

# t37\_trees\_9 (TMccPyLRoaFPn- qqK5vYo6KqgupqbV3MdcWh)

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Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v3\_trees\_2 : \iota \Rightarrow o$  be given. Let  $v3\_trees\_9 : \iota \Rightarrow o$  be given. Let  $m1\_trees\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $k3\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_trees\_9 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  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  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v1\_trees\_1 : \iota \Rightarrow o$  be given. Let  $v1\_finseq\_1 : \iota \Rightarrow o$  be given. Let  $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_trees\_9 : \iota \Rightarrow o$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v2\_funct\_1 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X0 (k1\_zfmisc\_1 X1)) \Leftrightarrow (r1\_tarski X0 X1) \quad (1)$$

Assume the following.

$$\forall X0. (v1\_relat\_1 X0) \Rightarrow (\forall X1. (v1\_relat\_1 X1) \Rightarrow ((r1\_tarski (k10\_xtuple\_0 X0) (k9\_xtuple\_0 X1)) \Rightarrow (k9\_xtuple\_0 (k3\_relat\_1 X0 X1) = k9\_xtuple\_0 X0))) \quad (2)$$

Assume the following.

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

Assume the following.

$$\forall X0. ((\neg v1\_xboole\_0 X0) \wedge (v1\_trees\_1 X0)) \Rightarrow (\forall X1. (m1\_trees\_1 X1 X0) \Leftrightarrow (m1\_subset\_1 X1 X0)) \quad (4)$$

Assume the following.

$$\forall X0. ((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finseq\_1 X0))) \Rightarrow (k4\_finseq\_1 X0 = k9\_xtuple\_0 X0) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X1)\wedge(v5\_relat\_1 X1 X0))\Rightarrow(k2\_relset\_1 X0 X1 = k10\_xtuple\_0 X1) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X1)\wedge(v4\_relat\_1 X1 X0))\Rightarrow(k1\_relset\_1 X0 X1 = k9\_xtuple\_0 X1) \quad (7)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0)\wedge((v1\_funct\_1 X0)\wedge((v3\_trees\_2 X0)\wedge(v3\_trees\_9 X0))))\Rightarrow(v1\_trees\_9 (k9\_xtuple\_0 X0)) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((v1\_relat\_1 X1)\wedge(v4\_relat\_1 X1 X0))\wedge(v1\_relat\_1 X2))\Rightarrow((v1\_relat\_1 (k3\_relat\_1 X1 X2))\wedge(v4\_relat\_1 (k3\_relat\_1 X1 X2) X0)) \quad (9)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0)\wedge((v1\_funct\_1 X0)\wedge(v3\_trees\_2 X0)))\Rightarrow((\neg v1\_xboole\_0 (k9\_xtuple\_0 X0))\wedge(v1\_trees\_1 (k9\_xtuple\_0 X0))) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1 X1 X0)\Rightarrow((v1\_funct\_1 X1)\wedge((v1\_finseq\_1 X1)\wedge(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers X0)))))) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_1 X1 X0)\Rightarrow((v1\_relat\_1 X1)\wedge((v1\_funct\_1 X1)\wedge(v1\_finseq\_1 X1))) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.v1\_relat\_1 (k3\_relat\_1 X0 X1) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X1)\wedge(v5\_relat\_1 X1 X0))\Rightarrow(m1\_subset\_1 (k2\_relset\_1 X0 X1) (k1\_zfmisc\_1 X0)) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v1\_xboole\_0 X0)\wedge((v1\_trees\_1 X0)\wedge(v1\_trees\_9 X0)))\wedge(m1\_subset\_1 X1 X0))\Rightarrow((v2\_funct\_1 (k1\_trees\_9 X0 X1))\wedge(m2\_finseq\_1 (k1\_trees\_9 X0 X1) X0)) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow((v4\_relat\_1 X2 X0)\wedge(v5\_relat\_1 X2 X1)) \quad (16)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge ((v3\_trees\_2 X0) \wedge \\ & (v3\_trees\_9 X0)))) \Rightarrow (\forall X1.(m1\_trees\_1 X1 (k9\_xtuple\_0 X0)) \Rightarrow \\ & (k1\_relset\_1 k5\_numbers (k3\_relat\_1 (k1\_trees\_9 (k9\_xtuple\_0 \\ & X0) X1) X0) = k4\_finseq\_1 (k1\_trees\_9 (k9\_xtuple\_0 X0) X1))) \end{aligned}$$