

t103_euclidlp

(TMKzjKkLkoFH2y941oLakYeCwzuhEAJzjQ1)

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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 $v1_euclid_4 : \iota \Rightarrow \iota \Rightarrow o$ 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 $v1_euclidlp : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m2_subset_1 \\ & X1 (k1_zfmisc_1 (k1_euclid X0)) (k1_euclidlp X0)) \Rightarrow (\forall X2. \\ & (m2_subset_1 X2 (k1_zfmisc_1 (k1_euclid X0)) (k1_euclidlp X0)) \Rightarrow \\ & ((r7_euclidlp X0 X1 X2) \Leftrightarrow (\exists X3.(m2_subset_1 X3 (k1_zfmisc_1 \\ & (k1_euclid X0)) (k5_euclidlp X0)) \wedge ((r1_tarski X1 X3) \wedge (r1_tarski \\ & X2 X3)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m2_subset_1 \\ & X1 (k1_zfmisc_1 (k1_euclid X0)) (k1_euclidlp X0)) \Rightarrow (\forall X2. \\ & (m2_subset_1 X2 (k1_zfmisc_1 (k1_euclid X0)) (k1_euclidlp X0)) \Rightarrow \\ & (\neg(v1_euclid_4 X1 X0) \wedge ((v1_euclid_4 X2 X0) \wedge ((X1 \neq X2) \wedge (\forall X3. \\ & (m2_finseq_2 X3 k1_numbers (k1_euclid X0)) \Rightarrow (\neg(X3 \in X1) \wedge (\neg X3 \in X2)))))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m2_finseq_2 \\ & X1 k1_numbers (k1_euclid X0)) \Rightarrow (\forall X2.(m2_subset_1 X2 (k1_zfmisc_1 \\ & (k1_euclid X0)) (k1_euclidlp X0)) \Rightarrow (\forall X3.(m2_subset_1 X3 \\ & (k1_zfmisc_1 (k1_euclid X0)) (k5_euclidlp X0)) \Rightarrow (((X1 \in X3) \wedge ((\\ & r1_tarski X2 X3) \wedge (v1_euclid_4 X2 X0))) \Rightarrow ((X1 \in X2) \vee (v1_euclidlp \\ & X3 X0)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(r1_tarski X0 X1) \Leftrightarrow (\forall X2.(X2 \in X0) \Rightarrow (X2 \in X1)) \quad (4)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m2_subset_1 \\ & X1 (k1_zfmisc_1 (k1_euclid X0)) (k1_euclidp X0)) \Rightarrow (\forall X2. \\ & (m2_subset_1 X2 (k1_zfmisc_1 (k1_euclid X0)) (k1_euclidp X0)) \Rightarrow \\ & (\neg(v1_euclid_4 X1 X0) \wedge ((v1_euclid_4 X2 X0) \wedge ((r7_euclidp X0 X1 \\ & X2) \wedge ((X1 \neq X2) \wedge (\forall X3.(m2_subset_1 X3 (k1_zfmisc_1 (k1_euclid \\ & X0)) (k5_euclidp X0)) \Rightarrow (\neg(r1_tarski X1 X3) \wedge ((r1_tarski X2 X3) \wedge \\ & (v1_euclidp X3 X0)))))))))) \end{aligned}$$