\ (m2_subset_1 X2 (k1_zfmisc_1 (k1_euclid X0)) (k5_euclidlp X0)) \Rightarrow \\ (((v1_euclidlp X1 X0) \wedge (r1_tarski X1 X2)) \Rightarrow (X1 = X2)))) \end{aligned}$$