

## t14\_afinsq\_1

(TMWt94MhLYxemXRR6Sm68aKLkFDzimDrcHD)

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Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v5\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_finset\_1 : \iota \Rightarrow o$  be given. Let  $k1\_afinsq\_1 : \iota \Rightarrow \iota$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k2\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $k1\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. (k9\_xtuple\_0 (k2\_funcop\_1 X0 X1) = X0) \wedge (r1\_tarski (k10\_xtuple\_0 (k2\_funcop\_1 X0 X1)) (k1\_tarski X1)) \quad (1)$$

Assume the following.

$$\forall X0. ((v1\_relat\_1 X0) \wedge ((v5\_ordinal1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finset\_1 X0)))) \Rightarrow (k1\_afinsq\_1 X0 = k1\_card\_1 X0) \quad (2)$$

Assume the following.

$$\forall X0. ((v1\_relat\_1 X0) \wedge ((v5\_ordinal1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finset\_1 X0)))) \Rightarrow (k1\_card\_1 X0 = k9\_xtuple\_0 X0) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((\neg v1\_xboole\_0 X1) \wedge (m1\_subset\_1 X2 X1)) \Rightarrow (v5\_relat\_1 (k2\_funcop\_1 X0 X2) X1) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (v1\_relat\_1 (k2\_funcop\_1 X0 X1)) \wedge (v1\_funct\_1 (k2\_funcop\_1 X0 X1)) \quad (5)$$

Assume the following.

$$\forall X0. v1\_finset\_1 (k1\_tarski X0) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_finset\_1 X0)\wedge(v1\_finset\_1 X1))\Rightarrow(v1\_finset\_1 (k2\_zfmisc\_1 X0 X1)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(v3\_ordinal1 X0)\Rightarrow(v5\_ordinal1 (k2\_funcop\_1 X0 X1)) \quad (8)$$

Assume the following.

$$\forall X0.\exists X1.m1\_subset\_1 X1 X0 \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.k2\_funcop\_1 X0 X1 = k2\_zfmisc\_1 X0 (k1\_tarSKI X1) \quad (10)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0)\Rightarrow(v3\_ordinal1 X0) \quad (11)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0)\Rightarrow(v1\_finset\_1 X0) \quad (12)$$

**Theorem 1**

$$\forall X0.(v7\_ordinal1 X0)\Rightarrow(\forall X1.(\neg v1\_xboole\_0 X1)\Rightarrow(\exists X2.((v1\_relat\_1 X2)\wedge((v5\_relat\_1 X2 X1)\wedge((v5\_ordinal1 X2)\wedge((v1\_funct\_1 X2)\wedge(v1\_finset\_1 X2))))))\wedge(k1\_afinsq\_1 X2 = X0)))$$