

t67_euclidlp
(TMQuZ5fgYLuZvFe13VH6QVz5uBx5LMWGsNk)

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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 $r6_euclidlp : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_euclid_4 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k8_euclid : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $v6_membered : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k2_euclid_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r4_euclidlp : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_rsum_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m2_finseq_2 \\ & X1 k1_numbers (k1_euclid X0)) \Rightarrow (\forall X2.(m2_finseq_2 X2 k1_numbers \\ & (k1_euclid X0)) \Rightarrow ((X1 = X2) \Leftrightarrow (k8_euclid X0 X1 X2 = k5_euclid X0)))) \end{aligned} \quad (1)$$

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.

$$\forall X0.\forall X1.(m1_finseq_2 X1 X0) \Rightarrow (\forall X2.(m2_finseq_2 X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \quad (3)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (4)$$

Assume the following.

$$v6_membered k4_ordinal1 \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v7_ordinal1 X0) \wedge ((m1_subset_1 \\ & X1 (k1_euclid X0)) \wedge (m1_subset_1 X2 (k1_euclid X0)))) \Rightarrow (m2_finseq_2 \\ & (k8_euclid X0 X1 X2) k1_numbers (k1_euclid X0)) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (m1_subset_1 (k1_euclidlp X0) (k1_zfmisc_1 (k1_zfmisc_1 (k1_euclid X0)))) \quad (7)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (m1_finseq_2 (k1_euclid X0) k1_numbers) \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m2_subset_1 \\ X1 (k1_zfmisc_1 (k1_euclid X0)) (k1_euclidlp X0)) \Rightarrow (\forall X2. \\ (m2_subset_1 X2 (k1_zfmisc_1 (k1_euclid X0)) (k1_euclidlp X0)) \Rightarrow \\ ((r6_euclidlp X0 X1 X2) \Leftrightarrow (\exists X3.(m2_finseq_2 X3 k1_numbers \\ (k1_euclid X0)) \wedge (\exists X4.(m2_finseq_2 X4 k1_numbers (k1_euclid \\ X0)) \wedge (\exists X5.(m2_finseq_2 X5 k1_numbers (k1_euclid X0)) \wedge \\ (\exists X6.(m2_finseq_2 X6 k1_numbers (k1_euclid X0)) \wedge ((X1 = \\ k2_euclid_4 X0 X3 X4) \wedge ((X2 = k2_euclid_4 X0 X5 X6) \wedge (r4_euclidlp \\ X0 (k8_euclid X0 X4 X3) (k8_euclid X0 X6 X5)))))))))) \quad (9) \end{aligned}$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (k1_euclidlp X0 = ReplSep2 \\ (toset (\lambda X1 : \iota.m2_finseq_2 X1 k1_numbers (k1_euclid X0))) \\ (\lambda X1 : \iota.toset (\lambda X2 : \iota.m2_finseq_2 X2 k1_numbers (k1_euclid \\ X0))) (\lambda X1 : \iota.\lambda X2 : \iota.True) (\lambda X1 : \iota.\lambda X2 : \iota. \\ k2_euclid_4 X0 X1 X2)) \quad (10) \end{aligned}$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m2_finseq_2 \\ X1 k1_numbers (k1_euclid X0)) \Rightarrow (\forall X2.(m2_finseq_2 X2 k1_numbers \\ (k1_euclid X0)) \Rightarrow ((r4_euclidlp X0 X1 X2) \Leftrightarrow ((X1 \neq k5_euclid X0) \wedge (\\ (X2 \neq k5_euclid X0) \wedge (r1_rvsum_1 X1 X2)))))) \quad (11) \end{aligned}$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\ (k1_euclid X0))) \Rightarrow ((v1_euclid_4 X1 X0) \Leftrightarrow (\exists X2.(m2_finseq_2 \\ X2 k1_numbers (k1_euclid X0)) \wedge (\exists X3.(m2_finseq_2 X3 k1_numbers \\ (k1_euclid X0)) \wedge ((X2 \neq X3) \wedge (X1 = k2_euclid_4 X0 X2 X3)))))) \quad (12) \end{aligned}$$

Assume the following.

$$\forall X0.(v6_membered X0) \Rightarrow (\forall X1.(m1_subset_1 X1 X0) \Rightarrow (v7_ordinal1 X1)) \quad (13)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m2_subset_1 \\ & X1 (k1_zfmisc_1 (k1_euclid X0)) (k1_euclidp X0)) \Rightarrow (\forall X2. \\ & (m2_subset_1 X2 (k1_zfmisc_1 (k1_euclid X0)) (k1_euclidp X0)) \Rightarrow \\ & ((r6_euclidp X0 X1 X2) \Rightarrow ((v1_euclid_4 X1 X0) \wedge (v1_euclid_4 X2 X0)))))) \end{aligned}$$