

t42_funct_1 (TMWcGqN- noTJWX9bxSPE3XGosJ3pU9J97hXk)

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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 $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k3_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_relat_1 : \iota \Rightarrow \iota$ be given. Let $k2_funct_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow ((v2_funct_1 X0) \Rightarrow \\ ((k3_relat_1 X0 (k2_funct_1 X0) = k4_relat_1 (k9_xtuple_0 X0)) \wedge \\ (k3_relat_1 (k2_funct_1 X0) X0 = k4_relat_1 (k10_xtuple_0 X0)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow ((v2_funct_1 X0) \Rightarrow \\ ((k10_xtuple_0 X0 = k9_xtuple_0 (k2_funct_1 X0)) \wedge (k9_xtuple_0 \\ X0 = k10_xtuple_0 (k2_funct_1 X0)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. ((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow (\forall X2. \\ ((v1_relat_1 X2) \wedge (v1_funct_1 X2)) \Rightarrow (\forall X3. ((v1_relat_1 \\ X3) \wedge (v1_funct_1 X3)) \Rightarrow (((k10_xtuple_0 X1 = X0) \wedge ((k3_relat_1 X1 \\ X2 = k4_relat_1 (k9_xtuple_0 X3)) \wedge (k3_relat_1 X2 X3 = k4_relat_1 \\ X0))) \Rightarrow (X3 = X1)))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow ((v1_relat_1 (\\ k2_funct_1 X0)) \wedge (v1_funct_1 (k2_funct_1 X0))) \quad (4)$$

Theorem 1

$$\begin{aligned} \forall X0. ((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1. ((\\ v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow (((v2_funct_1 X0) \wedge ((k10_xtuple_0 \\ X1 = k9_xtuple_0 X0) \wedge (k3_relat_1 X1 X0 = k4_relat_1 (k10_xtuple_0 \\ X0)))) \Rightarrow (X1 = k2_funct_1 X0))) \end{aligned}$$