

t7_finseq_4 (TMcEKmyGn- fKnY37dwyuajnW2XLDaDv8praS)

October 27, 2020

Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $r2_finseq_4 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k8_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_finseq_4 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1.(r2_finseq_4 X0 X1) \Leftrightarrow (\exists X2.k1_tarski X2 = k8_relat_1 X0 (k1_tarski X1))) \quad (1)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1.(r1_finseq_4 X0 X1) \Leftrightarrow ((X1 \in k9_xtuple_0 X0) \wedge (\forall X2.\neg(X2 \in k9_xtuple_0 X0) \wedge ((X1 \neq X2) \wedge (k1_funct_1 X0 X1 = k1_funct_1 X0 X2)))))) \quad (2)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1.(r1_finseq_4 X0 X1) \Leftrightarrow ((X1 \in k9_xtuple_0 X0) \wedge (k8_relat_1 X0 (k1_tarski (k1_funct_1 X0 X1)) = k1_tarski X1))) \quad (3)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1.\forall X2.(X2 = k8_relat_1 X0 X1) \Leftrightarrow (\forall X3.(X3 \in X2) \Leftrightarrow ((X3 \in k9_xtuple_0 X0) \wedge (k1_funct_1 X0 X3 \in X1)))) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(X1 = k1_tarski X0) \Leftrightarrow (\forall X2.(X2 \in X1) \Leftrightarrow (X2 = X0)) \quad (5)$$

Theorem 1

$$\forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1.(r2_finseq_4 X0 X1) \Leftrightarrow (\exists X2.(X2 \in k9_xtuple_0 X0) \wedge ((X1 = k1_funct_1 X0 X2) \wedge (\forall X3.\neg(X3 \in k9_xtuple_0 X0) \wedge ((X3 \neq X2) \wedge (k1_funct_1 X0 X3 = X1))))))$$