

## t12\_euclid\_7

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Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $k12\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_domain\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v3\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_finseq\_2 : \iota \Rightarrow \iota$  be given. Let  $k2\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $np\_2 : \iota$  be given. Let  $k2\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  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  $k1\_numbers : \iota$  be given. Let  $k6\_partfun1 : \iota \Rightarrow \iota$  be given. Let  $k4\_relat\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v6\_membered : \iota \Rightarrow o$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v3\_relat\_2 : \iota \Rightarrow o$  be given. Let  $v4\_relat\_2 : \iota \Rightarrow o$  be given. Let  $v8\_relat\_2 : \iota \Rightarrow o$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v3\_card\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_finseq\_1 : \iota \Rightarrow o$  be given. Let  $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $c2\_collsp : \iota$  be given. Let  $c1\_pre\_ff : \iota$  be given. Let  $v1\_relat\_2 : \iota \Rightarrow o$  be given. Assume the following.

$$k1\_finseq\_2 \ np\_1 = k12\_finseq\_1 \ k5\_numbers \ np\_1 \tag{1}$$

Assume the following.

$$(k2\_finseq\_1 \ np\_1 = k1\_tarski \ np\_1) \wedge (k2\_finseq\_1 \ np\_2 = k2\_tarski \ np\_1 \ np\_2) \tag{2}$$

Assume the following.

$$((v2\_xxreal\_0 \ np\_1) \wedge (m2\_subset\_1 \ np\_1 \ k1\_numbers \ k5\_numbers)) \wedge ((m1\_subset\_1 \ np\_1 \ k5\_numbers) \wedge (m1\_subset\_1 \ np\_1 \ k1\_numbers)) \tag{3}$$

Assume the following.

$$\forall X0. k6\_partfun1 \ X0 = k4\_relat\_1 \ X0 \tag{4}$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v1\_xboole\_0 \ X0) \wedge (m1\_subset\_1 \ X1 \ X0)) \Rightarrow (k6\_domain\_1 \ X0 \ X1 = k1\_tarski \ X1) \tag{5}$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (6)$$

Assume the following.

$$(\neg v1\_xboole\_0 k4\_ordinal1) \wedge (v3\_ordinal1 k4\_ordinal1) \quad (7)$$

Assume the following.

$$v6\_membered k4\_ordinal1 \quad (8)$$

Assume the following.

$$\forall X0.(v1\_relat\_1 (k4\_relat\_1 X0)) \wedge ((v3\_relat\_2 (k4\_relat\_1 X0)) \wedge ((v4\_relat\_2 (k4\_relat\_1 X0)) \wedge (v8\_relat\_2 (k4\_relat\_1 X0)))) \quad (9)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow ((v1\_relat\_1 (k1\_finseq\_2 X0)) \wedge ((v1\_funct\_1 (k1\_finseq\_2 X0)) \wedge ((v3\_card\_1 (k1\_finseq\_2 X0) X0) \wedge (v1\_finseq\_1 (k1\_finseq\_2 X0))))) \quad (10)$$

Assume the following.

$$\forall X0.(v1\_partfun1 (k6\_partfun1 X0) X0) \wedge (m1\_subset\_1 (k6\_partfun1 X0) (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X0))) \quad (11)$$

Assume the following.

$$c2\_collsp = k6\_domain\_1 k5\_numbers np\_1 \quad (12)$$

Assume the following.

$$c1\_pre\_ff = k12\_finseq\_1 k5\_numbers np\_1 \quad (13)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (k1\_finseq\_2 X0 = k6\_partfun1 (k2\_finseq\_1 X0)) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X0))) \Rightarrow (((v1\_relat\_2 X1) \wedge ((v1\_funct\_1 X1) \wedge ((v1\_partfun1 X1 X0) \wedge (v1\_funct\_2 X1 X0 X0)))) \Rightarrow ((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 X0 X0) \wedge (v3\_funct\_2 X1 X0 X0)))) \quad (15)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0)\wedge((v3\_relat\_2 X0)\wedge(v8\_relat\_2 X0)))\Rightarrow ((v1\_relat\_1 X0)\wedge(v1\_relat\_2 X0)) \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow((v1\_partfun1 X2 X0)\Rightarrow(v1\_funct\_2 X2 X0 X1)) \quad (17)$$

Assume the following.

$$\forall X0.(v6\_membered X0)\Rightarrow(\forall X1.(m1\_subset\_1 X1 X0)\Rightarrow (v7\_ordinal1 X1)) \quad (18)$$

**Theorem 1**

$$(v1\_funct\_1 (k12\_finseq\_1 k5\_numbers np\_1))\wedge((v1\_funct\_2 (k12\_finseq\_1 k5\_numbers np\_1) (k6\_domain\_1 k5\_numbers np\_1) (k6\_domain\_1 k5\_numbers np\_1))\wedge((v3\_funct\_2 (k12\_finseq\_1 k5\_numbers np\_1) (k6\_domain\_1 k5\_numbers np\_1) (k6\_domain\_1 k5\_numbers np\_1))\wedge(m1\_subset\_1 (k12\_finseq\_1 k5\_numbers np\_1) (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k6\_domain\_1 k5\_numbers np\_1) (k6\_domain\_1 k5\_numbers np\_1))))))$$