

t104_card_3 (TMFodpRuRYcWR- bogPu3NDzngEVzi6ThzLCy)

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Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v2_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v5_funct_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_card_3 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8_card_3 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v2_relat_1 X0) \wedge (v1_funct_1 X0))) \Rightarrow \\ (\forall X1.(m1_subset_1 X1 (k8_card_3 X0)) \Rightarrow (\exists X2.(m1_subset_1 \\ X2 (k4_card_3 X0)) \wedge (r1_tarski X1 X2))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. ((v1_relat_1 X1) \wedge ((v2_relat_1 X1) \wedge ((v4_relat_1 \\ X1 X0) \wedge (v1_funct_1 X1)))) \Rightarrow (\forall X2. ((v1_relat_1 X2) \wedge ((v4_relat_1 \\ X2 X0) \wedge ((v1_funct_1 X2) \wedge (v5_funct_1 X2 X1)))) \Rightarrow (X2 \in k8_card_3 \\ X1)) \end{aligned} \quad (3)$$

Theorem 1

$$\begin{aligned} \forall X0. \forall X1. ((v1_relat_1 X1) \wedge ((v2_relat_1 X1) \wedge ((v4_relat_1 \\ X1 X0) \wedge (v1_funct_1 X1)))) \Rightarrow (\forall X2. ((v1_relat_1 X2) \wedge ((v4_relat_1 \\ X2 X0) \wedge ((v1_funct_1 X2) \wedge (v5_funct_1 X2 X1)))) \Rightarrow (\exists X3. (m1_subset_1 \\ X3 (k4_card_3 X1)) \wedge (r1_tarski X2 X3))) \end{aligned}$$