t102_card_3 (TMc2vokoGkDdP17vzZwsjW41aBmdCCATNCQ)

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Let $v4\_funct\_1 : \iota \Rightarrow o$ be given. Let $v2\_card\_3 : \iota \Rightarrow o$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $k9\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10\_card\_3 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v4\_funct\_1\ X0) \Rightarrow (\forall X1.((v1\_relat\_1\ X1) \wedge (v1\_funct\_1\ X1)) \Rightarrow (\forall X2.((X1 \in X0) \wedge (X2 \in k9\_xtuple\_0\ (k10\_card\_3\ X0))) \Rightarrow (k1\_funct\_1\ X1\ X2 \in k1\_funct\_1\ (k10\_card\_3\ X0)\ X2))) \tag{1}$$

Assume the following.

$$\forall X0.((v4\_funct\_1\ X0) \wedge (v2\_card\_3\ X0)) \Rightarrow (\forall X1.((v1\_relat\_1\ X1) \wedge (v1\_funct\_1\ X1)) \Rightarrow ((X1 \in X0) \Rightarrow (k9\_xtuple\_0\ X1 = k9\_xtuple\_0\ (k10\_card\_3\ X0)))) \tag{2}$$

Theorem 1

$$\forall X0.((v4\_funct\_1\ X0) \wedge (v2\_card\_3\ X0)) \Rightarrow (\forall X1.((v1\_relat\_1\ X1) \wedge (v1\_funct\_1\ X1)) \Rightarrow (\forall X2.((X1 \in X0) \wedge (X2 \in k9\_xtuple\_0\ X1)) \Rightarrow (k1\_funct\_1\ X1\ X2 \in k1\_funct\_1\ (k10\_card\_3\ X0)\ X2)))$$