

t90_funct_4 (TMGQnZdeDtThGhRLFdwc-
tXdQ3qVgtf6CxJD)

October 27, 2020

Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k16_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1. \forall X2. \\ \forall X3. \forall X4. k1_funct_1 (k1_funct_4 (k1_funct_4 X0 (\\ k16_funcop_1 X1 X2)) (k16_funcop_1 X4 X3)) X4 = X3) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1. \forall X2. \\ \forall X3. (X1 \neq X3) \Rightarrow (k1_funct_1 (k1_funct_4 X0 (k16_funcop_1 \\ X1 X2)) X3 = k1_funct_1 X0 X3)) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. X0 \in k9_xtuple_0 (k16_funcop_1 X0 X1) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. k1_funct_1 (k16_funcop_1 X0 X1) X0 = X1 \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. ((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow (\forall X2. \\ ((v1_relat_1 X2) \wedge (v1_funct_1 X2)) \Rightarrow ((X0 \in k9_xtuple_0 X1) \Rightarrow (k1_funct_1 \\ (k1_funct_4 X2 X1) X0 = k1_funct_1 X1 X0))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. (v1_relat_1 (k16_funcop_1 X0 X1)) \wedge (v1_funct_1 \\ (k16_funcop_1 X0 X1)) \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \wedge ((\\ v1_relat_1 X1) \wedge (v1_funct_1 X1))) \Rightarrow ((v1_relat_1 (k1_funct_4 X0 \\ X1)) \wedge (v1_funct_1 (k1_funct_4 X0 X1))) \end{aligned} \quad (7)$$

Theorem 1

$$\forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1. \forall X2. \\ k1_funct_1 (k1_funct_4 (k1_funct_4 X0 (k16_funcop_1 X1 X2)) (k16_funcop_1 \\ X2 X1)) X1 = X2)$$