

t84_funct_4
(TMMm5GHbkmhBvkZpXrJKnFYfRGQvEJ735hf)

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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 $k4_funct_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. ((X0 \neq X1) \Rightarrow (k1_funct_1 (k4_funct_4 X0 X1 X2 X3) X0 = X2)) \wedge (k1_funct_1 (k4_funct_4 X0 X1 X2 X3) X1 = X3) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. (k9_xtuple_0 (k4_funct_4 X0 X1 X2 X3) = k2_tarski X0 X1) \wedge (r1_tarski (k10_xtuple_0 (k4_funct_4 X0 X1 X2 X3)) (k2_tarski X2 X3)) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow (\forall X2. ((v1_relat_1 X2) \wedge (v1_funct_1 X2)) \Rightarrow ((X0 \in k9_xtuple_0 X1) \Rightarrow (k1_funct_1 (k1_funct_4 X2 X1) X0 = k1_funct_1 X1 X0))) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. (v1_relat_1 (k4_funct_4 X0 X1 X2 X3)) \wedge (v1_funct_1 (k4_funct_4 X0 X1 X2 X3)) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (X2 = k2_tarski X0 X1) \Leftrightarrow (\forall X3. (X3 \in X2) \Leftrightarrow ((X3 = X0) \vee (X3 = X1))) \quad (5)$$

Theorem 1

$$\forall X0. ((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1. \forall X2. \forall X3. \forall X4. (X1 \neq X2) \Rightarrow ((k1_funct_1 (k1_funct_4 X0 (k4_funct_4 X1 X2 X3 X4)) X1 = X3) \wedge (k1_funct_1 (k1_funct_4 X0 (k4_funct_4 X1 X2 X3 X4)) X2 = X4)))$$