

t73\_afinsq\_2  
(TMZeaDoHFHvjianJUwgu9TbM7ffqvioTL2j)

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Let  $m1\_subset.1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k8\_afinsq.1 : \iota \Rightarrow \iota$  be given. Let  $k8\_afinsq.2 : \iota \Rightarrow \iota \Rightarrow \iota$  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  $k1\_zfmisc.1 : \iota \Rightarrow \iota$  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  $v5\_relat.1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_relat.1 : \iota \Rightarrow o$  be given. Let  $k5\_binop.1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k15\_afinsq.1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  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.

$$\forall X0. k5\_afinsq.1 X0 = k3\_afinsq.1 X0 \quad (2)$$

Assume the following.

$$\forall X0. (v5\_ordinal1 (k3\_afinsq.1 X0)) \wedge (v1\_finset.1 (k3\_afinsq.1 X0)) \quad (3)$$

Assume the following.

$$\forall X0. \neg v1\_xboole.0 (k8\_afinsq.1 X0) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v1\_xboole.0 X0) \wedge (m1\_subset.1 X1 X0)) \Rightarrow (v5\_relat.1 (k3\_afinsq.1 X1) X0) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1\_relat.1 X1) \wedge ((v5\_relat.1 X1 (k8\_afinsq.1 \\ & X0)) \wedge ((v1\_funct.1 X1) \wedge ((v5\_ordinal1 X1) \wedge (v1\_finset.1 X1)))))) \Rightarrow \\ & (m1\_subset.1 (k8\_afinsq.2 X0 X1) (k8\_afinsq.1 X0)) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.(v1\_relat\_1 (k5\_afinsq\_1 X0)) \wedge (v1\_funct\_1 (k5\_afinsq\_1 X0)) \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1\_relat\_1 X1) \wedge ((v5\_relat\_1 X1 (k8\_afinsq\_1 X0)) \wedge ((v1\_funct\_1 X1) \wedge ((v5\_ordinal1 X1) \wedge (v1\_finset\_1 X1)))))) \Rightarrow \\ & (\forall X2.(m1\_subset\_1 X2 (k8\_afinsq\_1 X0)) \Rightarrow ((X2 = k8\_afinsq\_2 X0 X1) \Leftrightarrow (\exists X3.((v1\_funct\_1 X3) \wedge ((v1\_funct\_2 X3 (k2\_zfmisc\_1 (k8\_afinsq\_1 X0) (k8\_afinsq\_1 X0)) (k8\_afinsq\_1 X0)) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k2\_zfmisc\_1 (k8\_afinsq\_1 X0) (k8\_afinsq\_1 X0)) (k8\_afinsq\_1 X0)))))) \wedge ((\forall X4.(m1\_subset\_1 X4 (k8\_afinsq\_1 X0)) \Rightarrow (\forall X5.(m1\_subset\_1 X5 (k8\_afinsq\_1 X0)) \Rightarrow (k5\_binop\_1 (k8\_afinsq\_1 X0) X3 X4 X5 = k15\_afinsq\_1 X0 X4 X5))) \wedge (X2 = k6\_afinsq\_2 (k8\_afinsq\_1 X0) X1 X3)))))) \end{aligned} \quad (8)$$

**Theorem 1**

$$\forall X0.\forall X1.(m1\_subset\_1 X1 (k8\_afinsq\_1 X0)) \Rightarrow (k8\_afinsq\_2 X0 (k5\_afinsq\_1 X1) = X1)$$