t45_euclid_2 (TMP2WUNWY7L4eUD3f23DxPFHXVCijpQ24wy)

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Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k15\_euclid : \iota \Rightarrow \iota$ be given. Let $k5\_square\_1 : \iota \Rightarrow \iota$ be given. Let $k12\_euclid : \iota \Rightarrow \iota$ be given. Let $k3\_rlvect\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9\_binop\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11\_binop\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_2 : \iota$ be given. Let $k23\_rvsum\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $k1\_numbers : \iota$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_euclid : \iota \Rightarrow \iota$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v1\_finseq\_1 : \iota \Rightarrow o$ be given. Let $v3\_valued\_0 : \iota \Rightarrow o$ be given. Let $k3\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $k4\_rvsum\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_card\_1 : \iota \Rightarrow \iota$ be given. Let $v3\_finseq\_1 : \iota \Rightarrow o$ be given. Let $v3\_card\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4\_funct\_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ (k15\_euclid\ X0))) \Rightarrow ((v1\_funct\_1\ X1) \wedge ((v1\_funct\_2\ X1\ (k2\_finseq\_1\ X0)\ k1\_numbers) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_finseq\_1\ X0)\ k1\_numbers)))))) \tag{1}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow (u1\_struct\_0\ (k15\_euclid\ X0) = k1\_euclid\ X0) \tag{2}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge ((v1\_finseq\_1\ X0) \wedge (v3\_valued\_0\ X0)))) \Rightarrow (\forall X1.((v1\_relat\_1\ X1) \wedge ((v1\_funct\_1\ X1) \wedge ((v1\_finseq\_1\ X1) \wedge (v3\_valued\_0\ X1)))) \Rightarrow ((k3\_finseq\_1\ X0 = k3\_finseq\_1\ X1) \Rightarrow (k5\_square\_1\ (k12\_euclid\ (k4\_rvsum\_1\ X0\ X1)) = k9\_binop\_2\ (k9\_binop\_2\ (k5\_square\_1\ (k12\_euclid\ X0))\ (k11\_binop\_2\ np\_\_2\ (k23\_rvsum\_1\ X1\ X0)))\ (k5\_square\_1\ (k12\_euclid\ X1))))) \tag{3}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge (v1\_finseq\_1\ X0))) \Rightarrow (k3\_finseq\_1\ X0 = k1\_card\_1\ X0) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((v7\_ordinal1\ X0)\wedge((m1\_subset\_1\ X1\ (u1\_struct\_0\ (k15\_euclid\ X0)))\wedge((m1\_subset\_1\ X2\ (u1\_struct\_0\ (k15\_euclid\ X0)))\wedge(((v1\_relat\_1\ X3)\wedge((v1\_funct\_1\ X3)\wedge((v1\_finseq\_1\ X3)\wedge(v3\_valued\_0\ X3))))\wedge((v1\_relat\_1\ X4)\wedge((v1\_funct\_1\ X4)\wedge((v1\_finseq\_1\ X4)\wedge(v3\_valued\_0\ X4))))))))\Rightarrow(((X1 = X3)\wedge(X2 = X4))\Rightarrow(k3\_rlvect\_1\ (k15\_euclid\ X0)\ X1\ X2 = k4\_rvsum\_1\ X3\ X4)) \tag{5}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(v3\_finseq\_1\ (k1\_euclid\ X0)) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.(v3\_card\_1\ X1\ X0)\Leftrightarrow(k1\_card\_1\ X1 = X0) \tag{7}$$

Assume the following.

$$\forall X0.(v3\_finseq\_1\ X0)\Rightarrow(v4\_funct\_1\ X0) \tag{8}$$

Assume the following.

$$\forall X0.(v4\_funct\_1\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ X0)\Rightarrow((v1\_relat\_1\ X1)\wedge(v1\_funct\_1\ X1))) \tag{9}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ (k15\_euclid\ X0)))\Rightarrow(v3\_card\_1\ X1\ X0)) \tag{10}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ (k15\_euclid\ X0)))\Rightarrow(v3\_valued\_0\ X1)) \tag{11}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ (k15\_euclid\ X0)))\Rightarrow(v1\_finseq\_1\ X1)) \tag{12}$$

Theorem 1

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ (k15\_euclid\ X0)))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ (k15\_euclid\ X0)))\Rightarrow(k5\_square\_1\ (k12\_euclid\ (k3\_rlvect\_1\ (k15\_euclid\ X0)\ X1\ X2)) = k9\_binop\_2\ (k9\_binop\_2\ (k5\_square\_1\ (k12\_euclid\ X1))\ (k11\_binop\_2\ np\_\_2\ (k23\_rvsum\_1\ X2\ X1)))\ (k5\_square\_1\ (k12\_euclid\ X2)))))$$