

t35_afinsq_1
(TMPfWw64VGSD93Wy3H1XT8kk6DQ56vbGMfL)

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Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v5_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_ordinal4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_afinsq_1 : \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $np_1 : \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k7_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_afinsq_1 : \iota \Rightarrow \iota$ be given. Let $k2_afinsq_1 : \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k16_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_afinsq_1 : \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$np_1 = k1_tarski\ k1_xboole_0 \quad (1)$$

Assume the following.

$$m1_subset_1\ k1_xboole_0\ k4_ordinal1 \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.k7_funcop_1\ X0\ X1 = k2_funcop_1\ X0\ X1 \quad (3)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (4)$$

Assume the following.

$$\forall X0.k5_afinsq_1\ X0 = k3_afinsq_1\ X0 \quad (5)$$

Assume the following.

$$\forall X0.((v1_relat_1\ X0) \wedge ((v5_ordinal1\ X0) \wedge ((v1_funct_1\ X0) \wedge (v1_finset_1\ X0)))) \Rightarrow (k2_afinsq_1\ X0 = k9_xtuple_0\ X0) \quad (6)$$

Assume the following.

$$\forall X0.(v5_ordinal1 (k3_afinsq_1 X0)) \wedge (v1_finset_1 (k3_afinsq_1 X0)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.v1_relat_1 (k2_zfmisc_1 X0 X1) \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(((v1_relat_1 X0) \wedge ((v5_ordinal1 X0) \wedge \\ (v1_funct_1 X0) \wedge (v1_finset_1 X0))) \wedge ((v1_relat_1 X1) \wedge ((v5_ordinal1 \\ X1) \wedge ((v1_funct_1 X1) \wedge (v1_finset_1 X1)))))) \Rightarrow ((v1_relat_1 (k1_ordinal4 \\ X0 X1)) \wedge ((v5_ordinal1 (k1_ordinal4 X0 X1)) \wedge ((v1_funct_1 (k1_ordinal4 \\ X0 X1)) \wedge (v1_finset_1 (k1_ordinal4 X0 X1)))))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(v1_funct_1 (k7_funcop_1 X0 X1)) \wedge ((v1_funct_2 \\ (k7_funcop_1 X0 X1) X0 (k1_tarski X1)) \wedge (m1_subset_1 (k7_funcop_1 \\ X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 X0 (k1_tarski X1)))))) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.k16_funcop_1 X0 X1 = k7_funcop_1 (k1_tarski X0) X1 \quad (11)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow ((X1 = \\ k5_afinsq_1 X0) \Leftrightarrow ((k9_xtuple_0 X1 = np_1) \wedge (k1_funct_1 X1 k6_numbers = \\ X0))) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} \forall X0.(((v1_relat_1 X0) \wedge ((v5_ordinal1 X0) \wedge ((v1_funct_1 \\ X0) \wedge (v1_finset_1 X0)))) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge ((v5_ordinal1 \\ X1) \wedge ((v1_funct_1 X1) \wedge (v1_finset_1 X1)))) \Rightarrow (\forall X2.((v1_relat_1 \\ X2) \wedge ((v5_ordinal1 X2) \wedge (v1_funct_1 X2)))) \Rightarrow ((X2 = k1_ordinal4 X0 \\ X1) \Leftrightarrow ((k9_xtuple_0 X2 = k2_nat_1 (k1_afinsq_1 X0) (k1_afinsq_1 \\ X1)) \wedge ((\forall X3.(v7_ordinal1 X3) \Rightarrow ((X3 \in k2_afinsq_1 X0) \Rightarrow (k1_funct_1 \\ X2 X3 = k1_funct_1 X0 X3))) \wedge (\forall X3.(v7_ordinal1 X3) \Rightarrow ((X3 \in \\ k2_afinsq_1 X1) \Rightarrow (k1_funct_1 X2 (k2_nat_1 (k1_afinsq_1 X0) X3) = \\ k1_funct_1 X1 X3)))))))))) \end{aligned} \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.k2_funcop_1 X0 X1 = k2_zfmisc_1 X0 (k1_tarski X1) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.(X1 = k1_tarSKI X0) \Leftrightarrow (\forall X2.(X2 \in X1) \Leftrightarrow (X2 = X0)) \quad (15)$$

Assume the following.

$$\forall X0.k3_afinsq_1 X0 = k16_funcop_1 k6_numbers X0 \quad (16)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \quad (17)$$

Theorem 1

$$\forall X0.\forall X1.((v1_relat_1 X1) \wedge ((v5_ordinal1 X1) \wedge (v1_funct_1 X1) \wedge (v1_finset_1 X1))) \Rightarrow (k1_funct_1 (k1_ordinal4 (k5_afinsq_1 X0) X1) k6_numbers = X0)$$