

## t45\_trees\_1

(TMXbQks2KqbG9R5mPjSeLy3LDKShjUNKoJX)

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Let  $k7\_trees\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_trees\_1 : \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $v1\_finset\_1 : \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v1\_trees\_1 : \iota \Rightarrow o$  be given. Let  $m4\_trees\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $k1\_card\_1 : \iota \Rightarrow \iota$  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  $k1\_numbers : \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v2\_trees\_1 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(v1\_finset\_1 X0) \Rightarrow (\forall X1.(v1\_finset\_1 X1) \Rightarrow ((r1\_tarski X0 X1) \Rightarrow (r1\_xxreal\_0 (k5\_card\_1 X0) (k5\_card\_1 X1)))) \quad (1)$$

Assume the following.

$$\forall X0.((\neg v1\_xboole\_0 X0) \wedge (v1\_trees\_1 X0)) \Rightarrow ((m4\_trees\_1 k1\_xboole\_0 X0) \wedge (m4\_trees\_1 (k1\_tarski k1\_xboole\_0) X0)) \quad (2)$$

Assume the following.

$$\forall X0.k1\_card\_1 (k1\_tarski X0) = np\_1 \quad (3)$$

Assume the following.

$$k2\_trees\_1 k6\_numbers = k1\_tarski k1\_xboole\_0 \quad (4)$$

Assume the following.

$$((v2\_xxreal\_0 np\_1) \wedge (m2\_subset\_1 np\_1 k1\_numbers k5\_numbers)) \wedge ((m1\_subset\_1 np\_1 k5\_numbers) \wedge (m1\_subset\_1 np\_1 k1\_numbers)) \quad (5)$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \quad (6)$$

Assume the following.

$$\forall X0.(v1\_finset\_1 X0) \Rightarrow (k5\_card\_1 X0 = k1\_card\_1 X0) \quad (7)$$

Assume the following.

$$\forall X0. \neg v1\_xboole\_0 (k1\_tarski X0) \quad (8)$$

Assume the following.

$$v1\_trees\_1 (k1\_tarski k1\_xboole\_0) \quad (9)$$

Assume the following.

$$\forall X0.v1\_finset\_1 (k1\_tarski X0) \quad (10)$$

Assume the following.

$$\forall X0.((\neg v1\_xboole\_0 X0) \wedge (v1\_trees\_1 X0)) \Rightarrow (\forall X1. (m4\_trees\_1 X1 X0) \Rightarrow (v2\_trees\_1 X1)) \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1\_xboole\_0 X0) \wedge ((v1\_finset\_1 X0) \wedge (v1\_trees\_1 \\ & X0))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 k5\_numbers) \Rightarrow ((X1 = k7\_trees\_1 \\ & X0) \Leftrightarrow (\exists X2.(m4\_trees\_1 X2 X0) \wedge ((X1 = k5\_card\_1 X2) \wedge (\forall X3. \\ & (m4\_trees\_1 X3 X0) \Rightarrow (r1\_xxreal\_0 (k5\_card\_1 X3) (k5\_card\_1 X2))))))) \end{aligned} \quad (12)$$

Assume the following.

$$\forall X0.((\neg v1\_xboole\_0 X0) \wedge (v1\_trees\_1 X0)) \Rightarrow (\forall X1. (v2\_trees\_1 X1) \Rightarrow ((m4\_trees\_1 X1 X0) \Leftrightarrow (r1\_tarski X1 X0))) \quad (13)$$

Assume the following.

$$\forall X0.((\neg v1\_xboole\_0 X0) \wedge ((v1\_finset\_1 X0) \wedge (v1\_trees\_1 X0))) \Rightarrow (\forall X1.(m4\_trees\_1 X1 X0) \Rightarrow (v1\_finset\_1 X1)) \quad (14)$$

**Theorem 1**  $k7\_trees\_1 (k2\_trees\_1 k6\_numbers) = np\_1$ .