

t1_topreala (TMHtzVFAsCt- NTL6hZZey3MbEA6whYTJsf2S)

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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 $k7_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_funct_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1. \forall X2. \\ & (X2 = k7_relat_1 X0 X1) \Leftrightarrow (\forall X3. (X3 \in X2) \Leftrightarrow (\exists X4. (X4 \in k9_xtuple_0 \\ & X0) \wedge ((X4 \in X1) \wedge (X3 = k1_funct_1 X0 X4)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow ((v2_funct_1 X0) \Leftrightarrow \\ & (\forall X1. \forall X2. ((X1 \in k9_xtuple_0 X0) \wedge ((X2 \in k9_xtuple_0 \\ & X0) \wedge (k1_funct_1 X0 X1 = k1_funct_1 X0 X2)))) \Rightarrow (X1 = X2))) \end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1. \forall X2. \\ & ((X1 \in k9_xtuple_0 X0) \wedge ((k1_funct_1 X0 X1 \in k7_relat_1 X0 X2) \wedge (v2_funct_1 \\ & X0))) \Rightarrow (X1 \in X2)) \end{aligned}$$