

# l2\_afinsq\_2 (TMTtWw- pxC3WMXRWn5W7VgzWbg3UcAHheYPd)

October 27, 2020

Let  $v1\_finset\_1 : \iota \Rightarrow o$  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  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $v2\_funct\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v2\_funct\_1 : \iota \Rightarrow o$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1\_finset\_1 X0) \Rightarrow (\forall X1.(v1\_finset\_1 X1) \Rightarrow (\forall X2. \\ & ((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 X0 X1) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 X0 X1)))))) \Rightarrow (((k5\_card\_1 X0 = k5\_card\_1 X1) \wedge (v2\_funct\_1 \\ & X2)) \Rightarrow (k10\_xtuple\_0 X2 = X1)))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X1) \wedge (v5\_relat\_1 X1 X0)) \Rightarrow (k2\_relset\_1 X0 X1 = k10\_xtuple\_0 X1) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1\_finset\_1 X0) \Rightarrow (\forall X1.(v1\_finset\_1 X1) \Rightarrow (\forall X2. \\ & ((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 X0 X1) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 X0 X1)))))) \Rightarrow (((k5\_card\_1 X0 = k5\_card\_1 X1) \wedge (k10\_xtuple\_0 \\ & X2 = X1)) \Rightarrow (v2\_funct\_1 X2))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X1) \wedge (v5\_relat\_1 X1 X0)) \Rightarrow (v2\_funct\_2 X1 X0) \Leftrightarrow (k2\_relset\_1 X0 X1 = X0) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))) \Rightarrow ((v4\_relat\_1 X2 X0) \wedge (v5\_relat\_1 X2 X1)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow(v1\_relat\_1 X2) \quad (6)$$

**Theorem 1**

$$\begin{aligned} &\forall X0.(v1\_finset\_1 X0)\Rightarrow(\forall X1.(v1\_finset\_1 X1)\Rightarrow(\forall X2. \\ &((v1\_funct\_1 X2)\wedge((v1\_funct\_2 X2 X0 X1)\wedge(m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ &(k2\_zfmisc\_1 X0 X1))))))\Rightarrow((k5\_card\_1 X0 = k5\_card\_1 X1)\Rightarrow((v2\_funct\_2 \\ &X2 X1)\Leftrightarrow(v2\_funct\_1 X2)))) \end{aligned}$$