

## t22\_card\_4

(TMLPG4vFrKxJwHKJ4a1BDMNzdLdiUpG5Red)

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Let  $v1\_finset.1 : \iota \Rightarrow o$  be given. Let  $k1\_xboole.0 : \iota$  be given. Let  $k2\_card.2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_card.1 : \iota \Rightarrow \iota$  be given. Let  $r2\_wellord2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_zfmisc.1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_card.1 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (r2\_wellord2 (k2\_zfmisc.1 X0 X1) (k2\_zfmisc.1 \\ & (k1\_card.1 X0) X1)) \wedge ((r2\_wellord2 (k2\_zfmisc.1 X0 X1) (k2\_zfmisc.1 \\ & X0 (k1\_card.1 X1))) \wedge ((r2\_wellord2 (k2\_zfmisc.1 X0 X1) (k2\_zfmisc.1 \\ & (k1\_card.1 X0) (k1\_card.1 X1))) \wedge ((k1\_card.1 (k2\_zfmisc.1 X0 X1) = \\ & k1\_card.1 (k2\_zfmisc.1 (k1\_card.1 X0) X1)) \wedge ((k1\_card.1 (k2\_zfmisc.1 \\ & X0 X1) = k1\_card.1 (k2\_zfmisc.1 X0 (k1\_card.1 X1))) \wedge (k1\_card.1 \\ & (k2\_zfmisc.1 X0 X1) = k1\_card.1 (k2\_zfmisc.1 (k1\_card.1 X0) (k1\_card.1 \\ & X1)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (v1\_finset.1 X1) \Rightarrow ((v1\_finset.1 X0) \vee (( \\ & X1 = k1\_xboole.0) \vee ((r2\_wellord2 (k2\_zfmisc.1 X0 X1) X0) \wedge (k1\_card.1 \\ & (k2\_zfmisc.1 X0 X1) = k1\_card.1 X0)))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0. v1\_card.1 (k1\_card.1 X0) \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0. (v1\_card.1 X0) \Rightarrow (\forall X1. (v1\_card.1 X1) \Rightarrow (k2\_card.2 \\ & X0 X1 = k1\_card.1 (k2\_zfmisc.1 X0 X1))) \end{aligned} \tag{4}$$

### Theorem 1

$$\begin{aligned} & \forall X0. \forall X1. (v1\_finset.1 X0) \Rightarrow ((X0 = k1\_xboole.0) \vee ( \\ & (v1\_finset.1 X1) \vee (k2\_card.2 (k1\_card.1 X1) (k1\_card.1 X0) = k1\_card.1 \\ & X1))) \end{aligned}$$