

## t68\_euclid\_8

(TMRzNScQzkj3gsvgtwv4xJ6R3uFsBMUrFUq)

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Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $m2\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_euclid : \iota \Rightarrow \iota$  be given. Let  $np\_3 : \iota$  be given. Let  $k23\_rvsum\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_euclid : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k11\_binop\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k4\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $k11\_rvsum\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  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  $k5\_numbers : \iota$  be given. Let  $m1\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k24\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v6\_membered : \iota \Rightarrow o$  be given. Let  $v3\_membered : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} \forall X0.(v7\_ordinal1\ X0) \Rightarrow (\forall X1.(m2\_finseq\_2\ X1\ k1\_numbers \\ (k4\_finseq\_2\ X0\ k1\_numbers)) \Rightarrow (\forall X2.(m2\_finseq\_2\ X2\ k1\_numbers \\ (k4\_finseq\_2\ X0\ k1\_numbers)) \Rightarrow (\forall X3.(v1\_xreal\_0\ X3) \Rightarrow (k23\_rvsum\_1 \\ (k11\_rvsum\_1\ X0\ X1\ X3)\ X2 = k11\_binop\_2\ X3\ (k23\_rvsum\_1\ X1\ X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} ((v2\_xxreal\_0\ np\_3) \wedge (m2\_subset\_1\ np\_3\ k1\_numbers\ k5\_numbers)) \wedge \\ ((m1\_subset\_1\ np\_3\ k5\_numbers) \wedge (m1\_subset\_1\ np\_3\ k1\_numbers)) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_2\ X1\ X0) \Rightarrow (\forall X2.(m2\_finseq\_2\ X2\ X0\ X1) \Leftrightarrow (m1\_subset\_1\ X2\ X1)) \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((v7\_ordinal1\ X0) \wedge ((m1\_subset\_1 \\ X1\ (k1\_euclid\ X0)) \wedge (v1\_xreal\_0\ X2))) \Rightarrow (k9\_euclid\ X0\ X1\ X2 = k24\_valued\_1 \\ X1\ X2) \end{aligned} \quad (4)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v7\_ordinal1\ X0)\wedge((m1\_subset\_1\ X1\ (k4\_finseq\_2\ X0\ k1\_numbers))\wedge(v1\_xreal\_0\ X2)))\Rightarrow(k11\_rvsum\_1\ X0\ X1\ X2 = k24\_valued\_1\ X1\ X2) \quad (6)$$

Assume the following.

$$v6\_membered\ k4\_ordinal1 \quad (7)$$

Assume the following.

$$v3\_membered\ k1\_numbers \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.(v7\_ordinal1\ X0)\Rightarrow(m1\_finseq\_2\ (k4\_finseq\_2\ X0\ X1)\ X1) \quad (9)$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(m1\_finseq\_2\ (k1\_euclid\ X0)\ k1\_numbers) \quad (10)$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(k1\_euclid\ X0 = k4\_finseq\_2\ X0\ k1\_numbers) \quad (11)$$

Assume the following.

$$\forall X0.(v6\_membered\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ X0)\Rightarrow(v7\_ordinal1\ X1)) \quad (12)$$

Assume the following.

$$\forall X0.(v3\_membered\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ X0)\Rightarrow(v1\_xreal\_0\ X1)) \quad (13)$$

**Theorem 1**

$$\forall X0.(m1\_subset\_1\ X0\ k1\_numbers)\Rightarrow(\forall X1.(m2\_finseq\_2\ X1\ k1\_numbers\ (k1\_euclid\ np\_3))\Rightarrow(\forall X2.(m2\_finseq\_2\ X2\ k1\_numbers\ (k1\_euclid\ np\_3))\Rightarrow(k23\_rvsum\_1\ (k9\_euclid\ np\_3\ X1\ X0)\ X2 = k11\_binop\_2\ X0\ (k23\_rvsum\_1\ X1\ X2))))$$