t64_euclidlp (TMQrV1eex9D6H9UAkT6H51bvbSGkBdra4xZ)

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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 $k1\_euclidlp : \iota \Rightarrow \iota$ be given. Let $k2\_euclid\_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_euclid\_4 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Let $k4\_ordinal1 : \iota$ be given. Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k5\_numbers) \Rightarrow (\forall X1.(m2\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k1\_euclid\ X0))\ (k1\_euclidlp\ X0)) \Rightarrow (\exists X2.(m2\_finseq\_2\ X2\ k1\_numbers\ (k1\_euclid\ X0)) \wedge (\exists X3.(m2\_finseq\_2\ X3\ k1\_numbers\ (k1\_euclid\ X0)) \wedge (X1 = k2\_euclid\_4\ X0\ X2\ X3)))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((X0 \in X1) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X2))) \Rightarrow (m1\_subset\_1\ X0\ X2) \tag{2}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k5\_numbers) \Rightarrow (\forall X1.(m2\_finseq\_2\ X1\ k1\_numbers\ (k1\_euclid\ X0)) \Rightarrow (\forall X2.(m2\_finseq\_2\ X2\ k1\_numbers\ (k1\_euclid\ X0)) \Rightarrow (\forall X3.(m2\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k1\_euclid\ X0))\ (k1\_euclidlp\ X0)) \Rightarrow (((X1 \in X3) \wedge (X2 \in X3)) \Rightarrow (r1\_tarski\ (k2\_euclid\_4\ X0\ X1\ X2)\ X3))))) \tag{3}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k5\_numbers) \Rightarrow (\forall X1.(m2\_finseq\_2\ X1\ k1\_numbers\ (k1\_euclid\ X0)) \Rightarrow (\forall X2.(m2\_finseq\_2\ X2\ k1\_numbers\ (k1\_euclid\ X0)) \Rightarrow (k2\_euclid\_4\ X0\ X1\ X2 \in k1\_euclidlp\ X0))) \tag{4}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(\forall X1.(m2\_finseq\_2\ X1\ k1\_numbers\ (k1\_euclid\ X0))\Rightarrow(\forall X2.(m2\_finseq\_2\ X2\ k1\_numbers\ (k1\_euclid\ X0))\Rightarrow(\forall X3.(m2\_finseq\_2\ X3\ k1\_numbers\ (k1\_euclid\ X0))\Rightarrow(\forall X4.(m2\_finseq\_2\ X4\ k1\_numbers\ (k1\_euclid\ X0))\Rightarrow(((X1 \in k2\_euclid\_4\ X0\ X2\ X3)\wedge(X4 \in k2\_euclid\_4\ X0\ X2\ X3))\Rightarrow((X1 = X4)\vee(r1\_tarski\ (k2\_euclid\_4\ X0\ X2\ X3)\ (k2\_euclid\_4\ X0\ X1\ X4)))))))) \tag{5}$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \tag{6}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k5\_numbers)\Rightarrow(m1\_subset\_1\ (k1\_euclidlp\ X0)\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ (k1\_euclid\ X0)))) \tag{7}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k1\_euclid\ X0)))\Rightarrow((v1\_euclid\_4\ X1\ X0)\Leftrightarrow(\exists X2.(m2\_finseq\_2\ X2\ k1\_numbers\ (k1\_euclid\ X0))\wedge(\exists X3.(m2\_finseq\_2\ X3\ k1\_numbers\ (k1\_euclid\ X0))\wedge((X2 \neq X3)\wedge(X1 = k2\_euclid\_4\ X0\ X2\ X3)))))) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.(X0 = X1)\Leftrightarrow((r1\_tarski\ X0\ X1)\wedge(r1\_tarski\ X1\ X0)) \tag{9}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k4\_ordinal1)\Rightarrow(v7\_ordinal1\ X0) \tag{10}$$

Theorem 1

$$\forall X0.(m1\_subset\_1\ X0\ k5\_numbers)\Rightarrow(\forall X1.(m2\_finseq\_2\ X1\ k1\_numbers\ (k1\_euclid\ X0))\Rightarrow(\forall X2.(m2\_finseq\_2\ X2\ k1\_numbers\ (k1\_euclid\ X0))\Rightarrow(\forall X3.(m2\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k1\_euclid\ X0))\ (k1\_euclidlp\ X0))\Rightarrow(((X1 \in X3)\wedge(X2 \in X3))\Rightarrow((X1 = X2)\vee((k2\_euclid\_4\ X0\ X1\ X2 = X3)\wedge(v1\_euclid\_4\ X3\ X0))))))) $$