t51_euclidlp (TMWmXavSBH-hyAdyRGSD2yGc1rfMkt9tHEES)

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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 $m2\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_numbers : \iota$ be given. Let $k2\_euclid\_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X0\ X1) \Rightarrow ((v1\_xboole\_0\ X1) \vee (X0 \in X1)) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0) \wedge ((\neg v1\_xboole\_0\ X1) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0)))) \Rightarrow (\forall X2.(m2\_subset\_1\ X2\ X0\ X1) \Leftrightarrow (m1\_subset\_1\ X2\ X1)) \tag{2}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k5\_numbers) \Rightarrow (\neg v1\_xboole\_0\ (k1\_euclidlp\ X0)) \tag{3}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k5\_numbers) \Rightarrow (m1\_subset\_1\ (k1\_euclidlp\ X0)\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ (k1\_euclid\ X0)))) \tag{4}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k5\_numbers) \Rightarrow (k1\_euclidlp\ X0 = ReplSep2\ (toset\ (\lambda X1 : \iota.m2\_finseq\_2\ X1\ k1\_numbers\ (k1\_euclid\ X0)))\ (\lambda X1 : \iota.toset\ (\lambda X2 : \iota.m2\_finseq\_2\ X2\ k1\_numbers\ (k1\_euclid\ X0)))\ (\lambda X1 : \iota.\lambda X2 : \iota.True)\ (\lambda X1 : \iota.\lambda X2 : \iota.\ k2\_euclid\_4\ X0\ X1\ X2)) \tag{5}$$

Assume the following.

$$\forall X0.(v1\_xboole\_0\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0)) \Rightarrow (v1\_xboole\_0\ X1)) \tag{6}$$

Theorem 1

$$\forall X0.(m1\_subset\_1\ X0\ k5\_numbers)\Rightarrow(\forall X1.(m2\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k1\_euclid\ X0))\ (k1\_euclidlp\ X0))\Rightarrow(\exists X2.\ (m2\_finseq\_2\ X2\ k1\_numbers\ (k1\_euclid\ X0))\wedge(\exists X3.(m2\_finseq\_2\ X3\ k1\_numbers\ (k1\_euclid\ X0))\wedge(X1 = k2\_euclid\_4\ X0\ X2\ X3))))$$