

## t94\_card\_2

(TMaGu4Tun138MG56tycJYm9j8CLW1XD XK1p)

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Let  $v1\_card\_1 : \iota \Rightarrow o$  be given. Let  $r1\_ordinal1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_card\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k10\_ordinal2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $r2\_wellord2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(v3\_ordinal1\ X0) \Rightarrow (\forall X1.(v3\_ordinal1\ X1) \Rightarrow ((r1\_ordinal1\ X0\ (k10\_ordinal2\ X0\ X1)) \wedge (r1\_ordinal1\ X1\ (k10\_ordinal2\ X0\ X1)))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.(r1\_tarski\ X0\ X1) \Rightarrow (r1\_ordinal1\ (k1\_card\_1\ X0)\ (k1\_card\_1\ X1)) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.r2\_wellord2\ X0\ X0 \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.((v3\_ordinal1\ X0) \wedge (v3\_ordinal1\ X1)) \Rightarrow (r1\_ordinal1\ X0\ X1) \Leftrightarrow (r1\_tarski\ X0\ X1) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.((v3\_ordinal1\ X0) \wedge (v3\_ordinal1\ X1)) \Rightarrow (v3\_ordinal1\ (k10\_ordinal2\ X0\ X1)) \tag{5}$$

Assume the following.

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

Assume the following.

$$\forall X0.(v1\_card\_1\ X0) \Rightarrow (\forall X1.(v1\_card\_1\ X1) \Rightarrow (k1\_card\_2\ X0\ X1 = k1\_card\_1\ (k10\_ordinal2\ X0\ X1))) \tag{7}$$

Assume the following.

$$\forall X0.(v1\_card\_1 X0) \Rightarrow (v3\_ordinal1 X0) \quad (8)$$

**Theorem 1**

$$\forall X0.(v1\_card\_1 X0) \Rightarrow (\forall X1.(v1\_card\_1 X1) \Rightarrow ((r1\_ordinal1 X0 (k1\_card\_2 X0 X1)) \wedge (r1\_ordinal1 X1 (k1\_card\_2 X0 X1))))$$