

t2_mesfunc7

(TMXrAe6JktovM9niacRnECNQrnontgbPLA4)

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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 $k1_numbers : \iota$ be given. Let $r2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_mesfunc1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k5_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_valued_0 : \iota \Rightarrow o$ be given. Let $k12_supinf_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_extreal1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_measure6 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. (v1_relat_1 X1) \Rightarrow (k9_xtuple_0 (k5_relat_1 X1 X0) = k3_xboole_0 (k9_xtuple_0 X1) X0) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((v1_relat_1 X2) \wedge (v1_funct_1 X2)) \Rightarrow ((X0 \in k9_xtuple_0 (k5_relat_1 X2 X1)) \Rightarrow (k1_funct_1 (k5_relat_1 X2 X1) X0 = k1_funct_1 X2 X0)) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. ((m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))) \Rightarrow (r2_relset_1 X0 X1 X2 X2) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. ((v1_funct_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))) \Rightarrow (k2_partfun1 X0 X1 X2 X3 = k5_relat_1 X2 X3) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v2_valued_0 X0))) \Rightarrow (k12_supinf_2 X0 X1 = k1_funct_1 X0 X1) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0)\wedge(((v1_relat_1 \\ & X1)\wedge((v4_relat_1 X1 X0)\wedge((v5_relat_1 X1 k7_numbers)\wedge(v1_funct_1 \\ & X1))))\wedge(m1_subset_1 X2 k1_numbers)))\Rightarrow((v1_funct_1 (k6_mesfunc1 \\ & X0 X1 X2))\wedge(m1_subset_1 (k6_mesfunc1 X0 X1 X2) (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 k7_numbers)))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v1_funct_1 X2)\wedge \\ & (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))\Rightarrow((v1_funct_1 \\ & (k2_partfun1 X0 X1 X2 X3))\wedge(m1_subset_1 (k2_partfun1 X0 X1 X2 X3) \\ & (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.((v1_relat_1 X1)\wedge(\\ & (v4_relat_1 X1 X0)\wedge((v5_relat_1 X1 k7_numbers)\wedge(v1_funct_1 X1))))\Rightarrow \\ & (\forall X2.(m1_subset_1 X2 k1_numbers)\Rightarrow(\forall X3.((v1_funct_1 \\ & X3)\wedge(m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 k7_numbers))))\Rightarrow \\ & ((X3 = k6_mesfunc1 X0 X1 X2)\Leftrightarrow((k9_xtuple_0 X3 = k9_xtuple_0 X1)\wedge \\ & (\forall X4.(m1_subset_1 X4 X0)\Rightarrow((X4 \in k9_xtuple_0 X3)\Rightarrow(k12_supinf_2 \\ & X3 X4 = k1_extreal1 (k1_measure6 X2) (k12_supinf_2 X1 X4)))))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(X2 = k3_xboole_0 X0 X1)\Leftrightarrow(\forall X3. \\ & (X3 \in X2)\Leftrightarrow((X3 \in X0)\wedge(X3 \in X1))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1)))\Rightarrow((v4_relat_1 X2 X0)\wedge(v5_relat_1 X2 X1)) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0)\wedge(v5_relat_1 X0 k7_numbers))\Rightarrow((v1_relat_1 \\ & X0)\wedge(v2_valued_0 X0)) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1)))\Rightarrow(v1_relat_1 X2) \end{aligned} \quad (12)$$

Theorem 1

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.\forall X2.((v1_funct_1 \\ & X2)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 k7_numbers))))\Rightarrow \\ & (\forall X3.(m1_subset_1 X3 k1_numbers)\Rightarrow(r2_relset_1 X0 k7_numbers \\ & (k2_partfun1 X0 k7_numbers (k6_mesfunc1 X0 X2 X3) X1) (k6_mesfunc1 \\ & X0 (k2_partfun1 X0 k7_numbers X2 X1) X3)))) \end{aligned}$$