

t41_euclidlp
(TMHirctU7F4Nk6ne3ijya6eLAgsCxGeM1vw)

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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 $r2_euclidlp : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r3_euclidlp : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_euclid : \iota \Rightarrow \iota$ be given. Let $r1_euclidlp : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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. Let $k9_euclid : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((m1_subset_1 X0 k5_numbers) \wedge \\ & ((m1_subset_1 X1 (k1_euclid X0)) \wedge (m1_subset_1 X2 (k1_euclid X0)))) \Rightarrow \\ & ((r2_euclidlp X0 X1 X2) \Leftrightarrow (r1_euclidlp X0 X1 X2)) \end{aligned} \quad (1)$$

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.

$$\begin{aligned} & \forall X0. (m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1. (m2_finseq_2 \\ & X1 k1_numbers (k1_euclid X0)) \Rightarrow (\forall X2. (m2_finseq_2 X2 k1_numbers \\ & (k1_euclid X0)) \Rightarrow (\neg(r2_euclidlp X0 X1 X2) \wedge (r3_euclidlp X0 X1 X2)))) \end{aligned} \quad (4)$$

Assume the following.

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

Assume the following.

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m2_finseq_2 \\
& X1 k1_numbers (k1_euclid X0)) \Rightarrow (\forall X2.(m2_finseq_2 X2 k1_numbers \\
& (k1_euclid X0)) \Rightarrow ((r1_euclidlp X0 X1 X2) \Leftrightarrow ((X1 \neq k5_euclid X0) \wedge (\\
& (X2 \neq k5_euclid X0) \wedge (\exists X3.(m1_subset_1 X3 k1_numbers) \wedge (\\
& X1 = k9_euclid X0 X2 X3))))))
\end{aligned} \tag{6}$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \tag{7}$$

Theorem 1

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