

t43_cfunct_1

(TMaf34qQc8pDEzo8RvgzV2HeCXCx3pHwDYE)

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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 $k2_cfunct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_cfunct_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k19_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge (\\ & \quad m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k2_numbers)))) \Rightarrow (\\ & \quad \forall X2.((v1_funct_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & \quad X0 k2_numbers)))) \Rightarrow (r2_relset_1 X0 k2_numbers (k1_cfunct_1 X0 \\ & \quad X1 X2) (k19_valued_1 X0 k2_numbers k2_numbers X1 (k2_cfunct_1 X0 \\ & \quad X2)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge (\\ & \quad m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k2_numbers)))) \Rightarrow (\\ & \quad \forall X2.((v1_funct_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & \quad X0 k2_numbers)))) \Rightarrow (r2_relset_1 X0 k2_numbers (k2_cfunct_1 X0 \\ & \quad (k19_valued_1 X0 k2_numbers k2_numbers X1 X2)) (k19_valued_1 X0 \\ & \quad k2_numbers k2_numbers (k2_cfunct_1 X0 X1) (k2_cfunct_1 X0 X2)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge (\\ & \quad m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k2_numbers)))) \Rightarrow (\\ & \quad r2_relset_1 X0 k2_numbers (k2_cfunct_1 X0 (k2_cfunct_1 X0 X1)) \\ & \quad (k2_partfun1 X0 k2_numbers X1 (k1_relset_1 X0 (k2_cfunct_1 X0 X1)))))) \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\wedge(m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))\Rightarrow((r2_relset_1 X0 X1 X2 X3)\Leftrightarrow(X2 = X3)) \quad (4)$$

Assume the following.

$$v1_membered k2_numbers \quad (5)$$

Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge((v1_funct_1 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k2_numbers)))))\Rightarrow((v1_funct_1 (k2_cfuncnt_1 X0 X1))\wedge(m1_subset_1 (k2_cfuncnt_1 X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 X0 k2_numbers)))) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0)\wedge(((v1_funct_1 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k2_numbers))))\wedge((v1_funct_1 X2)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 k2_numbers))))))\Rightarrow((v1_funct_1 (k1_cfuncnt_1 X0 X1 X2))\wedge(m1_subset_1 (k1_cfuncnt_1 X0 X1 X2) (k1_zfmisc_1 (k2_zfmisc_1 X0 k2_numbers)))) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((v1_membered X1)\wedge((v1_membered X2)\wedge(((v1_funct_1 X3)\wedge(m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))\wedge((v1_funct_1 X4)\wedge(m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 X0 X2))))))\Rightarrow((v1_funct_1 (k19_valued_1 X0 X1 X2 X3 X4))\wedge(m1_subset_1 (k19_valued_1 X0 X1 X2 X3 X4) (k1_zfmisc_1 (k2_zfmisc_1 X0 k2_numbers)))) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((v1_membered X1)\wedge((v1_membered X2)\wedge(((v1_funct_1 X3)\wedge(m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))\wedge((v1_funct_1 X4)\wedge(m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 X0 X2))))))\Rightarrow(k19_valued_1 X0 X1 X2 X3 X4 = k19_valued_1 X0 X1 X2 X4 X3) \quad (10)$$

Theorem 1

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge \\ & m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k2_numbers)))) \Rightarrow (\\ & \forall X2.((v1_funct_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 k2_numbers)))) \Rightarrow (r2_reset_1 X0 k2_numbers (k2_cfunct_1 X0 \\ & (k1_cfunct_1 X0 X1 X2)) (k1_cfunct_1 X0 (k2_partfun1 X0 k2_numbers \\ & X2 (k1_reset_1 X0 (k2_cfunct_1 X0 X2))) X1)))) \end{aligned}$$