

t96_euclidlp
(TMYKs3pKP8f8E6KX44JydbXiShFnhWFycV1)

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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 $k1_euclidlp : \iota \Rightarrow \iota$ be given. Let $r7_euclidlp : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_euclidlp : \iota \Rightarrow \iota$ 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 $k4_euclidlp : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m2_finseq_2 \\ & X1 k1_numbers (k1_euclid X0)) \Rightarrow (\forall X2.(m2_finseq_2 X2 k1_numbers \\ & (k1_euclid X0)) \Rightarrow (\forall X3.(m2_finseq_2 X3 k1_numbers (k1_euclid \\ & X0)) \Rightarrow (k4_euclidlp X0 X1 X2 X3 \in k5_euclidlp X0)))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.r1_tarski X0 X0 \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2.(m2_subset_1 \\ & X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\neg v1_xboole_0 (k5_euclidlp X0)) \quad (7)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (m1_subset_1 (k5_euclidlp X0) (k1_zfmisc_1 (k1_zfmisc_1 (k1_euclid X0)))) \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m2_subset_1 \\ & X1 (k1_zfmisc_1 (k1_euclid X0)) (k1_euclidlp X0)) \Rightarrow (\forall X2. \\ & (m2_subset_1 X2 (k1_zfmisc_1 (k1_euclid X0)) (k1_euclidlp X0)) \Rightarrow \\ & ((r7_euclidlp X0 X1 X2) \Leftrightarrow (\exists X3.(m2_finseq_2 X3 k1_numbers \\ & (k1_euclid X0)) \wedge (\exists X4.(m2_finseq_2 X4 k1_numbers (k1_euclid \\ & X0)) \wedge (\exists X5.(m2_finseq_2 X5 k1_numbers (k1_euclid X0)) \wedge \\ & ((r1_tarski X1 (k4_euclidlp X0 X3 X4 X5)) \wedge (r1_tarski X2 (k4_euclidlp \\ & X0 X3 X4 X5)))))))))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (k5_euclidlp X0 = ReplSep \\ & (toset (\lambda X1 : \iota.m1_subset_1 X1 (k1_zfmisc_1 (k1_euclid X0)))) \\ & (\lambda X1 : \iota.\exists X2.(m2_finseq_2 X2 k1_numbers (k1_euclid \\ & X0)) \wedge (\exists X3.(m2_finseq_2 X3 k1_numbers (k1_euclid X0)) \wedge \\ & (\exists X4.(m2_finseq_2 X4 k1_numbers (k1_euclid X0)) \wedge (X1 = k4_euclidlp \\ & X0 X2 X3 X4)))) (\lambda X1 : \iota.X1)) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (v1_xboole_0 X1)) \quad (11)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m2_subset_1 \\ & X1 (k1_zfmisc_1 (k1_euclid X0)) (k1_euclidlp X0)) \Rightarrow (\forall X2. \\ & (m2_subset_1 X2 (k1_zfmisc_1 (k1_euclid X0)) (k1_euclidlp X0)) \Rightarrow \\ & ((r7_euclidlp X0 X1 X2) \Leftrightarrow (\exists X3.(m2_subset_1 X3 (k1_zfmisc_1 \\ & (k1_euclid X0)) (k5_euclidlp X0)) \wedge ((r1_tarski X1 X3) \wedge (r1_tarski \\ & X2 X3)))))) \end{aligned}$$