

t29_cfdiff_1

(TMVyB2NEbWYYV4mVt5RjrC8z2EuvmSMrLsC)

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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 $v6_cfdiff_1 : \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k46_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_cfdiff_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_cfdiff_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11_complex1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_cfdiff_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_cfdiff_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1_funct_1 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 \\ & \quad k2_numbers k2_numbers)))) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge (m1_subset_1 \\ & \quad X1 (k1_zfmisc_1 (k2_zfmisc_1 k2_numbers k2_numbers)))) \Rightarrow (\forall X2. \\ & \quad (m1_subset_1 X2 k2_numbers) \Rightarrow (((r1_cfdiff_1 X0 X2) \wedge (r1_cfdiff_1 \\ & \quad X1 X2)) \Rightarrow ((r1_cfdiff_1 (k46_valued_1 k2_numbers k2_numbers k2_numbers \\ & \quad X0 X1) X2) \wedge (k2_cfdiff_1 (k46_valued_1 k2_numbers k2_numbers k2_numbers \\ & \quad X0 X1) X2 = k11_complex1 (k2_cfdiff_1 X0 X2) (k2_cfdiff_1 X1 X2)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_funct_1 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 \\ & \quad k2_numbers k2_numbers)))) \Rightarrow (\forall X1.((v6_cfdiff_1 X1) \wedge (m1_subset_1 \\ & \quad X1 (k1_zfmisc_1 k2_numbers))) \Rightarrow ((r2_cfdiff_1 X0 X1) \Leftrightarrow ((r1_tarski \\ & \quad X1 (k1_relset_1 k2_numbers X0)) \wedge (\forall X2.(m1_subset_1 X2 k2_numbers) \Rightarrow \\ & \quad ((X2 \in X1) \Rightarrow (r1_cfdiff_1 X0 X2)))))) \end{aligned} \tag{2}$$

Assume the following.

$$v1_membered k2_numbers \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((v1_membered \\ & X1)\wedge((v1_membered X2)\wedge(((v1_funct_1 X3)\wedge(m1_subset_1 X3 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1))))\wedge((v1_funct_1 X4)\wedge(m1_subset_1 X4 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X2))))))\Rightarrow((v1_funct_1 (k46_valued_1 X0 X1 X2 \\ & X3 X4)\wedge(m1_subset_1 (k46_valued_1 X0 X1 X2 X3 X4) (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 k2_numbers)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1_funct_1 X0)\wedge(m1_subset_1 X0 (k1_zfmisc_1 \\ & (k2_zfmisc_1 k2_numbers k2_numbers))))\Rightarrow((v1_funct_1 (k3_cfdiff_1 \\ & X0 X1))\wedge(m1_subset_1 (k3_cfdiff_1 X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 \\ & k2_numbers k2_numbers)))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_funct_1 X0)\wedge(m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 \\ & k2_numbers k2_numbers))))\Rightarrow(\forall X1.(r2_cfdiff_1 X0 X1)\Rightarrow(\\ & \forall X2.((v1_funct_1 X2)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & k2_numbers k2_numbers))))\Rightarrow((X2 = k3_cfdiff_1 X0 X1)\Leftrightarrow((k1_relset_1 \\ & k2_numbers X2 = X1)\wedge(\forall X3.(m1_subset_1 X3 k2_numbers)\Rightarrow(\\ & (X3 \in X1)\Rightarrow(k7_partfun1 k2_numbers X2 X3 = k2_cfdiff_1 X0 X3)))))) \end{aligned} \quad (6)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_funct_1 X0)\wedge(m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 \\ & k2_numbers k2_numbers))))\Rightarrow(\forall X1.((v1_funct_1 X1)\wedge(m1_subset_1 \\ & X1 (k1_zfmisc_1 (k2_zfmisc_1 k2_numbers k2_numbers))))\Rightarrow(\forall X2. \\ & ((v6_cfdiff_1 X2)\wedge(m1_subset_1 X2 (k1_zfmisc_1 k2_numbers)))\Rightarrow \\ & (((r1_tarski X2 (k1_relset_1 k2_numbers (k46_valued_1 k2_numbers \\ & k2_numbers k2_numbers X0 X1)))\wedge((r2_cfdiff_1 X0 X2)\wedge(r2_cfdiff_1 \\ & X1 X2)))\Rightarrow((r2_cfdiff_1 (k46_valued_1 k2_numbers k2_numbers k2_numbers \\ & X0 X1) X2)\wedge(\forall X3.(m1_subset_1 X3 k2_numbers)\Rightarrow((X3 \in X2)\Rightarrow \\ & (k7_partfun1 k2_numbers (k3_cfdiff_1 (k46_valued_1 k2_numbers \\ & k2_numbers k2_numbers X0 X1) X2) X3 = k11_complex1 (k2_cfdiff_1 \\ & X0 X3) (k2_cfdiff_1 X1 X3)))))) \end{aligned}$$