

t6_supinf_1

(TMM1s5SgwJzEZZJUTzZ4EssfF6z3Z5jhvVu)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_setfam_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k7_numbers : \iota$ be given. Let $v2_membered : \iota \Rightarrow o$ be given. Let $k5_setfam_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xxreal_2 : \iota \Rightarrow \iota$ be given. Let $k5_supinf_1 : \iota \Rightarrow \iota$ be given. Let $m1_xxreal_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.((\neg v1_xboole_0 X0) \wedge ((v1_setfam_1 X0) \wedge (m1_subset_1 \\ X0 (k1_zfmisc_1 (k1_zfmisc_1 k7_numbers)))))) \Rightarrow (\forall X1.(v2_membered \\ X1) \Rightarrow ((X1 = k5_setfam_1 k7_numbers X0) \Rightarrow (m1_xxreal_2 (k1_xxreal_2 \\ (k5_supinf_1 X0)) X1))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v1_xboole_0 X0) \wedge ((v1_setfam_1 X0) \wedge (m1_subset_1 \\ X0 (k1_zfmisc_1 (k1_zfmisc_1 k7_numbers)))))) \Rightarrow (\forall X1.((\\ \neg v1_xboole_0 X1) \wedge (v2_membered X1)) \Rightarrow ((X1 = k5_setfam_1 k7_numbers \\ X0) \Rightarrow (m1_xxreal_2 (k1_xxreal_2 X1) (k5_supinf_1 X0)))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow ((\\ (r1_xxreal_0 X0 X1) \wedge (r1_xxreal_0 X1 X0)) \Rightarrow (X0 = X1))) \tag{3}$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v1_xboole_0 X0) \wedge ((v1_setfam_1 X0) \wedge (m1_subset_1 \\ X0 (k1_zfmisc_1 (k1_zfmisc_1 k7_numbers)))))) \Rightarrow (v2_membered (\\ k5_supinf_1 X0)) \end{aligned} \tag{4}$$

Assume the following.

$$\forall X0.(v2_membered X0) \Rightarrow (v1_xxreal_0 (k1_xxreal_2 X0)) \tag{5}$$

Assume the following.

$$\forall X0.(v2_membered\ X0) \Rightarrow (\forall X1.(v1_xreal_0\ X1) \Rightarrow ((X1 = k1_xreal_2\ X0) \Leftrightarrow ((m1_xreal_2\ X1\ X0) \wedge (\forall X2.(m1_xreal_2\ X2\ X0) \Rightarrow (r1_xreal_0\ X1\ X2)))))) \quad (6)$$

Theorem 1

$$\forall X0.((\neg v1_xboole_0\ X0) \wedge ((v1_setfam_1\ X0) \wedge (m1_subset_1\ X0\ (k1_zfmisc_1\ (k1_zfmisc_1\ k7_numbers)))))) \Rightarrow (\forall X1.((\neg v1_xboole_0\ X1) \wedge (v2_membered\ X1)) \Rightarrow ((X1 = k5_setfam_1\ k7_numbers\ X0) \Rightarrow (k1_xreal_2\ X1 = k1_xreal_2\ (k5_supinf_1\ X0))))$$