

t19_funct_6 (TMKL- CYAm58rm4vptzxvJ5ky7B5Rr3aLENLG)

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Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k8_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_6 : \iota \Rightarrow \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1. \forall X2. \\ & (X2 = k8_relat_1 X0 X1) \Leftrightarrow (\forall X3. (X3 \in X2) \Leftrightarrow ((X3 \in k9_xtuple_0 \\ & X0) \wedge (k1_funct_1 X0 X3 \in X1)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1. (X1 = \\ & k10_xtuple_0 X0) \Leftrightarrow (\forall X2. (X2 \in X1) \Leftrightarrow (\exists X3. (X3 \in k9_xtuple_0 \\ & X0) \wedge (X2 = k1_funct_1 X0 X3)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (X1 = k1_funct_6 X0) \Leftrightarrow (\forall X2. (X2 \in X1) \Leftrightarrow \\ & ((X2 \in X0) \wedge ((v1_relat_1 X2) \wedge (v1_funct_1 X2)))) \end{aligned} \quad (3)$$

Theorem 1

$$\begin{aligned} & \forall X0. \forall X1. ((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow ((X0 \in \\ & k8_relat_1 X1 (k1_funct_6 (k10_xtuple_0 X1))) \Leftrightarrow ((X0 \in k9_xtuple_0 \\ & X1) \wedge ((v1_relat_1 (k1_funct_1 X1 X0)) \wedge (v1_funct_1 (k1_funct_1 \\ & X1 X0)))))) \end{aligned}$$