

t34_euclidlp
(TMdi6oSks2RZviMzxJNBqxnU9UTaDF3HaSH)

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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 $r3_euclidlp : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_euclid : \iota \Rightarrow \iota$ be given. Let $m1_finseq_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((m1_subset_1 X0 k5_numbers) \wedge \\ & ((m1_subset_1 X1 (k1_euclid X0)) \wedge (m1_subset_1 X2 (k1_euclid X0)))) \Rightarrow \\ & ((r3_euclidlp X0 X1 X2) \Rightarrow (r3_euclidlp X0 X2 X1)) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (m1_finseq_2 X1 X0) \Rightarrow (\forall X2. (m2_finseq_2 X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \quad (2)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. (m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1. (m2_finseq_2 \\ & X1 k1_numbers (k1_euclid X0)) \Rightarrow (\forall X2. (m2_finseq_2 X2 k1_numbers \\ & (k1_euclid X0)) \Rightarrow (\neg (r3_euclidlp X0 X1 X2) \wedge (X1 = k5_euclid X0)))) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0. (v7_ordinal1 X0) \Rightarrow (m1_finseq_2 (k1_euclid X0) k1_numbers) \quad (5)$$

Assume the following.

$$\forall X0. (m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \quad (6)$$

Theorem 1

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