

t91_euclidlp
(TMMES4kJKSuazhMYQLEiAz9eLtns7ZswcXW)

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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 $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k5_euclidlp : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_euclidlp : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m2_finseq_2 \\ & X1 k1_numbers (k1_euclid X0)) \Rightarrow (\forall X2.(m2_finseq_2 X2 k1_numbers \\ & (k1_euclid X0)) \Rightarrow (\forall X3.(m2_finseq_2 X3 k1_numbers (k1_euclid \\ & X0)) \Rightarrow (\forall X4.(m2_finseq_2 X4 k1_numbers (k1_euclid X0)) \Rightarrow \\ & (\forall X5.(m2_finseq_2 X5 k1_numbers (k1_euclid X0)) \Rightarrow (\forall X6. \\ & (m2_finseq_2 X6 k1_numbers (k1_euclid X0)) \Rightarrow (((X1 \in k4_euclidlp \\ & X0 X2 X3 X4) \wedge ((X5 \in k4_euclidlp X0 X2 X3 X4) \wedge (X6 \in k4_euclidlp X0 X2 \\ & X3 X4))) \Rightarrow (r1_tarski (k4_euclidlp X0 X1 X5 X6) (k4_euclidlp X0 X2 \\ & X3 X4)))))))))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2.(m2_subset_1 X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \tag{3}$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\neg v1_xboole_0 (k5_euclidlp X0)) \tag{4}$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (m1_subset_1 (k5_euclidlp X0) (k1_zfmisc_1 (k1_zfmisc_1 (k1_euclid X0)))) \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (k5_euclidlp X0 = ReplSep \\
& \quad (toset (\lambda X1 : \iota.m1_subset_1 X1 (k1_zfmisc_1 (k1_euclid X0)))) \\
& \quad (\lambda X1 : \iota.\exists X2.(m2_finseq_2 X2 k1_numbers (k1_euclid \\
& \quad X0)) \wedge (\exists X3.(m2_finseq_2 X3 k1_numbers (k1_euclid X0)) \wedge \\
& \quad (\exists X4.(m2_finseq_2 X4 k1_numbers (k1_euclid X0)) \wedge (X1 = k4_euclidlp \\
& \quad X0 X2 X3 X4)))) (\lambda X1 : \iota.X1))
\end{aligned} \tag{6}$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (v1_xboole_0 X1)) \tag{7}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m2_finseq_2 \\
& X1 k1_numbers (k1_euclid X0)) \Rightarrow (\forall X2.(m2_finseq_2 X2 k1_numbers \\
& (k1_euclid X0)) \Rightarrow (\forall X3.(m2_finseq_2 X3 k1_numbers (k1_euclid \\
& X0)) \Rightarrow (\forall X4.(m2_subset_1 X4 (k1_zfmisc_1 (k1_euclid X0)) \\
& (k5_euclidlp X0)) \Rightarrow (((X1 \in X4) \wedge ((X2 \in X4) \wedge (X3 \in X4))) \Rightarrow (r1_tarski \\
& (k4_euclidlp X0 X1 X2 X3 X4))))))
\end{aligned}$$