

t42\_trees\_1 (TM-  
cTsmwQ4LZUyJuqCyxL9TJLXCiCCuszfAo)

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Let  $k6\_trees\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_trees\_1 : \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  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  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_finset\_1 : \iota \Rightarrow o$  be given. Let  $v1\_trees\_1 : \iota \Rightarrow o$  be given. Let  $v1\_card\_1 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_xreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(v1\_xboole\_0 X0) \Rightarrow (X0 = k1\_xboole\_0) \quad (1)$$

Assume the following.

$$k2\_trees\_1 k6\_numbers = k1\_tarski k1\_xboole\_0 \quad (2)$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \quad (3)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finseq\_1 X0))) \Rightarrow (k3\_finseq\_1 X0 = k1\_card\_1 X0) \quad (4)$$

Assume the following.

$$\forall X0. \exists X1. (m1\_finseq\_1 X1 X0) \wedge ((v1\_relat\_1 X1) \wedge (v4\_relat\_1 X1 k5\_numbers) \wedge ((v5\_relat\_1 X1 X0) \wedge ((v1\_funct\_1 X1) \wedge ((v1\_xboole\_0 X1) \wedge ((v1\_finset\_1 X1) \wedge (v1\_finseq\_1 X1)))))) \quad (5)$$

Assume the following.

$$\forall X0. \neg v1\_xboole\_0 (k1\_tarski X0) \quad (6)$$

Assume the following.

$$v1\_trees\_1 (k1\_tarski k1\_xboole\_0) \quad (7)$$

Assume the following.

$$\forall X0.v1\_finset\_1 (k1\_tarski X0) \quad (8)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 X0) \Rightarrow ((v1\_xboole\_0 (k1\_card\_1 X0)) \wedge (v1\_card\_1 (k1\_card\_1 X0))) \quad (9)$$

Assume the following.

$$\forall X0.((\neg v1\_xboole\_0 X0) \wedge ((v1\_finset\_1 X0) \wedge (v1\_trees\_1 X0))) \Rightarrow (m1\_subset\_1 (k6\_trees\_1 X0) k5\_numbers) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.(X1 = k1\_tarski X0) \Leftrightarrow (\forall X2.(X2 \in X1) \Leftrightarrow (X2 = X0)) \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1\_xboole\_0 X0) \wedge ((v1\_finset\_1 X0) \wedge (v1\_trees\_1 X0))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 k5\_numbers) \Rightarrow ((X1 = k6\_trees\_1 X0) \Leftrightarrow ((\exists X2.(m2\_finseq\_1 X2 k5\_numbers) \wedge ((X2 \in X0) \wedge (k3\_finseq\_1 X2 = X1))) \wedge (\forall X2.(m2\_finseq\_1 X2 k5\_numbers) \Rightarrow ((X2 \in X0) \Rightarrow (r1\_xreal\_0 (k3\_finseq\_1 X2) X1)))))) \end{aligned} \quad (12)$$

**Theorem 1**  $k6\_trees\_1 (k2\_trees\_1 k6\_numbers) = k6\_numbers.$