

t40_funct_1

(TMJK47aDi7NXtthXurDo3XdPWv1WFZ6rDeQ)

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Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v2_funct_1 : \iota \Rightarrow o$ be given. Let $k2_funct_1 : \iota \Rightarrow \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0. \forall X1. ((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow (((\\ v2_funct_1 X1) \wedge (X0 \in k10_xtuple_0 X1)) \Rightarrow ((X0 = k1_funct_1 X1 (k1_funct_1 \\ (k2_funct_1 X1) X0)) \wedge (X0 = k1_funct_1 (k3_relat_1 (k2_funct_1 \\ X1) X1) X0))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0. ((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow ((v2_funct_1 X0) \Rightarrow \\ (\forall X1. ((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow ((X1 = k2_funct_1 \\ X0) \Leftrightarrow ((k9_xtuple_0 X1 = k10_xtuple_0 X0) \wedge (\forall X2. \forall X3. \\ (((X2 \in k10_xtuple_0 X0) \wedge (X3 = k1_funct_1 X1 X2)) \Rightarrow ((X3 \in k9_xtuple_0 \\ X0) \wedge (X2 = k1_funct_1 X0 X3))) \wedge (((X3 \in k9_xtuple_0 X0) \wedge (X2 = k1_funct_1 \\ X0 X3)) \Rightarrow ((X2 \in k10_xtuple_0 X0) \wedge (X3 = k1_funct_1 X1 X2)))))))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow ((v1_relat_1 (\\ k2_funct_1 X0)) \wedge (v1_funct_1 (k2_funct_1 X0))) \tag{3}$$

Assume the following.

$$\begin{aligned} \forall X0. ((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow ((v2_funct_1 X0) \Leftrightarrow \\ (\forall X1. \forall X2. ((X1 \in k9_xtuple_0 X0) \wedge ((X2 \in k9_xtuple_0 \\ X0) \wedge (k1_funct_1 X0 X1 = k1_funct_1 X0 X2))) \Rightarrow (X1 = X2))) \end{aligned} \tag{4}$$

Theorem 1

$$\forall X0. ((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow ((v2_funct_1 X0) \Rightarrow \\ (v2_funct_1 (k2_funct_1 X0)))$$