

# l44\_card\_fin

## (TMb5C1ZdHN8XfzzaMaheEcnFp2Ci7szZjk6)

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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  $k5\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v2\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $r2\_wellord2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_card\_1 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow ((v1\_funct\_1 X0) \wedge ((v1\_funct\_2 X0 (k9\_xtuple\_0 X0) (k10\_xtuple\_0 X0)) \wedge (m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k9\_xtuple\_0 X0) (k10\_xtuple\_0 X0)))))) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (r2\_wellord2 X0 X1) \Rightarrow (r2\_wellord2 X1 X0) \quad (2)$$

Assume the following.

$$\forall X0. (v1\_finset\_1 X0) \Rightarrow (k5\_card\_1 X0 = k1\_card\_1 X0) \quad (3)$$

Assume the following.

$$\forall X0. v1\_card\_1 (k1\_card\_1 X0) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (r2\_wellord2 X0 X1) \Leftrightarrow (\exists X2. ((v1\_relat\_1 X2) \wedge (v1\_funct\_1 X2) \wedge ((v2\_funct\_1 X2) \wedge ((k9\_xtuple\_0 X2 = X0) \wedge (k10\_xtuple\_0 X2 = X1)))) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. (v1\_card\_1 X1) \Rightarrow ((X1 = k1\_card\_1 X0) \Leftrightarrow (r2\_wellord2 X0 X1)) \quad (6)$$

### Theorem 1

$$\forall X0. (v1\_finset\_1 X0) \Rightarrow (\exists X1. ((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 (k5\_card\_1 X0) X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k5\_card\_1 X0) X0)))) \wedge (v2\_funct\_1 X1)))$$