

t99_card_3

(TMUqDBW96xf7WAEjzpnSQUkFkpyMzkjCDaA)

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Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v2_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $r1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_card_3 : \iota \Rightarrow \iota$ be given. Let $k1_funct_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11_card_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v2_relat_1 X0) \wedge (v1_funct_1 X0))) \Rightarrow \\ & (\forall X1.((v1_relat_1 X1) \wedge ((v2_relat_1 X1) \wedge (v1_funct_1 X1)))) \Rightarrow \\ & (\forall X2.(m1_subset_1 X2 (k4_card_3 (k1_funct_4 X0 X1)))) \Rightarrow (\\ & k11_card_3 (k1_funct_4 X0 X1) X2 (k9_xtuple_0 X1) \in k4_card_3 X1)) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1.((\\ & v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow ((r1_partfun1 X0 X1) \Leftrightarrow (k1_funct_4 \\ & X0 X1 = k1_funct_4 X1 X0))) \end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v2_relat_1 X0) \wedge (v1_funct_1 X0))) \Rightarrow \\ & (\forall X1.((v1_relat_1 X1) \wedge ((v2_relat_1 X1) \wedge (v1_funct_1 X1)))) \Rightarrow \\ & ((r1_partfun1 X0 X1) \Rightarrow (\forall X2.(m1_subset_1 X2 (k4_card_3 (\\ & k1_funct_4 X0 X1)))) \Rightarrow (k11_card_3 (k1_funct_4 X0 X1) X2 (k9_xtuple_0 \\ & X0) \in k4_card_3 X0))) \end{aligned}$$