

## t53\_afinsq\_2

(TMPssZ6uqQxHpG6HnprmjSuKrXRkP8jA7D7)

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Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $k7\_afinsq\_2 : \iota \Rightarrow \iota$  be given. Let  $k5\_afinsq\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k6\_afinsq\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_afinsq\_1 : \iota \Rightarrow \iota$  be given. Let  $v5\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v1\_finset\_1 : \iota \Rightarrow o$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $k2\_numbers : \iota$  be given. Let  $k27\_binop\_2 : \iota$  be given. Assume the following.

$$\begin{aligned} \forall X0. (\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1. ((v1\_funct\_1 X1) \wedge \\ (v1\_funct\_2 X1 (k2\_zfmisc\_1 X0 X0) X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ (k2\_zfmisc\_1 (k2\_zfmisc\_1 X0 X0) X0)))))) \Rightarrow (\forall X2. (m1\_subset\_1 \\ X2 X0) \Rightarrow (k6\_afinsq\_2 X0 (k5\_afinsq\_1 X2) X1 = X2)) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1\_subset\_1 X0 X1) \quad (2)$$

Assume the following.

$$\forall X0. k5\_afinsq\_1 X0 = k3\_afinsq\_1 X0 \quad (3)$$

Assume the following.

$$\forall X0. (v5\_ordinal1 (k3\_afinsq\_1 X0)) \wedge (v1\_finset\_1 (k3\_afinsq\_1 X0)) \quad (4)$$

Assume the following.

$$\forall X0. (v1\_relat\_1 (k3\_afinsq\_1 X0)) \wedge (v1\_funct\_1 (k3\_afinsq\_1 X0)) \quad (5)$$

Assume the following.

$$\neg v1\_xboole\_0 k2\_numbers \quad (6)$$

Assume the following.

$$(v1\_funct\_1 \ k27\_binop\_2) \wedge ((v1\_funct\_2 \ k27\_binop\_2 \ (k2\_zfmisc\_1 \ k2\_numbers \ k2\_numbers) \ k2\_numbers) \wedge (m1\_subset\_1 \ k27\_binop\_2 \ (k1\_zfmisc\_1 \ (k2\_zfmisc\_1 \ (k2\_zfmisc\_1 \ k2\_numbers \ k2\_numbers) \ k2\_numbers)))) \quad (7)$$

Assume the following.

$$\forall X0. ((v1\_relat\_1 \ X0) \wedge ((v1\_funct\_1 \ X0) \wedge ((v5\_ordinal1 \ X0) \wedge (v1\_finset\_1 \ X0)))) \Rightarrow (k7\_afinsq\_2 \ X0 = k6\_afinsq\_2 \ k2\_numbers \ X0 \ k27\_binop\_2) \quad (8)$$

Assume the following.

$$\forall X0. (v1\_xcmplx\_0 \ X0) \Leftrightarrow (X0 \in k2\_numbers) \quad (9)$$

**Theorem 1**  $\forall X0. (v1\_xcmplx\_0 \ X0) \Rightarrow (k7\_afinsq\_2 \ (k5\_afinsq\_1 \ X0) = X0).$