

t71_afinsq_1 (TMcwMHT- fjrg2jm3AkRYwCdfimM3dZZkLkcV)

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Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v1_afinsq_1 : \iota \Rightarrow o$ be given. Let $k64_valued_1 : \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $v3_xxreal_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Let $v1_xxreal_2 : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k2_xxreal_2 : \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $v2_membered : \iota \Rightarrow o$ be given. Let $v4_membered : \iota \Rightarrow o$ be given. Let $v5_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow ((r1_xxreal_0 X0 X1) \Rightarrow ((v1_xboole_0 X0) \vee ((v2_xxreal_0 X1) \vee (v3_xxreal_0 X0)))))) \quad (1)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (2)$$

Assume the following.

$$\forall X0.(((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 X0) \wedge ((\neg v1_xboole_0 X0) \wedge (v1_afinsq_1 X0)))))) \Rightarrow (k6_numbers \in k9_xtuple_0 X0)) \quad (3)$$

Assume the following.

$$\forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1.(((v1_relat_1 X1) \wedge ((v4_relat_1 X1 k5_numbers) \wedge ((v1_funct_1 X1) \wedge ((\neg v1_xboole_0 X1) \wedge (v1_finset_1 X1)))))) \Rightarrow ((X0 \in k1_relset_1 k5_numbers X1) \Rightarrow (r1_xxreal_0 (k64_valued_1 X1) X0))) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (5)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (6)$$

Assume the following.

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

Assume the following.

$$\forall X0.((\neg v1_xboole_0 X0) \wedge (v1_relat_1 X0)) \Rightarrow (\neg v1_xboole_0 (k9_xtuple_0 X0)) \quad (8)$$

Assume the following.

$$\forall X0.((v6_membered X0) \wedge (v1_xxreal_2 X0)) \Rightarrow ((v1_xxreal_0 (k2_xxreal_2 X0)) \wedge (v7_ordinal1 (k2_xxreal_2 X0))) \quad (9)$$

Assume the following.

$$\forall X0.((v3_membered X0) \wedge (v1_xxreal_2 X0)) \Rightarrow ((v1_xxreal_0 (k2_xxreal_2 X0)) \wedge (v1_xreal_0 (k2_xxreal_2 X0))) \quad (10)$$

Assume the following.

$$v1_xboole_0 k1_xboole_0 \quad (11)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge (v4_relat_1 X0 k5_numbers)) \Rightarrow (v6_membered (k9_xtuple_0 X0)) \quad (12)$$

Assume the following.

$$m2_subset_1 k6_numbers k1_numbers k5_numbers \quad (13)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 X0) \wedge (\neg v1_xboole_0 X0)))) \Rightarrow (k64_valued_1 X0 = k2_xxreal_2 (k1_relset_1 k5_numbers X0)) \quad (14)$$

Assume the following.

$$\forall X0.(v3_membered X0) \Rightarrow (v2_membered X0) \quad (15)$$

Assume the following.

$$\forall X0.((v6_membered\ X0)\wedge(\neg v1_xboole_0\ X0))\Rightarrow((v6_membered\ X0)\wedge((\neg v1_xboole_0\ X0)\wedge(v1_xxreal_2\ X0))) \quad (16)$$

Assume the following.

$$\forall X0.((v1_xxreal_0\ X0)\wedge(v2_xxreal_0\ X0))\Rightarrow((\neg v1_xboole_0\ X0)\wedge((v1_xxreal_0\ X0)\wedge(\neg v3_xxreal_0\ X0))) \quad (17)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow((v7_ordinal1\ X0)\wedge(\neg v3_xxreal_0\ X0)) \quad (18)$$

Assume the following.

$$\forall X0.(v4_membered\ X0)\Rightarrow(v3_membered\ X0) \quad (19)$$

Assume the following.

$$\forall X0.(v5_membered\ X0)\Rightarrow(v4_membered\ X0) \quad (20)$$

Assume the following.

$$\forall X0.(v6_membered\ X0)\Rightarrow(v5_membered\ X0) \quad (21)$$

Assume the following.

$$\forall X0.(v3_membered\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ X0)\Rightarrow(v1_xreal_0\ X1)) \quad (22)$$

Assume the following.

$$\forall X0.(v2_membered\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ X0)\Rightarrow(v1_xxreal_0\ X1)) \quad (23)$$

Theorem 1

$$\forall X0.((v1_relat_1\ X0)\wedge((v4_relat_1\ X0\ k5_numbers)\wedge((v1_funct_1\ X0)\wedge((\neg v1_xboole_0\ X0)\wedge((v1_finset_1\ X0)\wedge(v1_afinsq_1\ X0))))))\Rightarrow(k64_valued_1\ X0 = k6_numbers)$$