

## t13\_euclid\_7

(TMQrkaDthETgZcSBEPcRh7FFqRxrR7xL6fT)

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Let  $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $v2\_funct\_1 : \iota \Rightarrow o$  be given. Let  $k6\_rfinseq2 : \iota \Rightarrow \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $r2\_classes1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k3\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_finseq\_1 : \iota \Rightarrow o$  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  $k5\_numbers : \iota$  be given. Let  $v1\_integra2 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow (\forall X1.(( \\ & v1\_relat\_1 X1) \wedge (v1\_funct\_1 X1)) \Rightarrow ((r2\_classes1 X0 X1) \Leftrightarrow (\exists X2. \\ & ((v1\_relat\_1 X2) \wedge (v1\_funct\_1 X2)) \wedge ((k9\_xtuple\_0 X2 = k9\_xtuple\_0 \\ & X0) \wedge ((k10\_xtuple\_0 X2 = k9\_xtuple\_0 X1) \wedge ((v2\_funct\_1 X2) \wedge (X0 = \\ & k3\_relat\_1 X2 X1))))))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_relat\_1 X0) \wedge (v1\_relat\_1 X1)) \Rightarrow ((r2\_classes1 X0 X1) \Rightarrow (r2\_classes1 X1 X0)) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (m2\_finseq\_1 X1 X0) \Leftrightarrow (m1\_finseq\_1 X1 X0) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v2\_funct\_1 \\ & X0))) \wedge ((v1\_relat\_1 X1) \wedge ((v1\_funct\_1 X1) \wedge (v2\_funct\_1 X1)))) \Rightarrow \\ & ((v1\_relat\_1 (k3\_relat\_1 X0 X1)) \wedge (v2\_funct\_1 (k3\_relat\_1 X0 X1))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m2\_finseq\_1 X1 X0) \Rightarrow ((v1\_funct\_1 X1) \wedge ( \\ & (v1\_finseq\_1 X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers \\ & X0)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_1 X1 X0)\Rightarrow((v1\_relat\_1 X1)\wedge(v1\_funct\_1 X1)\wedge(v1\_finseq\_1 X1)) \quad (6)$$

Assume the following.

$$\forall X0.(m1\_finseq\_1 X0 k1\_numbers)\Rightarrow((v1\_integra2 (k6\_r\_finseq2 X0))\wedge(m2\_finseq\_1 (k6\_r\_finseq2 X0) k1\_numbers)) \quad (7)$$

Assume the following.

$$\forall X0.(m2\_finseq\_1 X0 k1\_numbers)\Rightarrow(\forall X1.((v1\_integra2 X1)\wedge(m2\_finseq\_1 X1 k1\_numbers))\Rightarrow((X1 = k6\_r\_finseq2 X0)\Leftrightarrow(r2\_classes1 X0 X1))) \quad (8)$$

**Theorem 1**

$$\forall X0.(m2\_finseq\_1 X0 k1\_numbers)\Rightarrow((v2\_funct\_1 X0)\Leftrightarrow(v2\_funct\_1 (k6\_r\_finseq2 X0)))$$