

t44_mesfun9c
(TMFgjbM2YtVrEC8ExUf3ptao2e8QpcMtaY6)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_prob_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_prob_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_numbers : \iota$ be given. Let $r1_mesfun7c : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $r2_mesfunc6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_comseq_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_comseq_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_membered : \iota \Rightarrow o$ be given. Let $k1_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((\neg v1_xboole_0 X1) \wedge \\ & ((v1_prob_1 X1 X0) \wedge ((v4_prob_1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ & (k1_zfmisc_1 X0)))))) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge (m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 k1_numbers)))) \Rightarrow (\forall X3.(\\ & (v1_funct_1 X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 \\ & k1_numbers)))) \Rightarrow (((r2_mesfunc6 X0 X1 X2) \wedge (r2_mesfunc6 X0 X1 X3)) \Rightarrow \\ & (r2_mesfunc6 X0 X1 (k3_valued_1 X0 k1_numbers k1_numbers X2 X3)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge (\\ & m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k2_numbers)))) \Rightarrow (\\ & \forall X2.((v1_funct_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 k2_numbers)))) \Rightarrow ((r2_relset_1 X0 k1_numbers (k5_comseq_3 X0 \\ & (k2_valued_1 X0 k2_numbers k2_numbers X1 X2)) (k3_valued_1 X0 k1_numbers \\ & k1_numbers (k5_comseq_3 X0 X1) (k5_comseq_3 X0 X2))) \wedge (r2_relset_1 \\ & X0 k1_numbers (k6_comseq_3 X0 (k2_valued_1 X0 k2_numbers k2_numbers \\ & X1 X2)) (k3_valued_1 X0 k1_numbers k1_numbers (k6_comseq_3 X0 X1) \\ & (k6_comseq_3 X0 X2)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((\neg v1_xboole_0 X1) \wedge \\ & ((v1_prob_1 X1 X0) \wedge ((v4_prob_1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ & (k1_zfmisc_1 X0)))))) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge (m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 k2_numbers)))) \Rightarrow ((r1_mesfunc7c \\ & X0 X1 X2) \Leftrightarrow ((r2_mesfunc6 X0 X1 (k5_comseq_3 X0 X2)) \wedge (r2_mesfunc6 \\ & X0 X1 (k6_comseq_3 X0 X2)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((m1_subset_1 X2 \\ & (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1)))) \Rightarrow ((r2_relset_1 X0 X1 X2 X3) \Leftrightarrow (X2 = X3)) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((v1_membered \\ & X1) \wedge ((v1_membered X2) \wedge ((v1_funct_1 X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1)))) \wedge ((v1_funct_1 X4) \wedge (m1_subset_1 X4 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X2)))))) \Rightarrow (k2_valued_1 X0 X1 X2 X3 X4 = k1_valued_1 \\ & X3 X4) \end{aligned} \quad (5)$$

Assume the following.

$$v3_membered k1_numbers \quad (6)$$

Assume the following.

$$v1_membered k2_numbers \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1_funct_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 k2_numbers)))) \Rightarrow ((v1_funct_1 (k6_comseq_3 X0 \\ & X1)) \wedge (m1_subset_1 (k6_comseq_3 X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 k1_numbers)))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1_funct_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 k2_numbers)))) \Rightarrow ((v1_funct_1 (k5_comseq_3 X0 \\ & X1)) \wedge (m1_subset_1 (k5_comseq_3 X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 k1_numbers)))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((v3_membered \\ & X1)\wedge((v3_membered X2)\wedge(((v1_funct_1 X3)\wedge(m1_subset_1 X3 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1))))\wedge((v1_funct_1 X4)\wedge(m1_subset_1 X4 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X2))))))\Rightarrow((v1_funct_1 (k3_valued_1 X0 X1 X2 X3 \\ & X4)\wedge(m1_subset_1 (k3_valued_1 X0 X1 X2 X3 X4) (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 k1_numbers)))))) \end{aligned} \tag{10}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((v1_membered \\ & X1)\wedge((v1_membered X2)\wedge(((v1_funct_1 X3)\wedge(m1_subset_1 X3 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1))))\wedge((v1_funct_1 X4)\wedge(m1_subset_1 X4 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X2))))))\Rightarrow((v1_funct_1 (k2_valued_1 X0 X1 X2 X3 \\ & X4)\wedge(m1_subset_1 (k2_valued_1 X0 X1 X2 X3 X4) (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 k2_numbers)))))) \end{aligned} \tag{11}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((v1_membered \\ & X1)\wedge((v1_membered X2)\wedge(((v1_funct_1 X3)\wedge(m1_subset_1 X3 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1))))\wedge((v1_funct_1 X4)\wedge(m1_subset_1 X4 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X2))))))\Rightarrow(k2_valued_1 X0 X1 X2 X3 X4 = k2_valued_1 \\ & X0 X1 X2 X4 X3) \end{aligned} \tag{12}$$

Theorem 1

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.((\neg v1_xboole_0 X1)\wedge \\ & ((v1_prob_1 X1 X0)\wedge((v4_prob_1 X1 X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 \\ & (k1_zfmisc_1 X0))))))\Rightarrow(\forall X2.((v1_funct_1 X2)\wedge(m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 k2_numbers))))\Rightarrow(\forall X3.(\\ & (v1_funct_1 X3)\wedge(m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 \\ & k2_numbers))))\Rightarrow(((r1_mesfun7c X0 X1 X2)\wedge(r1_mesfun7c X0 X1 X3))\Rightarrow \\ & (r1_mesfun7c X0 X1 (k2_valued_1 X0 k2_numbers k2_numbers X2 X3)))))) \end{aligned}$$