

l39_convex1 (TMd- EdHm7njLG1G7K9RXmdyiAwrE2YzJdZf4)

October 27, 2020

Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $v2_funct_1 : \iota \Rightarrow o$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k1_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $np_3 : \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $np_2 : \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \neq X1) \wedge ((X1 \neq X2) \wedge (X2 \neq X0))) \Leftrightarrow (v2_funct_1 (k11_finseq_1 X0 X1 X2)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. ((v1_relat_1 X3) \wedge ((v1_funct_1 X3) \wedge (v1_finseq_1 X3))) \Rightarrow ((X3 = k11_finseq_1 X0 X1 X2) \Leftrightarrow ((k3_finseq_1 X3 = np_3) \wedge ((k1_funct_1 X3 np_1 = X0) \wedge ((k1_funct_1 X3 np_2 = X1) \wedge (k1_funct_1 X3 np_3 = X2))))) \quad (2)$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow (\forall X1. \forall X2. \forall X3. ((v2_funct_1 X0) \wedge (k10_xtuple_0 X0 = k1_enumset1 X1 X2 X3)) \Rightarrow ((X1 = X2) \vee ((X2 = X3) \vee ((X1 = X3) \vee (k3_finseq_1 X0 = np_3)))))) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. k10_xtuple_0 (k11_finseq_1 X0 X1 X2) = k1_enumset1 X0 X1 X2 \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. (X3 = k1_enumset1 X0 X1 X2) \Leftrightarrow (\forall X4. (X4 \in X3) \Leftrightarrow (\neg (X4 \neq X0) \wedge ((X4 \neq X1) \wedge (X4 \neq X2)))) \quad (5)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow \\ & \quad (\forall X1. \forall X2. \forall X3. \neg (v2_funct_1 X0) \wedge ((k10_xtuple_0 \\ X0 = k1_enumset1 X1 X2 X3) \wedge ((X1 \neq X2) \wedge ((X2 \neq X3) \wedge ((X3 \neq X1) \wedge ((X0 \neq k11_finseq_1 \\ X1 X2 X3) \wedge ((X0 \neq k11_finseq_1 X1 X3 X2) \wedge ((X0 \neq k11_finseq_1 X2 X1 X3) \wedge \\ ((X0 \neq k11_finseq_1 X2 X3 X1) \wedge ((X0 \neq k11_finseq_1 X3 X1 X2) \wedge (X0 \neq k11_finseq_1 \\ X3 X2 X1)))))))))) \end{aligned}$$