

## t44\_euclid\_2

(TMa2dVNE2pKfCG6mhSu3ZTKxGVq8pVvx7HM)

October 27, 2020

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  $k4\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k12\_euclid : \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k5\_euclid : \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $k1\_euclid : \iota \Rightarrow \iota$  be given. Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $np\_0 : \iota$  be given. Let  $k4\_euclid : \iota \Rightarrow \iota$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $v3\_membered : \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $v4\_funct\_1 : \iota \Rightarrow o$  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.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (k4\_struct\_0 (k15\_euclid X0) = k5\_euclid X0) \quad (1)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 X0) \Rightarrow (X0 = k1\_xboole\_0) \quad (2)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 (k15\_euclid X0))) \Rightarrow ((k12\_euclid X1 = k6\_numbers) \Leftrightarrow (X1 = k4\_struct\_0 (k15\_euclid X0)))) \quad (3)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 (k15\_euclid X0))) \Rightarrow (r1\_xxreal\_0 k6\_numbers (k12\_euclid X1))) \quad (4)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (r1\_xxreal\_0 k6\_numbers X0) \quad (5)$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow (u1\_struct\_0\ (k15\_euclid\ X0) = k1\_euclid\ X0) \quad (6)$$

Assume the following.

$$\forall X0.(v1\_xxreal\_0\ X0) \Rightarrow (\forall X1.(v1\_xxreal\_0\ X1) \Rightarrow ((r1\_xxreal\_0\ X0\ X1) \wedge (r1\_xxreal\_0\ X1\ X0)) \Rightarrow (X0 = X1)) \quad (7)$$

Assume the following.

$$v1\_xboole\_0\ np\_0 \quad (8)$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \quad (9)$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow (k5\_euclid\ X0 = k4\_euclid\ X0) \quad (10)$$

Assume the following.

$$\exists X0.(v1\_xboole\_0\ X0) \wedge ((v1\_xcmplx\_0\ X0) \wedge ((v1\_xxreal\_0\ X0) \wedge (v1\_xreal\_0\ X0))) \quad (11)$$

Assume the following.

$$v3\_membered\ k1\_numbers \quad (12)$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow (v4\_funct\_1\ (u1\_struct\_0\ (k15\_euclid\ X0))) \quad (13)$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge ((v1\_finseq\_1\ X0) \wedge (v3\_valued\_0\ X0)))) \Rightarrow (m1\_subset\_1\ (k12\_euclid\ X0)\ k1\_numbers) \quad (14)$$

Assume the following.

$$k1\_xboole\_0 = the\ (\lambda X0 : \iota.v1\_xboole\_0\ X0) \quad (15)$$

Assume the following.

$$\forall X0.(v4\_funct\_1\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ X0) \Rightarrow ((v1\_relat\_1\ X1) \wedge (v1\_funct\_1\ X1))) \quad (16)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0\ X0) \Rightarrow (v7\_ordinal1\ X0) \quad (17)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (v1\_xxreal\_0 X0) \quad (18)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 (k15\_euclid X0))) \Rightarrow (v3\_valued\_0 X1)) \quad (19)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 (k15\_euclid X0))) \Rightarrow (v1\_finseq\_1 X1)) \quad (20)$$

Assume the following.

$$\forall X0.(v3\_membered X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 X0) \Rightarrow (v1\_xreal\_0 X1)) \quad (21)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 \\ & (k15\_euclid X0))) \Rightarrow ((\neg(X1 \neq k4\_struct\_0 (k15\_euclid X0)) \wedge (r1\_xxreal\_0 \\ & (k12\_euclid X1) k6\_numbers)) \wedge (\neg(\neg r1\_xxreal\_0 (k12\_euclid X1) \\ & k6\_numbers)) \wedge (X1 = k4\_struct\_0 (k15\_euclid X0)))) \end{aligned}$$