

l37_euclidlp

(TMXz9PcXqeRuqtQ3qsWtqEv7sHopdG1Hfby)

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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 $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k9_euclid : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k6_numbers : \iota$ be given. Let $r1_euclidlp : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_euclid : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_0 : \iota$ be given. Let $m1_finseq_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k24_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(m2_finseq_2 X1 k1_numbers \\ (k1_euclid X0)) \Rightarrow ((k9_euclid X0 X1 np_1 = X1) \wedge (k9_euclid X0 X1 k6_numbers = \\ k5_euclid X0))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m2_finseq_2 \\ X1 k1_numbers (k1_euclid X0)) \Rightarrow (\forall X2.(m2_finseq_2 X2 k1_numbers \\ (k1_euclid X0)) \Rightarrow (\neg(r1_euclidlp X0 X1 X2) \wedge (\forall X3.(m1_subset_1 \\ X3 k1_numbers) \Rightarrow (\neg(X3 \neq k6_numbers) \wedge (X1 = k9_euclid X0 X2 X3)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow (k9_euclid X1 (k5_euclid X1) X0 = k5_euclid X1)) \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(m2_finseq_2 X1 k1_numbers \\ (k1_euclid X0)) \Rightarrow ((k7_euclid X0 (k9_euclid X0 X1 k6_numbers) X1 = \\ X1) \wedge (k7_euclid X0 X1 (k5_euclid X0) = X1))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((m1_subset_1 X0 k5_numbers)\wedge \\ & ((m1_subset_1 X1 (k1_euclid X0))\wedge(m1_subset_1 X2 (k1_euclid X0))))\Rightarrow \\ & ((r3_euclidlp X0 X1 X2)\Rightarrow(r3_euclidlp X0 X2 X1)) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & ((v2_xreal_0 np_1)\wedge(m2_subset_1 np_1 k1_numbers k5_numbers))\wedge \\ & ((m1_subset_1 np_1 k5_numbers)\wedge(m1_subset_1 np_1 k1_numbers)) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & (m2_subset_1 np_0 k1_numbers k5_numbers)\wedge((m1_subset_1 np_0 \\ & k5_numbers)\wedge(m1_subset_1 np_0 k1_numbers)) \end{aligned} \quad (8)$$

Assume the following.

$$v1_xboole_0 np_0 \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(m1_finseq_2 X1 X0)\Rightarrow(\forall X2.(m2_finseq_2 \\ & X2 X0 X1)\Leftrightarrow(m1_subset_1 X2 X1)) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v7_ordinal1 X0)\wedge((m1_subset_1 \\ & X1 (k1_euclid X0))\wedge(v1_xreal_0 X2)))\Rightarrow(k9_euclid X0 X1 X2 = k24_valued_1 \\ & X1 X2) \end{aligned} \quad (11)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (12)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (13)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow(m1_finseq_2 (k1_euclid X0) k1_numbers) \quad (14)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers)\Rightarrow(\forall X1.(m2_finseq_2 \\ & X1 k1_numbers (k1_euclid X0))\Rightarrow(\forall X2.(m2_finseq_2 X2 k1_numbers \\ & (k1_euclid X0))\Rightarrow((r3_euclidlp X0 X1 X2)\Leftrightarrow(\forall X3.(m1_subset_1 \\ & X3 k1_numbers)\Rightarrow(\forall X4.(m1_subset_1 X4 k1_numbers)\Rightarrow((k7_euclid \\ & X0 (k9_euclid X0 X1 X3) (k9_euclid X0 X2 X4) = k5_euclid X0)\Rightarrow((X3 = \\ & k6_numbers)\wedge(X4 = k6_numbers)))))))) \end{aligned} \quad (15)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m2_finseq_2 \\ & X1 k1_numbers (k1_euclid X0)) \Rightarrow (\forall X2.(m2_finseq_2 X2 k1_numbers \\ & (k1_euclid X0)) \Rightarrow ((r1_euclidlp X0 X1 X2) \Leftrightarrow ((X1 \neq k5_euclid X0) \wedge (\\ & (X2 \neq k5_euclid X0) \wedge (\exists X3.(m1_subset_1 X3 k1_numbers) \wedge (\\ & X1 = k9_euclid X0 X2 X3)))))) \end{aligned} \quad (16)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \quad (17)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \quad (18)$$

Theorem 1

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