

t77\_card\_2  
(TMURGVwH9ZpCT5Jm1BfLWh3sk3S486uvK2C)

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Let  $v1\_finset\_1 : \iota \Rightarrow o$  be given. Let  $r2\_wellord2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_card\_1 : \iota \Rightarrow o$  be given. Let  $k1\_card\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_ordinal1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. r1\_tarski X0 (k2\_xboole\_0 X0 X1) \quad (1)$$

Assume the following.

$$\forall X0. (v1\_card\_1 X0) \Rightarrow ((\neg v1\_finset\_1 X0) \Rightarrow (k1\_card\_2 X0 X0 = X0)) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (r2\_wellord2 X0 X1) \Leftrightarrow (k1\_card\_1 X0 = k1\_card\_1 X1) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. r1\_ordinal1 (k1\_card\_1 (k2\_xboole\_0 X0 X1)) (k1\_card\_2 (k1\_card\_1 X0) (k1\_card\_1 X1)) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (r1\_tarski X0 X1) \Rightarrow (r1\_ordinal1 (k1\_card\_1 X0) (k1\_card\_1 X1)) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. ((v3\_ordinal1 X0) \wedge (v3\_ordinal1 X1)) \Rightarrow (r1\_ordinal1 X0 X1) \Leftrightarrow (r1\_tarski X0 X1) \quad (6)$$

Assume the following.

$$\forall X0. (\neg v1\_finset\_1 X0) \Rightarrow ((\neg v1\_finset\_1 (k1\_card\_1 X0)) \wedge (v1\_card\_1 (k1\_card\_1 X0))) \quad (7)$$

Assume the following.

$$\forall X0.v1\_card\_1 (k1\_card\_1 X0) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.(X0 = X1) \Leftrightarrow ((r1\_tarSKI X0 X1) \wedge (r1\_tarSKI X1 X0)) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.k2\_xboole\_0 X0 X1 = k2\_xboole\_0 X1 X0 \quad (10)$$

Assume the following.

$$\forall X0.(v1\_card\_1 X0) \Rightarrow (v3\_ordinal1 X0) \quad (11)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.\forall X1.\neg(\neg v1\_finset\_1 X0) \wedge (((r2\_wellord2 X0 X1) \vee \\ & (r2\_wellord2 X1 X0)) \wedge (\neg(r2\_wellord2 (k2\_xboole\_0 X0 X1) X0) \wedge \\ & k1\_card\_1 (k2\_xboole\_0 X0 X1) = k1\_card\_1 X0))) \end{aligned}$$