

## t1\_card\_3

(TMJY8qwygZWDufACDKCTwKUgpCBchTRwMg1)

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

$$\forall X0. \forall X1. r2\_wellord2 X0 X0 \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0. ((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow (\forall X1. (( \\ v1\_relat\_1 X1) \wedge ((v1\_funct\_1 X1) \wedge (v1\_card\_3 X1))) \Rightarrow ((X1 = k1\_card\_3 \\ X0) \Leftrightarrow ((k9\_xtuple\_0 X1 = k9\_xtuple\_0 X0) \wedge (\forall X2. (X2 \in k9\_xtuple\_0 \\ X0) \Rightarrow (k1\_funct\_1 X1 X2 = k1\_card\_1 (k1\_funct\_1 X0 X2)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. (v1\_card\_1 X1) \Rightarrow ((X1 = k1\_card\_1 X0) \Leftrightarrow (r2\_wellord2 X0 X1)) \tag{3}$$

Assume the following.

$$\forall X0. ((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow ((v1\_card\_3 X0) \Leftrightarrow (\forall X1. (X1 \in k9\_xtuple\_0 X0) \Rightarrow (v1\_card\_1 (k1\_funct\_1 X0 X1)))) \tag{4}$$

**Theorem 1**

$$\forall X0. ((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_card\_3 X0))) \Rightarrow (k1\_card\_3 X0 = X0)$$