

t4_sprect_2
(TMS8QmUCG46wdU5hewQGrnfMi7xTmnGK1aK)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k3_finseq_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_nat_d : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. 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 $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\
& \quad X1 k5_numbers) \Rightarrow (\forall X2.(m1_subset_1 X2 k5_numbers) \Rightarrow (\forall X3. \\
& \quad (\neg v1_xboole_0 X3) \Rightarrow (\forall X4.(m2_finseq_1 X4 X3) \Rightarrow (((X0 \in k4_finseq_1 \\
& \quad X4) \wedge ((X1 \in k4_finseq_1 X4) \wedge (X2 \in k4_finseq_1 (k3_finseq_6 X3 X4 \\
& \quad X0 X1)))) \Rightarrow ((r1_xxreal_0 X0 X1) \vee (k2_nat_1 (k7_nat_d X0 X2) np_1 \in \\
& \quad k4_finseq_1 X4))))))
\end{aligned} \tag{1}$$

Assume the following.

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

Assume the following.

$$\begin{aligned}
& \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(m2_finseq_1 X1 X0) \Rightarrow \\
& (\forall X2.(m1_subset_1 X2 k5_numbers) \Rightarrow (\forall X3.(m1_subset_1 \\
& X3 k5_numbers) \Rightarrow (((r1_xxreal_0 np_1 X2) \wedge (r1_xxreal_0 X2 (k3_finseq_1 \\
& X1)) \wedge (r1_xxreal_0 np_1 X3) \wedge (r1_xxreal_0 X3 (k3_finseq_1 X1)))) \Rightarrow \\
& ((k1_funct_1 (k3_finseq_6 X0 X1 X2 X3) np_1 = k1_funct_1 X1 X2) \wedge \\
& (((r1_xxreal_0 X2 X3) \Rightarrow ((k3_finseq_1 (k3_finseq_6 X0 X1 X2 X3) = \\
& k2_nat_1 (k7_nat_d X3 X2) np_1) \wedge (\forall X4.(m1_subset_1 X4 k5_numbers) \Rightarrow \\
& (((r1_xxreal_0 np_1 X4) \wedge (r1_xxreal_0 X4 (k3_finseq_1 (k3_finseq_6 \\
& X0 X1 X2 X3)))) \Rightarrow (k1_funct_1 (k3_finseq_6 X0 X1 X2 X3) X4 = k1_funct_1 \\
& X1 (k7_nat_d (k2_nat_1 X4 X2) np_1)))))) \wedge ((\neg r1_xxreal_0 X2 X3) \Rightarrow \\
& ((k3_finseq_1 (k3_finseq_6 X0 X1 X2 X3) = k2_nat_1 (k7_nat_d X2 X3) \\
& np_1) \wedge (\forall X4.(m1_subset_1 X4 k5_numbers) \Rightarrow (((r1_xxreal_0 \\
& np_1 X4) \wedge (r1_xxreal_0 X4 (k3_finseq_1 (k3_finseq_6 X0 X1 X2 X3)))) \Rightarrow \\
& (k1_funct_1 (k3_finseq_6 X0 X1 X2 X3) X4 = k1_funct_1 X1 (k2_nat_1 \\
& (k7_nat_d X2 X4) np_1))))))))))
\end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \tag{4}$$

Assume the following.

$$k5_numbers = k4_ordinal1 \tag{5}$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow \\
(k4_finseq_1 X0 = k9_xtuple_0 X0) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1) \wedge (v4_relat_1 X1 X0)) \Rightarrow (\\
k1_relset_1 X0 X1 = k9_xtuple_0 X1) \tag{7}$$

Assume the following.

$$v6_membered k4_ordinal1 \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0) \Rightarrow ((v1_funct_1 X1) \wedge (\\
(v1_finseq_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers \\
X0)))))) \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0) \Rightarrow ((v1_relat_1 X1) \wedge (\\
(v1_funct_1 X1) \wedge (v1_finseq_1 X1))) \tag{10}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0)\wedge \\ & ((m1_finseq_1 X1 X0)\wedge((v7_ordinal1 X2)\wedge(v7_ordinal1 X3))))\Rightarrow \quad (11) \\ & (m2_finseq_1 (k3_finseq_6 X0 X1 X2 X3) X0) \end{aligned}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1_relat_1 X1)\wedge((v5_relat_1 X1 X0)\wedge(\\ & v1_funct_1 X1)))\Rightarrow(\forall X2.(X2 \in k9_xtuple_0 X1)\Rightarrow(k7_partfun1 \quad (12) \\ & X0 X1 X2 = k1_funct_1 X1 X2)) \end{aligned}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 X0)))\Rightarrow \\ & ((v1_relat_1 X0)\wedge((v4_relat_1 X0 k5_numbers)\wedge((v1_funct_1 X0)\wedge \quad (13) \\ & (v1_finseq_1 X0)))) \end{aligned}$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow(v5_relat_1 X1 X0) \quad (14)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v6_membered X0)\Rightarrow(\forall X1.(m1_subset_1 X1 X0)\Rightarrow \\ & (v7_ordinal1 X1)) \quad (15) \end{aligned}$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers)\Rightarrow(\forall X1.(m1_subset_1 \\ & X1 k5_numbers)\Rightarrow(\forall X2.(m1_subset_1 X2 k5_numbers)\Rightarrow(\forall X3. \\ & (\neg v1_xboole_0 X3)\Rightarrow(\forall X4.(m2_finseq_1 X4 X3)\Rightarrow(((X0 \in k4_finseq_1 \\ & X4)\wedge((X1 \in k4_finseq_1 X4)\wedge(X2 \in k4_finseq_1 (k3_finseq_6 X3 X4 \\ & X0 X1))))\Rightarrow((r1_xxreal_0 X0 X1)\vee(k7_partfun1 X3 (k3_finseq_6 X3 \\ & X4 X0 X1) X2 = k7_partfun1 X3 X4 (k2_nat_1 (k7_nat_d X0 X2) np_1)))))))))) \end{aligned}$$