

t7\_euclid  
(TMFzMiGtuBFjvbFa76jDaXW2qknkkHsRiwP)

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Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k12\_euclid : \iota \Rightarrow \iota$  be given. Let  $k5\_euclid : \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $k16\_rvsum\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k11\_binop\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k12\_rvsum\_1 : \iota \Rightarrow \iota$  be given. Let  $k3\_square\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $k3\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_square\_1 : \iota \Rightarrow \iota$  be given. Let  $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_euclid : \iota \Rightarrow \iota$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k18\_rvsum\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_finseq\_1 : \iota \Rightarrow o$  be given. Let  $v3\_valued\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. \neg(v1\_xboole\_0 X0) \wedge ((X0 \neq X1) \wedge (v1\_xboole\_0 X1)) \quad (1)$$

Assume the following.

$$\forall X0. (v7\_ordinal1 X0) \Rightarrow (\forall X1. (v1\_xreal\_0 X1) \Rightarrow (k16\_rvsum\_1 (k2\_finseq\_2 X0 X1) = k11\_binop\_2 X0 X1)) \quad (2)$$

Assume the following.

$$\forall X0. (v7\_ordinal1 X0) \Rightarrow (\forall X1. (v1\_xreal\_0 X1) \Rightarrow (k12\_rvsum\_1 (k2\_finseq\_2 X0 X1) = k2\_finseq\_2 X0 (k3\_square\_1 X1))) \quad (3)$$

Assume the following.

$$\forall X0. (v1\_xcmplx\_0 X0) \Rightarrow (k3\_xcmplx\_0 X0 k6\_numbers = k6\_numbers) \quad (4)$$

Assume the following.

$$k7\_square\_1 k6\_numbers = k6\_numbers \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1 X1 X0)\Leftrightarrow(m1\_finseq\_1 X1 X0) \quad (6)$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1\_xboole\_0 X0)\wedge((v7\_ordinal1 X1)\wedge(m1\_subset\_1 X2 X0)))\Rightarrow(k5\_finseq\_2 X0 X1 X2 = k2\_finseq\_2 X1 X2) \quad (8)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0)\Rightarrow(k5\_euclid X0 = k4\_euclid X0) \quad (9)$$

Assume the following.

$$\forall X0.(m1\_finseq\_1 X0 k1\_numbers)\Rightarrow(k18\_rvsum\_1 X0 = k16\_rvsum\_1 X0) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xreal\_0 X0)\wedge(v1\_xreal\_0 X1))\Rightarrow(k11\_binop\_2 X0 X1 = k3\_xcmplx\_0 X0 X1) \quad (11)$$

Assume the following.

$$\exists X0.(v1\_xboole\_0 X0)\wedge((v1\_xcmplx\_0 X0)\wedge((v1\_xxreal\_0 X0)\wedge(v1\_xreal\_0 X0))) \quad (12)$$

Assume the following.

$$\exists X0.(m1\_subset\_1 X0 k1\_numbers)\wedge((\neg v1\_xboole\_0 X0)\wedge((v1\_xxreal\_0 X0)\wedge((v1\_xcmplx\_0 X0)\wedge(v1\_xreal\_0 X0)))) \quad (13)$$

Assume the following.

$$v1\_xboole\_0 k1\_xboole\_0 \quad (14)$$

Assume the following.

$$\neg v1\_xboole\_0 k1\_numbers \quad (15)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0)\Rightarrow(((v1\_relat\_1 (k4\_euclid X0))\wedge((v1\_funct\_1 (k4\_euclid X0))\wedge((v1\_finseq\_1 (k4\_euclid X0))\wedge(v3\_valued\_0 (k4\_euclid X0)))))) \quad (16)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge ((v3\_valued\_0 X0) \wedge (v1\_finseq\_1 X0)))) \Rightarrow (m2\_finseq\_1 (k12\_rvsum\_1 X0) k1\_numbers) \quad (17)$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_xreal\_0 X0) \wedge (v1\_xreal\_0 X1)) \Rightarrow (m1\_subset\_1 (k11\_binop\_2 X0 X1) k1\_numbers) \quad (18)$$

Assume the following.

$$\forall X0. ((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge ((v1\_finseq\_1 X0) \wedge (v3\_valued\_0 X0)))) \Rightarrow (k12\_euclid X0 = k7\_square\_1 (k18\_rvsum\_1 (k12\_rvsum\_1 X0))) \quad (19)$$

Assume the following.

$$\forall X0. (v7\_ordinal1 X0) \Rightarrow (k4\_euclid X0 = k5\_finseq\_2 k1\_numbers X0 k6\_numbers) \quad (20)$$

Assume the following.

$$\forall X0. (v1\_xcmplx\_0 X0) \Rightarrow (k3\_square\_1 X0 = k3\_xcmplx\_0 X0 X0) \quad (21)$$

Assume the following.

$$\forall X0. (v1\_xreal\_0 X0) \Rightarrow (v1\_xcmplx\_0 X0) \quad (22)$$

Assume the following.

$$\forall X0. (v7\_ordinal1 X0) \Rightarrow (v1\_xreal\_0 X0) \quad (23)$$

**Theorem 1**  $\forall X0. (v7\_ordinal1 X0) \Rightarrow (k12\_euclid (k5\_euclid X0) = k6\_numbers).$