

# t54\_afinsq\_2 (TMNCzvkJApTEBZYsDXXD- tyU3WxpLnbumBk)

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

$$\begin{aligned} & \forall X0. (\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1. ((v1\_funct\_1 X1) \wedge \\ & (v1\_funct\_2 X1 (k2\_zfmisc\_1 X0 X0) X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 (k2\_zfmisc\_1 X0 X0) X0)))) \Rightarrow (\forall X2. (m1\_subset\_1 \\ & X2 X0) \Rightarrow (\forall X3. (m1\_subset\_1 X3 X0) \Rightarrow (k6\_afinsq\_2 X0 (k6\_afinsq\_1 \\ & X2 X3) X1 = k5\_binop\_1 X0 X1 X2 X3)))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1\_subset\_1 X0 X1) \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. (((v1\_funct\_1 X1) \wedge \\ & ((v1\_funct\_2 X1 (k2\_zfmisc\_1 X0 X0) X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 (k2\_zfmisc\_1 X0 X0) X0)))) \wedge ((m1\_subset\_1 X2 X0) \wedge \\ & (m1\_subset\_1 X3 X0))) \Rightarrow (k5\_binop\_1 X0 X1 X2 X3 = k1\_binop\_1 X1 X2 X3) \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0. \forall X1. (v1\_relat\_1 (k6\_afinsq\_1 X0 X1)) \wedge (v1\_funct\_1 (k6\_afinsq\_1 X0 X1)) \tag{4}$$

Assume the following.

$$\neg v1\_xboole\_0 k2\_numbers \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.(v5\_ordinal1 (k6\_afinsq\_1 X0 X1))\wedge(v1\_finset\_1 (k6\_afinsq\_1 X0 X1)) \quad (6)$$

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.

$$\forall X0.((v1\_funct\_1 X0)\wedge((v1\_funct\_2 X0 (k2\_zfmisc\_1 k2\_numbers k2\_numbers) k2\_numbers)\wedge(m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k2\_zfmisc\_1 k2\_numbers k2\_numbers) k2\_numbers))))))\Rightarrow((X0 = k27\_binop\_2)\Leftrightarrow (\forall X1.(v1\_xcmplx\_0 X1)\Rightarrow(\forall X2.(v1\_xcmplx\_0 X2)\Rightarrow(k1\_binop\_1 X0 X1 X2 = k3\_binop\_2 X1 X2)))) \quad (9)$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0)\Leftrightarrow(X0 \in k2\_numbers) \quad (10)$$

**Theorem 1**

$$\forall X0.(v1\_xcmplx\_0 X0)\Rightarrow(\forall X1.(v1\_xcmplx\_0 X1)\Rightarrow(k7\_afinsq\_2 (k6\_afinsq\_1 X0 X1) = k3\_binop\_2 X0 X1))$$