

t82_afinsq_2
(TMYbzGWrc1F6ojHrZJjeX47szQ5DTApxcPZ)

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Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8_afinsq_1 : \iota \Rightarrow \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v5_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8_afinsq_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_ordinal4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k15_afinsq_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_funct_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((v1_relat_1 X1) \wedge (\\ & (v5_relat_1 X1 X0) \wedge ((v1_funct_1 X1) \wedge ((v5_ordinal1 X1) \wedge (v1_finset_1 \\ & X1)))))) \Rightarrow (\forall X2. ((v1_relat_1 X2) \wedge ((v5_relat_1 X2 X0) \wedge (\\ & v1_funct_1 X2) \wedge ((v5_ordinal1 X2) \wedge (v1_finset_1 X2)))))) \Rightarrow (\neg (r1_tarski \\ & X1 X2) \wedge (\forall X3. ((v1_relat_1 X3) \wedge ((v5_relat_1 X3 X0) \wedge ((v1_funct_1 \\ & X3) \wedge ((v5_ordinal1 X3) \wedge (v1_finset_1 X3)))))) \Rightarrow (k1_ordinal4 X1 \\ & X3 \neq X2)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1_relat_1 X1) \wedge ((v5_relat_1 X1 (k8_afinsq_1 \\ & X0)) \wedge ((v1_funct_1 X1) \wedge ((v5_ordinal1 X1) \wedge (v1_finset_1 X1)))))) \Rightarrow \\ & (\forall X2. ((v1_relat_1 X2) \wedge ((v5_relat_1 X2 (k8_afinsq_1 X0)) \wedge \\ & ((v1_funct_1 X2) \wedge ((v5_ordinal1 X2) \wedge (v1_finset_1 X2)))))) \Rightarrow (k8_afinsq_2 \\ & X0 (k1_ordinal4 X1 X2) = k15_afinsq_1 X0 (k8_afinsq_2 X0 X1) (k8_afinsq_2 \\ & X0 X2))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_relat_1 X0) \wedge ((v5_ordinal1 X0) \wedge ((v1_funct_1 \\ & X0) \wedge (v1_finset_1 X0)))) \Rightarrow (\forall X1. ((v1_relat_1 X1) \wedge ((v5_ordinal1 \\ & X1) \wedge ((v1_funct_1 X1) \wedge (v1_finset_1 X1)))) \Rightarrow (r1_tarski X0 (k1_ordinal4 \\ & X0 X1))) \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1_subset_1 X1 (k8_afinsq_1 X0))\wedge(m1_subset_1 X2 (k8_afinsq_1 X0)))\Rightarrow(k15_afinsq_1 X0 X1 X2 = k1_ordinal4 X1 X2) \quad (4)$$

Assume the following.

$$\forall X0.v4_funct_1 (k8_afinsq_1 X0) \quad (5)$$

Assume the following.

$$\forall X0.\neg v1_xboole_0 (k8_afinsq_1 X0) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge((v5_relat_1 X1 (k8_afinsq_1 X0))\wedge((v1_funct_1 X1)\wedge((v5_ordinal1 X1)\wedge(v1_finset_1 X1))))\Rightarrow (m1_subset_1 (k8_afinsq_2 X0 X1) (k8_afinsq_1 X0)) \quad (7)$$

Assume the following.

$$\forall X0.(v4_funct_1 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 X0)\Rightarrow((v1_relat_1 X1)\wedge(v1_funct_1 X1))) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X1 (k8_afinsq_1 X0))\Rightarrow((v5_ordinal1 X1)\wedge(v1_finset_1 X1)) \quad (9)$$

Theorem 1

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge((v5_relat_1 X1 (k8_afinsq_1 X0))\wedge((v1_funct_1 X1)\wedge((v5_ordinal1 X1)\wedge(v1_finset_1 X1))))\Rightarrow (\forall X2.((v1_relat_1 X2)\wedge((v5_relat_1 X2 (k8_afinsq_1 X0))\wedge((v1_funct_1 X2)\wedge((v5_ordinal1 X2)\wedge(v1_finset_1 X2))))\Rightarrow((r1_tarski X1 X2)\Rightarrow(r1_tarski (k8_afinsq_2 X0 X1) (k8_afinsq_2 X0 X2))))$$