

t19_polyform
(TMX5gbnzWPnV5UKKexmR62rPMkXE88xfQja)

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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 $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k7_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $np_1 : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k4_tarSKI : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow \\ & \quad (\forall X1.((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 \\ & \quad X1))) \Rightarrow (\forall X2.((v1_relat_1 X2) \wedge ((v1_funct_1 X2) \wedge (v1_finseq_1 \\ & \quad X2)))) \Rightarrow (k7_finseq_1 (k7_finseq_1 X0 X1) X2 = k7_finseq_1 X0 (k7_finseq_1 \\ & \quad X1 X2)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow \\ & \quad (\forall X1.(v7_ordinal1 X1) \Rightarrow ((X1 \in k1_relset_1 k5_numbers X0) \Leftrightarrow \\ & \quad ((r1_xxreal_0 np_1 X1) \wedge (r1_xxreal_0 X1 (k3_finseq_1 X0)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow \\ & \quad (\forall X1.((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 \\ & \quad X1))) \Rightarrow (\forall X2.(v7_ordinal1 X2) \Rightarrow ((r1_xxreal_0 X2 (k3_finseq_1 \\ & \quad (k7_finseq_1 X0 X1))) \Rightarrow ((r1_xxreal_0 X2 (k3_finseq_1 X0)) \vee (k1_funct_1 \\ & \quad (k7_finseq_1 X0 X1) X2 = k1_funct_1 X1 (k6_xcmplx_0 X2 (k3_finseq_1 \\ & \quad X0))))))) \end{aligned} \tag{3}$$

Assume the following.

$$k5_numbers = k4_ordinal1 \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge(v4_relat_1 X1 X0))\Rightarrow(k1_relset_1 X0 X1 = k9_xtuple_0 X1) \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1 X0)\Rightarrow(\forall X1.((v1_relat_1 X1)\wedge(v1_funct_1 X1)\wedge(v1_finseq_1 X1))\Rightarrow(\forall X2.((v1_relat_1 X2)\wedge(v1_funct_1 X2)\wedge(v1_finseq_1 X2))\Rightarrow(((r1_xxreal_0 np_1 X0)\wedge(r1_xxreal_0 X0 (k3_finseq_1 X1))\Rightarrow(k1_funct_1 X1 X0 = k1_funct_1 (k7_finseq_1 X1 X2) X0)))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(((v1_relat_1 X0)\wedge(v1_funct_1 X0)\wedge(v1_finseq_1 X0))\wedge((v1_relat_1 X1)\wedge(v1_funct_1 X1)\wedge(v1_finseq_1 X1)))\Rightarrow \\ ((v1_relat_1 (k7_finseq_1 X0 X1))\wedge((v1_funct_1 (k7_finseq_1 X0 X1))\wedge(v1_finseq_1 (k7_finseq_1 X0 X1)))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0)\wedge(v1_funct_1 X0))\Rightarrow(\forall X1.\forall X2. \\ ((X1 \in k9_xtuple_0 X0)\Rightarrow((X2 = k1_funct_1 X0 X1)\Leftrightarrow(k4_tarski X1 X2 \in X0)))\wedge((\neg X1 \in k9_xtuple_0 X0)\Rightarrow((X2 = k1_funct_1 X0 X1)\Leftrightarrow(X2 = k1_xboole_0)))) \end{aligned} \quad (8)$$

Assume the following.

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

Theorem 1

$$\begin{aligned} \forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 X0)))\Rightarrow \\ (\forall X1.((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge(v1_finseq_1 X1)))\Rightarrow(\forall X2.((v1_relat_1 X2)\wedge((v1_funct_1 X2)\wedge(v1_finseq_1 X2)))\Rightarrow(\forall X3.(v7_ordinal1 X3)\Rightarrow((r1_xxreal_0 X3 (k3_finseq_1 (k7_finseq_1 X0 X1))\Rightarrow((r1_xxreal_0 X3 (k3_finseq_1 X0))\vee(k1_funct_1 (k7_finseq_1 (k7_finseq_1 X0 X1) X2) X3 = k1_funct_1 X1 (k6_xcmplx_0 X3 (k3_finseq_1 X0)))))))))) \end{aligned}$$