

t1_prgcor_2
(TMPbeKgExR92ci3oo6ae4HSWTqoibtNqW2v)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v5_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k1_afinsq_1 : \iota \Rightarrow \iota$ be given. Let $r1_prgcor_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k12_afinsq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow ((X0 \in X1) \Leftrightarrow (\neg r1_xxreal_0 X1 X0))) \quad (1)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v5_ordinal1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finset_1 X0)))) \Rightarrow (k1_afinsq_1 X0 = k1_card_1 X0) \quad (2)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v5_ordinal1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finset_1 X0)))) \Rightarrow (k1_card_1 X0 = k9_xtuple_0 X0) \quad (3)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v5_ordinal1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finset_1 X0)))) \Rightarrow (v7_ordinal1 (k9_xtuple_0 X0)) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge ((v1_relat_1 X1) \wedge ((v5_relat_1 X1 X0) \wedge ((v5_ordinal1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finset_1 X1)))))) \Rightarrow (m2_finseq_1 (k12_afinsq_1 X0 X1) X0) \quad (5)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v5_ordinal1 X1) \wedge \\
& ((v1_relat_1 X1) \wedge ((v5_relat_1 X1 X0) \wedge ((v1_funct_1 X1) \wedge (v1_finset_1 \\
& X1)))))) \Rightarrow (\forall X2.(m2_finseq_1 X2 X0) \Rightarrow ((r1_prgcor_2 X0 X1 X2) \Leftrightarrow \\
& ((r1_tarski k5_numbers X0) \wedge ((k1_funct_1 X1 k6_numbers = k3_finseq_1 \\
& X2) \wedge ((\neg r1_xxreal_0 (k1_afinsq_1 X1) (k3_finseq_1 X2)) \wedge (\forall X3. \\
& (v7_ordinal1 X3) \Rightarrow (((r1_xxreal_0 np_1 X3) \wedge (r1_xxreal_0 X3 (k3_finseq_1 \\
& X2)))) \Rightarrow (k1_funct_1 X1 X3 = k1_funct_1 X2 X3)))))))))
\end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge (\\
& v5_relat_1 X1 X0) \wedge ((v5_ordinal1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finset_1 \\
& X1)))))) \Rightarrow (((v7_ordinal1 (k1_funct_1 X1 k6_numbers)) \wedge (k1_funct_1 \\
& X1 k6_numbers \in k1_afinsq_1 X1)) \Rightarrow (\forall X2.(m2_finseq_1 X2 X0) \Rightarrow \\
& ((X2 = k12_afinsq_1 X0 X1) \Leftrightarrow (\forall X3.(v7_ordinal1 X3) \Rightarrow ((X3 = \\
& k1_funct_1 X1 k6_numbers) \Rightarrow ((k3_finseq_1 X2 = X3) \wedge (\forall X4. \\
& (v7_ordinal1 X4) \Rightarrow (((r1_xxreal_0 np_1 X4) \wedge (r1_xxreal_0 X4 X3)) \Rightarrow \\
& (k1_funct_1 X2 X4 = k1_funct_1 X1 X4))))))))))
\end{aligned} \tag{7}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v5_ordinal1 X1) \wedge \\
& ((v1_relat_1 X1) \wedge ((v5_relat_1 X1 X0) \wedge ((v1_funct_1 X1) \wedge (v1_finset_1 \\
& X1)))))) \Rightarrow (((r1_tarski k5_numbers X0) \wedge ((v7_ordinal1 (k1_funct_1 \\
& X1 k6_numbers)) \wedge (k1_funct_1 X1 k6_numbers \in k1_afinsq_1 X1))) \Rightarrow \\
& (r1_prgcor_2 X0 X1 (k12_afinsq_1 X0 X1)))
\end{aligned}$$