

t38_finseq_3
(TMWG54Dp8KDL7pjpzyxPtYNqZa8GWMgShiN)

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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 $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k4_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k2_finseq_1 : \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (1)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (2)$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow (k4_finseq_1 X0 = k9_xtuple_0 X0) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 X1) \wedge (v4_relat_1 X1 X0)) \Rightarrow (k1_relset_1 X0 X1 = k9_xtuple_0 X1) \quad (4)$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow (m2_subset_1 (k3_finseq_1 X0) k1_numbers k5_numbers) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 X1) \wedge (v4_relat_1 X1 X0)) \Rightarrow (m1_subset_1 (k1_relset_1 X0 X1) (k1_zfmisc_1 X0)) \quad (6)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow \\
& \quad (\forall X1.((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 \\
& \quad X1))) \Rightarrow (\forall X2.((v1_relat_1 X2) \wedge ((v1_funct_1 X2) \wedge (v1_finseq_1 \\
& \quad X2))) \Rightarrow ((X2 = k7_finseq_1 X0 X1) \Leftrightarrow ((k4_finseq_1 X2 = k2_finseq_1 \\
& \quad (k2_nat_1 (k3_finseq_1 X0) (k3_finseq_1 X1))) \wedge ((\forall X3.(\\
& \quad v7_ordinal1 X3) \Rightarrow ((X3 \in k4_finseq_1 X0) \Rightarrow (k1_funct_1 X2 X3 = k1_funct_1 \\
& \quad X0 X3))) \wedge (\forall X3.(v7_ordinal1 X3) \Rightarrow ((X3 \in k4_finseq_1 X1) \Rightarrow \\
& \quad (k1_funct_1 X2 (k2_nat_1 (k3_finseq_1 X0) X3) = k1_funct_1 X1 X3))))))))) \Rightarrow \\
& \quad (7)
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow \\
& \quad (\forall X1.(m2_subset_1 X1 k1_numbers k5_numbers) \Rightarrow ((X1 = k3_finseq_1 \\
& \quad X0) \Leftrightarrow (k2_finseq_1 X1 = k9_xtuple_0 X0))) \Rightarrow \\
& \quad (8)
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow \\
& \quad ((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 X0) \wedge \\
& \quad (v1_finseq_1 X0)))) \Rightarrow \\
& \quad (9)
\end{aligned}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow \\
& \quad (\forall X1.((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 \\
& \quad X1))) \Rightarrow (\forall X2.((v1_relat_1 X2) \wedge ((v1_funct_1 X2) \wedge (v1_finseq_1 \\
& \quad X2))) \Rightarrow (((k3_finseq_1 X0 = k2_nat_1 (k3_finseq_1 X1) (k3_finseq_1 \\
& \quad X2)) \wedge ((\forall X3.(m1_subset_1 X3 k5_numbers) \Rightarrow ((X3 \in k1_relset_1 \\
& \quad k5_numbers X1) \Rightarrow (k1_funct_1 X0 X3 = k1_funct_1 X1 X3))) \wedge (\forall X3. \\
& \quad (m1_subset_1 X3 k5_numbers) \Rightarrow ((X3 \in k1_relset_1 k5_numbers X2) \Rightarrow \\
& \quad (k1_funct_1 X0 (k2_nat_1 (k3_finseq_1 X1) X3) = k1_funct_1 X2 X3)))))) \Rightarrow \\
& \quad (X0 = k7_finseq_1 X1 X2))) \Rightarrow
\end{aligned}$$