

t2_pua2mss1 (TMN- QuVRMHqapd6iMFqMQ4vfue1V1st6ArCL)

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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 $k4_card_3 : \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1.((\\ & v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow (((k9_xtuple_0 X0 = k9_xtuple_0 \\ & X1) \wedge (\forall X2.(X2 \in k9_xtuple_0 X0) \Rightarrow (k1_funct_1 X0 X2 = k1_funct_1 \\ & X1 X2)))) \Rightarrow (X0 = X1))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v2_relat_1 X0) \wedge (v1_funct_1 X0))) \Rightarrow \\ & (\forall X1.((v1_relat_1 X1) \wedge ((v2_relat_1 X1) \wedge (v1_funct_1 X1))) \Rightarrow \\ & ((r1_tarski (k4_card_3 X0) (k4_card_3 X1)) \Rightarrow ((k9_xtuple_0 X0 = \\ & k9_xtuple_0 X1) \wedge (\forall X2.(X2 \in k9_xtuple_0 X0) \Rightarrow (r1_tarski \\ & (k1_funct_1 X0 X2) (k1_funct_1 X1 X2)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. r1_tarski X0 X0 \tag{3}$$

Assume the following.

$$\forall X0. \forall X1. (X0 = X1) \Leftrightarrow ((r1_tarski X0 X1) \wedge (r1_tarski X1 X0)) \tag{4}$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v2_relat_1 X0) \wedge (v1_funct_1 X0))) \Rightarrow \\ & (\forall X1.((v1_relat_1 X1) \wedge ((v2_relat_1 X1) \wedge (v1_funct_1 X1))) \Rightarrow \\ & ((k4_card_3 X0 = k4_card_3 X1) \Rightarrow (X0 = X1))) \end{aligned}$$