

t20_mesfun9c (TMcTR-
Waf6mHfSSs9wZM6iEbGWCsZsTyCEHA)

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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 $k2_numbers : \iota$ be given. Let $r2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k2_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $v1_relat_1 : \iota \Rightarrow o$ 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 $k4_comseq_3 : \iota \Rightarrow \iota$ be given. Let $k3_comseq_3 : \iota \Rightarrow \iota$ be given. Let $v1_valued_0 : \iota \Rightarrow o$ be given. Let $v1_membered : \iota \Rightarrow o$ be given. Let $k4_complex1 : \iota \Rightarrow \iota$ be given. Let $k3_complex1 : \iota \Rightarrow \iota$ 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.

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

Assume the following.

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

Assume the following.

$$\forall X0. \forall X1. ((v1_funct_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k2_numbers)))) \Rightarrow (k6_comseq_3 X0 X1 = k4_comseq_3 X1) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((v1_funct_1 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k2_numbers))))\Rightarrow(k5_comseq_3 X0 X1 = k3_comseq_3 X1) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v1_funct_1 X2)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))\Rightarrow(k2_partfun1 X0 X1 X2 X3 = k5_relat_1 X2 X3) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X0)\wedge(v1_valued_0 X0))\Rightarrow((v1_relat_1 (k5_relat_1 X0 X1))\wedge(v1_valued_0 (k5_relat_1 X0 X1))) \quad (7)$$

Assume the following.

$$v1_membered k2_numbers \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((v1_funct_1 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k2_numbers))))\Rightarrow((v1_funct_1 (k6_comseq_3 X0 X1))\wedge(m1_subset_1 (k6_comseq_3 X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 X0 k1_numbers)))) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.(v1_relat_1 X0)\Rightarrow(v1_relat_1 (k5_relat_1 X0 X1)) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.((v1_funct_1 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k2_numbers))))\Rightarrow((v1_funct_1 (k5_comseq_3 X0 X1))\wedge(m1_subset_1 (k5_comseq_3 X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 X0 k1_numbers)))) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v1_funct_1 X2)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))\Rightarrow((v1_funct_1 (k2_partfun1 X0 X1 X2 X3))\wedge(m1_subset_1 (k2_partfun1 X0 X1 X2 X3) (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k3_xboole_0 X0 X1)\Leftrightarrow(\forall X3.(X3 \in X2)\Leftrightarrow((X3 \in X0)\wedge(X3 \in X1))) \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_valued_0 X0))) \Rightarrow \\ & (\forall X1.((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow ((X1 = k4_comseq_3 \\ & X0) \Leftrightarrow ((k9_xtuple_0 X1 = k9_xtuple_0 X0) \wedge (\forall X2.(X2 \in k9_xtuple_0 \\ & X1) \Rightarrow (k1_funct_1 X1 X2 = k4_complex1 (k1_funct_1 X0 X2)))))) \end{aligned} \quad (14)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_valued_0 X0))) \Rightarrow \\ & (\forall X1.((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow ((X1 = k3_comseq_3 \\ & X0) \Leftrightarrow ((k9_xtuple_0 X1 = k9_xtuple_0 X0) \wedge (\forall X2.(X2 \in k9_xtuple_0 \\ & X1) \Rightarrow (k1_funct_1 X1 X2 = k3_complex1 (k1_funct_1 X0 X2)))))) \end{aligned} \quad (15)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_relat_1 X2) \quad (16)$$

Assume the following.

$$\forall X0. \forall X1. (v1_membered X1) \Rightarrow (\forall X2. (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_valued_0 X2)) \quad (17)$$

Theorem 1

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((v1_funct_1 X1) \wedge (\\ & m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k2_numbers)))) \Rightarrow (\\ & \forall X2. (r2_relset_1 X0 k1_numbers (k2_partfun1 X0 k1_numbers \\ & (k5_comseq_3 X0 X1) X2) (k5_comseq_3 X0 (k2_partfun1 X0 k2_numbers \\ & X1 X2))) \wedge (r2_relset_1 X0 k1_numbers (k2_partfun1 X0 k1_numbers \\ & (k6_comseq_3 X0 X1) X2) (k6_comseq_3 X0 (k2_partfun1 X0 k2_numbers \\ & X1 X2)))))) \end{aligned}$$