

t22_mesfunc2

(TMaoNJsRxsAhrQdf1jvsSwFTA8r6J9yg6kH)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_numbers : \iota$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12_supinf_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_mesfunc2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_supinf_2 : \iota$ be given. Let $k1_mesfunc2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k3_extreal1 : \iota \Rightarrow \iota$ be given. Let $k2_supinf_2 : \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v2_valued_0 : \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(m1_subset_1 X0 k7_numbers) \Rightarrow ((X0 = k6_numbers) \Leftrightarrow (k3_extreal1 X0 = k6_numbers)) \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge (\\ m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k7_numbers)))) \Rightarrow (\\ \forall X2.(m1_subset_1 X2 X0) \Rightarrow (((X2 \in k1_relset_1 X0 X1) \wedge (k12_supinf_2 \\ (k1_mesfunc2 X0 X1) X2 = k1_supinf_2)) \Rightarrow (k12_supinf_2 (k2_mesfunc2 \\ X0 X1) X2 = k2_supinf_2 (k12_supinf_2 X1 X2)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge (\\ m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k7_numbers)))) \Rightarrow (\\ \forall X2.(m1_subset_1 X2 X0) \Rightarrow (((k12_supinf_2 (k1_mesfunc2 \\ X0 X1) X2 = k12_supinf_2 X1 X2) \vee (k12_supinf_2 (k1_mesfunc2 X0 X1) \\ X2 = k1_supinf_2)) \wedge ((k12_supinf_2 (k2_mesfunc2 X0 X1) X2 = k2_supinf_2 \\ (k12_supinf_2 X1 X2)) \vee (k12_supinf_2 (k2_mesfunc2 X0 X1) X2 = k1_supinf_2)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k7_numbers) \Rightarrow (k3_extreal1 X0 = k3_extreal1 (k2_supinf_2 X0)) \quad (4)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (5)$$

Assume the following.

$$k1_supinf_2 = k1_xboole_0 \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v2_valued_0 X0)))\Rightarrow(k12_supinf_2 X0 X1 = k1_funct_1 X0 X1) \quad (7)$$

Assume the following.

$$v2_membered\ k7_numbers \quad (8)$$

Assume the following.

$$m1_subset_1\ k1_supinf_2\ k7_numbers \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v2_valued_0 X0)))\Rightarrow(m1_subset_1\ (k12_supinf_2\ X0\ X1)\ k7_numbers) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1)))\Rightarrow(v1_relat_1\ X2) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.(v2_membered\ X1)\Rightarrow(\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1)))\Rightarrow(v2_valued_0\ X2)) \quad (12)$$

Theorem 1

$$\begin{aligned} &\forall X0.(\neg v1_xboole_0\ X0)\Rightarrow(\forall X1.((v1_funct_1\ X1)\wedge(\\ &\quad m1_subset_1\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ k7_numbers))))\Rightarrow(\\ &\quad \forall X2.(m1_subset_1\ X2\ X0)\Rightarrow(((X2 \in k1_relset_1\ X0\ X1)\wedge(k12_supinf_2 \\ &\quad (k2_mesfunc2\ X0\ X1)\ X2 = k1_supinf_2))\Rightarrow(k12_supinf_2\ (k1_mesfunc2 \\ &\quad X0\ X1)\ X2 = k12_supinf_2\ X1\ X2)))) \end{aligned}$$