

t14_mesfunc2 (TM-
Njw6FmDMGDV3fSyDFPivZEJ9VSvHsN4gU)

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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 $r2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_mesfunc2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_mesfunc2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_mesfunc1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k12_supinf_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_supinf_2 : \iota \Rightarrow \iota$ be given. Let $k1_extreal2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_supinf_2 : \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((m1_subset_1 X2 \\ & (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1)))) \Rightarrow ((r2_relset_1 X0 X1 X2 X3) \Leftrightarrow (X2 = X3)) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 X1) \wedge (v4_relat_1 X1 X0)) \Rightarrow (k1_relset_1 X0 X1 = k9_xtuple_0 X1) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((v1_relat_1 X1) \wedge \\ & (v4_relat_1 X1 X0) \wedge ((v5_relat_1 X1 k7_numbers) \wedge (v1_funct_1 X1)))) \Rightarrow \\ & ((v1_funct_1 (k7_mesfunc1 X0 X1)) \wedge (m1_subset_1 (k7_mesfunc1 \\ & X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 X0 k7_numbers)))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((v1_funct_1 X1) \wedge \\ & m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k7_numbers)))) \Rightarrow \\ & ((v1_funct_1 (k2_mesfunc2 X0 X1)) \wedge (m1_subset_1 (k2_mesfunc2 \\ & X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 X0 k7_numbers)))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge((v1_funct_1 X1)\wedge \\ m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k7_numbers))))\Rightarrow \\ ((v1_funct_1 (k1_mesfunc2 X0 X1))\wedge(m1_subset_1 (k1_mesfunc2 \\ X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 X0 k7_numbers)))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.((v1_relat_1 X1)\wedge \\ (v4_relat_1 X1 X0)\wedge((v5_relat_1 X1 k7_numbers)\wedge(v1_funct_1 X1))))\Rightarrow \\ (\forall X2.((v1_funct_1 X2)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ X0 k7_numbers))))\Rightarrow((X2 = k7_mesfunc1 X0 X1)\Leftrightarrow((k9_xtuple_0 X2 = \\ k9_xtuple_0 X1)\wedge(\forall X3.(m1_subset_1 X3 X0)\Rightarrow((X3 \in k9_xtuple_0 \\ X2)\Rightarrow(k12_supinf_2 X2 X3 = k2_supinf_2 (k12_supinf_2 X1 X3)))))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.((v1_funct_1 X1)\wedge \\ m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k7_numbers))))\Rightarrow(\\ \forall X2.((v1_funct_1 X2)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ X0 k7_numbers))))\Rightarrow((X2 = k2_mesfunc2 X0 X1)\Leftrightarrow((k1_relset_1 X0 X2 = \\ k1_relset_1 X0 X1)\wedge(\forall X3.(m1_subset_1 X3 X0)\Rightarrow((X3 \in k1_relset_1 \\ X0 X2)\Rightarrow(k12_supinf_2 X2 X3 = k1_extreal2 (k2_supinf_2 (k12_supinf_2 \\ X1 X3)) k1_supinf_2)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.((v1_funct_1 X1)\wedge \\ m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k7_numbers))))\Rightarrow(\\ \forall X2.((v1_funct_1 X2)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ X0 k7_numbers))))\Rightarrow((X2 = k1_mesfunc2 X0 X1)\Leftrightarrow((k1_relset_1 X0 X2 = \\ k1_relset_1 X0 X1)\wedge(\forall X3.(m1_subset_1 X3 X0)\Rightarrow((X3 \in k1_relset_1 \\ X0 X2)\Rightarrow(k12_supinf_2 X2 X3 = k1_extreal2 (k12_supinf_2 X1 X3) k1_supinf_2)))))) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ (k2_zfmisc_1 X0 X1)))\Rightarrow((v4_relat_1 X2 X0)\wedge(v5_relat_1 X2 X1)) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ (k2_zfmisc_1 X0 X1)))\Rightarrow(v1_relat_1 X2) \quad (10)$$

Theorem 1

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.((v1_funct_1 X1)\wedge \\ m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k7_numbers))))\Rightarrow(\\ r2_relset_1 X0 k7_numbers (k2_mesfunc2 X0 X1) (k1_mesfunc2 X0 (\\ k7_mesfunc1 X0 X1)))) \end{aligned}$$