

## t19\_euclid\_2

(TMPcerdxUz9X82uaB2LFvGRLiabtQniUA4t)

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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  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $k23\_rvsum\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_rlvect\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k11\_binop\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  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  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v3\_valued\_0 : \iota \Rightarrow o$  be given. Let  $v1\_finseq\_1 : \iota \Rightarrow o$  be given. Let  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k10\_rvsum\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $v3\_card\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 (k15\_euclid X0))) \Rightarrow (m2\_finseq\_1 X1 k1\_numbers)) \quad (1)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 (k15\_euclid X0))) \Rightarrow ((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 (k2\_finseq\_1 X0) k1\_numbers) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k2\_finseq\_1 X0) k1\_numbers)))))) \quad (2)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge ((v3\_valued\_0 X0) \wedge (v1\_finseq\_1 X0)))) \Rightarrow (\forall X1.((v1\_relat\_1 X1) \wedge ((v1\_funct\_1 X1) \wedge ((v3\_valued\_0 X1) \wedge (v1\_finseq\_1 X1)))) \Rightarrow (\forall X2.(v1\_xreal\_0 X2) \Rightarrow ((k3\_finseq\_1 X0 = k3\_finseq\_1 X1) \Rightarrow (k23\_rvsum\_1 (k10\_rvsum\_1 X0 X2) X1 = k11\_binop\_2 X2 (k23\_rvsum\_1 X0 X1)))) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1 X1 X0) \Leftrightarrow (m1\_finseq\_1 X1 X0) \quad (4)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finseq\_1 X0))) \Rightarrow (k3\_finseq\_1 X0 = k1\_card\_1 X0) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. \forall X4. ((v1\_xreal\_0 X0) \wedge ((v1\_xreal\_0 X1) \wedge ((v7\_ordinal1 X2) \wedge ((m1\_subset\_1 X3 (u1\_struct\_0 (k15\_euclid X2))) \wedge ((v1\_relat\_1 X4) \wedge ((v1\_funct\_1 X4) \wedge ((v1\_finseq\_1 X4) \wedge (v3\_valued\_0 X4)))))))) \Rightarrow (((X0 = X1) \wedge (X3 = X4)) \Rightarrow (k1\_rlvect\_1 (k15\_euclid X2) X3 X0 = k10\_rvsum\_1 X4 X1)) \quad (6)$$

Assume the following.

$$\forall X0. \forall X1. (m1\_finseq\_1 X1 X0) \Rightarrow ((v1\_relat\_1 X1) \wedge (v1\_funct\_1 X1) \wedge (v1\_finseq\_1 X1)) \quad (7)$$

Assume the following.

$$\forall X0. \forall X1. (v3\_card\_1 X1 X0) \Leftrightarrow (k1\_card\_1 X1 = X0) \quad (8)$$

Assume the following.

$$\forall X0. (v7\_ordinal1 X0) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 (k15\_euclid X0))) \Rightarrow (v3\_card\_1 X1 X0)) \quad (9)$$

Assume the following.

$$\forall X0. (v7\_ordinal1 X0) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 (k15\_euclid X0))) \Rightarrow (v3\_valued\_0 X1)) \quad (10)$$

Assume the following.

$$\forall X0. (v7\_ordinal1 X0) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 (k15\_euclid X0))) \Rightarrow (v1\_finseq\_1 X1)) \quad (11)$$

**Theorem 1**

$$\forall X0. (v7\_ordinal1 X0) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 (k15\_euclid X0))) \Rightarrow (\forall X2. (m1\_subset\_1 X2 (u1\_struct\_0 (k15\_euclid X0))) \Rightarrow (\forall X3. (v1\_xreal\_0 X3) \Rightarrow (k23\_rvsum\_1 (k1\_rlvect\_1 (k15\_euclid X0) X1 X3) X2 = k11\_binop\_2 X3 (k23\_rvsum\_1 X1 X2))))))$$