

t33_afinsq_1
(TMZN67hBczxCKJNas9daQbNqA1zuPaHKQ6G)

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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 $k5_afinsq_1 : \iota \Rightarrow \iota$ be given. Let $k2_afinsq_1 : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k16_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_afinsq_1 : \iota \Rightarrow \iota$ be given. Let $k2_classes1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $k1_ordinal1 : \iota \Rightarrow \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_classes1 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_setfam_1 : \iota \Rightarrow \iota$ be given. Let $k8_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v4_ordinal1 : \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_tarski : \iota \Rightarrow \iota$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. (v1_relat_1 X2) \Rightarrow ((X2 = k1_tarski \\ (k4_tarski X0 X1)) \Rightarrow ((k9_xtuple_0 X2 = k1_tarski X0) \wedge (k10_xtuple_0 \\ X2 = k1_tarski X1))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. k16_funcop_1 X0 X1 = k1_tarski (k4_tarski X0 X1) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. k2_zfmisc_1 (k1_tarski X0) (k1_tarski X1) = \\ k1_tarski (k4_tarski X0 X1) \quad (3)$$

Assume the following.

$$\forall X0. k5_afinsq_1 X0 = k3_afinsq_1 X0 \quad (4)$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge ((v5_ordinal1 X0) \wedge ((v1_funct_1 \\ X0) \wedge (v1_finset_1 X0)))) \Rightarrow (k2_afinsq_1 X0 = k9_xtuple_0 X0) \quad (5)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(k2_classes1\ X0\ k1_xboole_0 = k1_tarski\ X0) \wedge ((\forall X1. \\
& (v3_ordinal1\ X1) \Rightarrow (k2_classes1\ X0\ (k1_ordinal1\ X1) = k2_xboole_0 \\
& (k2_xboole_0\ (ReplSep\ (toset\ (\lambda X2 : \iota.m1_subset_1\ X2\ (k1_classes1 \\
& X0)))\ (\lambda X2 : \iota.\exists X3.(m1_subset_1\ X3\ (k1_classes1\ X0)) \wedge \\
& ((X3 \in k2_classes1\ X0\ X1) \wedge (r1_tarski\ X2\ X3)))\ (\lambda X2 : \iota.X2)) \\
& (ReplSep\ (toset\ (\lambda X2 : \iota.m1_subset_1\ X2\ (k1_classes1\ X0))) \\
& (\lambda X2 : \iota.X2 \in k2_classes1\ X0\ X1)\ (\lambda X2 : \iota.k9_setfam_1\ X2))) \\
& (k8_subset_1\ (k1_zfmisc_1\ (k2_classes1\ X0\ X1))\ (k9_setfam_1\ (\\
& k2_classes1\ X0\ X1))\ (k1_classes1\ X0))) \wedge (\forall X1.(v3_ordinal1 \\
& X1) \Rightarrow (\forall X2.((v1_relat_1\ X2) \wedge ((v1_funct_1\ X2) \wedge (v5_ordinal1 \\
& X2))) \Rightarrow ((v4_ordinal1\ X1) \wedge ((k9_xtuple_0\ X2 = X1) \wedge (\forall X3. \\
& (v3_ordinal1\ X3) \Rightarrow ((X3 \in X1) \Rightarrow (k1_funct_1\ X2\ X3 = k2_classes1\ X0\ X3)))))) \Rightarrow \\
& ((X1 = k1_xboole_0) \vee (k2_classes1\ X0\ X1 = k3_xboole_0\ (k3_tarski \\
& (k10_xtuple_0\ X2))\ (k1_classes1\ X0))))))
\end{aligned} \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.k4_tarski\ X0\ X1 = k2_tarski\ (k2_tarski\ X0\ X1)\ (k1_tarski\ X0) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1\ X1) \wedge (v1_funct_1\ X1)) \Rightarrow ((X1 = k5_afinsq_1\ X0) \Leftrightarrow ((k9_xtuple_0\ X1 = np_1) \wedge (k1_funct_1\ X1\ k6_numbers = X0))) \tag{8}$$

Assume the following.

$$\forall X0.k3_afinsq_1\ X0 = k16_funcop_1\ k6_numbers\ X0 \tag{9}$$

Theorem 1

$$\forall X0.\forall X1.((v1_relat_1\ X1) \wedge ((v5_ordinal1\ X1) \wedge ((v1_funct_1\ X1) \wedge (v1_finset_1\ X1)))) \Rightarrow ((X1 = k5_afinsq_1\ X0) \Leftrightarrow ((k2_afinsq_1\ X1 = np_1) \wedge (k10_xtuple_0\ X1 = k1_tarski\ X0)))$$