t105_card_3 (TMcu2KdsijLaua52vJoadbysZuACz3DdsBW)

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Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $r4\_wellord1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_finset\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $k9\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k10\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k1\_relat\_1 : \iota \Rightarrow \iota$ be given. Let $r3\_wellord1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2\_funct\_1 : \iota \Rightarrow o$ be given. Let $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge (v1\_funct\_1\ X0)) \Rightarrow ((v1\_finset\_1\ (k9\_xtuple\_0\ X0)) \Rightarrow (v1\_finset\_1\ (k10\_xtuple\_0\ X0))) \tag{1}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge (v1\_finset\_1\ X0)) \Rightarrow (v1\_finset\_1\ (k1\_relat\_1\ X0)) \tag{2}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge (\neg v1\_finset\_1\ X0)) \Rightarrow (\neg v1\_finset\_1\ (k1\_relat\_1\ X0)) \tag{3}$$

Assume the following.

$$\forall X0.(v1\_relat\_1\ X0) \Rightarrow (\forall X1.(v1\_relat\_1\ X1) \Rightarrow ((r4\_wellord1\ X0\ X1) \Leftrightarrow (\exists X2.((v1\_relat\_1\ X2) \wedge (v1\_funct\_1\ X2)) \wedge (r3\_wellord1\ X0\ X1\ X2)))) \tag{4}$$

Assume the following.

$$\forall X0.(v1\_relat\_1\ X0) \Rightarrow (\forall X1.(v1\_relat\_1\ X1) \Rightarrow (\forall X2.((v1\_relat\_1\ X2) \wedge (v1\_funct\_1\ X2)) \Rightarrow ((r3\_wellord1\ X0\ X1\ X2) \Leftrightarrow ((k9\_xtuple\_0\ X2 = k1\_relat\_1\ X0) \wedge ((k10\_xtuple\_0\ X2 = k1\_relat\_1\ X1) \wedge ((v2\_funct\_1\ X2) \wedge (\forall X3.\forall X4.(k4\_tarski\ X3\ X4 \in X0) \Leftrightarrow ((X3 \in k1\_relat\_1\ X0) \wedge ((X4 \in k1\_relat\_1\ X0) \wedge (k4\_tarski\ (k1\_funct\_1\ X2\ X3)\ (k1\_funct\_1\ X2\ X4) \in X1)))))))))) \tag{5}$$

Theorem 1

$$\forall X0.(v1\_relat\_1\ X0)\Rightarrow(\forall X1.(v1\_relat\_1\ X1)\Rightarrow(((r4\_wellord1\ X0\ X1)\wedge(v1\_finset\_1\ X0))\Rightarrow(v1\_finset\_1\ X1)))$$