t9_euclid_4 (TMMrytttD68AnbrEkQqZthsmTPx5mAFauci)

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Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Let $m2\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_numbers : \iota$ be given. Let $k1\_euclid : \iota \Rightarrow \iota$ be given. Let $k2\_euclid\_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $k1\_xboole\_0 : \iota$ 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 $k5\_euclid : \iota \Rightarrow \iota$ 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 $k5\_numbers : \iota$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np\_\_0 : \iota$ be given. Let $k6\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_xreal\_0 : \iota \Rightarrow o$ be given. Let $k9\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_euclid\_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v1\_xboole\_0\ X0) \Rightarrow (X0 = k1\_xboole\_0) \tag{1}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow (\forall X1.(m2\_finseq\_2\ X1\ k1\_numbers\ (k1\_euclid\ X0)) \Rightarrow ((k9\_euclid\ X0\ X1\ np\_\_1 = X1) \wedge (k9\_euclid\ X0\ X1\ k6\_numbers = k5\_euclid\ X0))) \tag{2}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow (\forall X1.(m2\_finseq\_2\ X1\ k1\_numbers\ (k1\_euclid\ X0)) \Rightarrow ((k7\_euclid\ X0\ (k9\_euclid\ X0\ X1\ k6\_numbers)\ X1 = X1) \wedge (k7\_euclid\ X0\ X1\ (k5\_euclid\ X0) = X1))) \tag{3}$$

Assume the following.

$$((v2\_xxreal\_0\ np\_\_1) \wedge (m2\_subset\_1\ np\_\_1\ k1\_numbers\ k5\_numbers)) \wedge ((m1\_subset\_1\ np\_\_1\ k5\_numbers) \wedge (m1\_subset\_1\ np\_\_1\ k1\_numbers)) \tag{4}$$

Assume the following.

$$v1\_xboole\_0\ np\_\_0 \tag{5}$$

Assume the following.

$$k6\_xcmplx\_0\ np\_\_1\ np\_\_1 = np\_\_0 \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_2\ X1\ X0)\Rightarrow(\forall X2.(m2\_finseq\_2\ X2\ X0\ X1)\Leftrightarrow(m1\_subset\_1\ X2\ X1)) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1\ X0\ k1\_numbers)\wedge(v1\_xreal\_0\ X1))\Rightarrow(k9\_real\_1\ X0\ X1 = k6\_xcmplx\_0\ X0\ X1) \tag{8}$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v7\_ordinal1\ X0)\wedge((m1\_subset\_1\ X1\ (k1\_euclid\ X0))\wedge(m1\_subset\_1\ X2\ (k1\_euclid\ X0))))\Rightarrow(k2\_euclid\_4\ X0\ X1\ X2 = k1\_euclid\_4\ X0\ X1\ X2) \tag{10}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(m1\_finseq\_2\ (k1\_euclid\ X0)\ k1\_numbers) \tag{11}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(\forall X1.(m2\_finseq\_2\ X1\ k1\_numbers\ (k1\_euclid\ X0))\Rightarrow(\forall X2.(m2\_finseq\_2\ X2\ k1\_numbers\ (k1\_euclid\ X0))\Rightarrow(k1\_euclid\_4\ X0\ X1\ X2 = ReplSep\ (toset\ (\lambda X3 : \iota.m1\_subset\_1\ X3\ k1\_numbers))\ (\lambda X3 : \iota.True)\ (\lambda X3 : \iota.k7\_euclid\ X0\ (k9\_euclid\ X0\ X1\ (k9\_real\_1\ np\_\_1\ X3))\ (k9\_euclid\ X0\ X2\ X3))))) \tag{12}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v7\_ordinal1\ X0)\wedge((m1\_subset\_1\ X1\ (k1\_euclid\ X0))\wedge(m1\_subset\_1\ X2\ (k1\_euclid\ X0))))\Rightarrow(k2\_euclid\_4\ X0\ X1\ X2 = k2\_euclid\_4\ X0\ X2\ X1) \tag{13}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_numbers)\Rightarrow(v1\_xreal\_0\ X0) \tag{14}$$

Theorem 1

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(\forall X1.(m2\_finseq\_2\ X1\ k1\_numbers\ (k1\_euclid\ X0))\Rightarrow(\forall X2.(m2\_finseq\_2\ X2\ k1\_numbers\ (k1\_euclid\ X0))\Rightarrow((X1 \in k2\_euclid\_4\ X0\ X1\ X2)\wedge(X2 \in k2\_euclid\_4\ X0\ X1\ X2))))$$