

## t25\_euclid\_8

(TMWKA2e3qp9xa6eQCTVr5Tz61htTmAB2pmu)

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Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k9\_euclid : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_3 : \iota$  be given. Let  $k2\_euclid\_8 : \iota$  be given. Let  $k1\_euclid\_8 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  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  $k11\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $np\_2 : \iota$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $k3\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $k4\_ordinal1 : \iota$  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  $k5\_numbers : \iota$  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  $v3\_valued\_0 : \iota \Rightarrow o$  be given. Let  $k1\_seq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $k11\_binop\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m2\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_euclid : \iota \Rightarrow \iota$  be given. Let  $v6\_membered : \iota \Rightarrow o$  be given. Let  $v3\_membered : \iota \Rightarrow o$  be given. Let  $m1\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((v1\_relat\_1 X3) \wedge \\ & ((v1\_funct\_1 X3) \wedge (v1\_finseq\_1 X3))) \Rightarrow ((X3 = k11\_finseq\_1 X0 X1 \\ & X2) \Leftrightarrow ((k3\_finseq\_1 X3 = np\_3) \wedge ((k1\_funct\_1 X3 np\_1 = X0) \wedge ((k1\_funct\_1 \\ & X3 np\_2 = X1) \wedge (k1\_funct\_1 X3 np\_3 = X2)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. (v1\_xcmplx\_0 X0) \Rightarrow (k3\_xcmplx\_0 np\_1 X0 = X0) \tag{2}$$

Assume the following.

$$\forall X0. (v1\_xcmplx\_0 X0) \Rightarrow (k3\_xcmplx\_0 X0 k6\_numbers = k6\_numbers) \tag{3}$$

Assume the following.

$$m1\_subset\_1 k1\_xboole\_0 k4\_ordinal1 \tag{4}$$

Assume the following.

$$\begin{aligned} & ((v2\_xreal\_0 \ np\_3) \wedge (m2\_subset\_1 \ np\_3 \ k1\_numbers \ k5\_numbers)) \wedge \\ & ((m1\_subset\_1 \ np\_3 \ k5\_numbers) \wedge (m1\_subset\_1 \ np\_3 \ k1\_numbers)) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & ((v2\_xreal\_0 \ np\_1) \wedge (m2\_subset\_1 \ np\_1 \ k1\_numbers \ k5\_numbers)) \wedge \\ & ((m1\_subset\_1 \ np\_1 \ k5\_numbers) \wedge (m1\_subset\_1 \ np\_1 \ k1\_numbers)) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0. \forall X1. (m2\_finseq\_1 \ X1 \ X0) \Leftrightarrow (m1\_finseq\_1 \ X1 \ X0) \quad (7)$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \quad (8)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1\_relat\_1 \ X0) \wedge ((v1\_funct\_1 \ X0) \wedge (v3\_valued\_0 \\ & \ X0))) \Rightarrow (k1\_seq\_1 \ X0 \ X1 = k1\_funct\_1 \ X0 \ X1) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v1\_xreal\_0 \ X0) \wedge ((v1\_xreal\_0 \\ & \ X1) \wedge (v1\_xreal\_0 \ X2))) \Rightarrow (k1\_euclid\_8 \ X0 \ X1 \ X2 = k11\_finseq\_1 \ X0 \ X1 \\ & \ X2) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1\_xreal\_0 \ X0) \wedge (v1\_xreal\_0 \ X1)) \Rightarrow (k11\_binop\_2 \\ & \ X0 \ X1 = k3\_xcmplx\_0 \ X0 \ X1) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0. (m2\_finseq\_2 \ X0 \ k1\_numbers \ (k1\_euclid \ np\_3)) \Rightarrow (\forall X1. \\ & (v1\_xreal\_0 \ X1) \Rightarrow (k9\_euclid \ np\_3 \ X0 \ X1 = k1\_euclid\_8 \ (k11\_binop\_2 \\ & \ X1 \ (k1\_seq\_1 \ X0 \ np\_1)) \ (k11\_binop\_2 \ X1 \ (k1\_seq\_1 \ X0 \ np\_2)) \ (k11\_binop\_2 \\ & \ X1 \ (k1\_seq\_1 \ X0 \ np\_3)))) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (v1\_relat\_1 \ (k11\_finseq\_1 \ X0 \\ & \ X1 \ X2)) \wedge (v1\_funct\_1 \ (k11\_finseq\_1 \ X0 \ X1 \ X2)) \end{aligned} \quad (14)$$

Assume the following.

$$v6\_membered\ k4\_ordinal1 \quad (15)$$

Assume the following.

$$v3\_membered\ k1\_numbers \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_2\ X1\ X0)\Rightarrow(\forall X2.(m2\_finseq\_2\ X2\ X0\ X1)\Rightarrow(m2\_finseq\_1\ X2\ X0)) \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_1\ X1\ X0)\Rightarrow((v1\_relat\_1\ X1)\wedge(v1\_funct\_1\ X1)\wedge(v1\_finseq\_1\ X1)) \quad (18)$$

Assume the following.

$$m2\_finseq\_2\ k2\_euclid\_8\ k1\_numbers\ (k1\_euclid\ np\_3) \quad (19)$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(m1\_finseq\_2\ (k1\_euclid\ X0)\ k1\_numbers) \quad (20)$$

Assume the following.

$$k2\_euclid\_8 = k1\_euclid\_8\ np\_1\ k6\_numbers\ k6\_numbers \quad (21)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xcmplx\_0\ X0)\wedge(v1\_xcmplx\_0\ X1))\Rightarrow(k3\_xcmplx\_0\ X0\ X1 = k3\_xcmplx\_0\ X1\ X0) \quad (22)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_1\ X1\ X0)\Rightarrow(v5\_relat\_1\ X1\ X0) \quad (23)$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge(v5\_relat\_1\ X0\ k1\_numbers))\Rightarrow((v1\_relat\_1\ X0)\wedge(v3\_valued\_0\ X0)) \quad (24)$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(v1\_xreal\_0\ X0) \quad (25)$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_numbers)\Rightarrow(v1\_xcmplx\_0\ X0) \quad (26)$$

Assume the following.

$$\forall X0.(v6\_membered\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ X0) \Rightarrow (v7\_ordinal1\ X1)) \quad (27)$$

Assume the following.

$$\forall X0.(v3\_membered\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ X0) \Rightarrow (v1\_xreal.0\ X1)) \quad (28)$$

**Theorem 1**

$$\forall X0.(m1\_subset\_1\ X0\ k1\_numbers) \Rightarrow (k9\_euclid\ np\_3\ k2\_euclid\_8\ X0 = k1\_euclid\_8\ X0\ k6\_numbers\ k6\_numbers)$$