

## t29\_card\_3

(TMbpebSnE2nar8mA1V3djWf2VVExxz3LcyV)

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Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_card\_3 : \iota \Rightarrow o$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_card\_3 : \iota \Rightarrow \iota$  be given. Let  $r2\_wellord2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $v1\_card\_1 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. (r2\_wellord2\ X0\ (k2\_zfmisc\_1\ X0\ (k1\_tarski\ X1))) \wedge (k1\_card\_1\ X0 = k1\_card\_1\ (k2\_zfmisc\_1\ X0\ (k1\_tarski\ X1))) \quad (1)$$

Assume the following.

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

Assume the following.

$$\forall X0. ((v1\_relat\_1\ X0) \wedge (v1\_funct\_1\ X0)) \Rightarrow ((v1\_relat\_1\ (k2\_card\_3\ X0)) \wedge (v1\_funct\_1\ (k2\_card\_3\ X0))) \quad (3)$$

Assume the following.

$$\forall X0. ((v1\_relat\_1\ X0) \wedge (v1\_funct\_1\ X0)) \Rightarrow (\forall X1. ((v1\_relat\_1\ X1) \wedge (v1\_funct\_1\ X1)) \Rightarrow ((X1 = k2\_card\_3\ X0) \Leftrightarrow ((k9\_xtuple\_0\ X1 = k9\_xtuple\_0\ X0) \wedge (\forall X2. (X2 \in k9\_xtuple\_0\ X0) \Rightarrow (k1\_funct\_1\ X1\ X2 = k2\_zfmisc\_1\ (k1\_funct\_1\ X0\ X2)\ (k1\_tarski\ X2)))))) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (v1\_card\_1\ X1) \Rightarrow ((X1 = k1\_card\_1\ X0) \Leftrightarrow (r2\_wellord2\ X0\ X1)) \quad (5)$$

Assume the following.

$$\forall X0. ((v1\_relat\_1\ X0) \wedge (v1\_funct\_1\ X0)) \Rightarrow ((v1\_card\_3\ X0) \Leftrightarrow (\forall X1. (X1 \in k9\_xtuple\_0\ X0) \Rightarrow (v1\_card\_1\ (k1\_funct\_1\ X0\ X1)))) \quad (6)$$

### Theorem 1

$$\forall X0. ((v1\_relat\_1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge (v1\_card\_3\ X0))) \Rightarrow (\forall X1. (X1 \in k9\_xtuple\_0\ X0) \Rightarrow (k1\_card\_1\ (k1\_funct\_1\ (k2\_card\_3\ X0)\ X1) = k1\_funct\_1\ X0\ X1))$$